

Subject Matter Code: J Storm Water Economics

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Comment ID: CTR-001-007

Comment Author: Law Offices of Alan C. Waltner

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org: Alameda Cnty Clean Wtr Pgm

Document Date: 09/22/97

Subject Matter Code: J Storm Water Economics

References:

Attachments? N

CROSS REFERENCES

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Comment: SIGNIFICANT ECONOMIC IMPACTS WOULD RESULT FROM THE APPLICATION OF WATER QUALITY STANDARDS AS NUMERIC EFFLUENT LIMITATIONS OR WASTELOAD ALLOCATIONS

If EPA intends that the WQS have a more direct effect on the permitting for MS4s, the implications are significant. In particular, the economic analysis supporting the proposed CTR would be dramatically incomplete. Massive expenditures would be required if storm water systems essentially were required to meet the same numerically based treatment standards as being considered for POTWs. The expenditures that would result from such an approach are being addressed in more detail in other MS4 comments, and will not be repeated here.

However, we note that the economic impact analysis that EPA prepared to support the proposed rule assumes that the regulation would have no economic impact on MS4s. (\*11) If MS4s are subjected to NELs or WLAs as a result of the rule, significant economic impacts would result. Even if water quality based effluent limitations are based on BMPS, they would have an economic impact if they represent controls more extensive than the maximum extent practicable criteria of Section 402(p). EPA's economic analysis also provides no basis for estimating the costs to MS4s, since the "representative" dischargers analyzed in the economic analysis do not include any storm water systems. The economic analysis does not include these costs and it would be arbitrary to adopt a rule that would have these implications without considering those costs. (\*12)

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(\*11) Likewise, the economic analysis supporting the State Implementation Policy excluded consideration of the costs to municipal storm water systems, on the theory that "the proposed Policy does not impose new regulatory requirements and, therefore, no additional costs are anticipated (i.e., . . . storm water . . . )" SIP at VIII-33. Elsewhere the SIP urges that: "The SWRCB is making no changes in the existing storm water program at the SWRCB and RWQCB. For these reasons, this cost analysis did not consider the storm water proposed Policy issue." Id. at VIII-43. These municipal costs were excluded even though the benefits calculations assumed that the proposed water quality standards would be achieved and that, with respect to San Francisco Bay, the share of toxic loadings attributable to nonpoint sources is estimated to range from 90% to 99% of the total. SIP at VIII-25. It is fundamental that "you can't get something for nothing" and the conflicting assumptions in the SIP, which parallel assumptions in the economic analysis of the CTR, are simply arbitrary.

(\*12) Also, since EPA stands in the shoes of the state in adopting these criteria the action would violate the cost balancing elements of the Porter Cologne Act, as discussed below. At minimum, to the extent

that the rule creates an inflexible obligation to implement the criteria with respect to MS4s without complying with Porter Cologne Act requirements, it would set the State and Regional Boards on a collision course with those requirements at the Basin Plan and NPDES permitting phases.

Response to: CTR-001-007

EPA did not ascribe benefits or costs of controlling storm water discharges in the proposed or final Economic Analysis. EPA believes that many storm water dischargers can avoid violation of water quality standards through application of best management practices that are already required by current storm water permits. This conclusion is supported by EPA's analysis of the data submitted by several commenters (see response to CTR-040-004). EPA articulated its position on the use of BMPs in storm water permits in the Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits (61 FR 43761, August 19, 1996).

The commenter claims that even with the application of current BMPs, its storm water dischargers would still violate water quality standards due to the CTR criteria. The commenter appears to assume that the storm water discharge would be subject to numeric water quality based effluent limits which would be equivalent to the criteria values and applied as effluent limits never to be exceeded, or calculated in the same manner that effluent limits are calculated for other point sources, such as POTWs. The commenter then appears to assume that such WQBELs would then require the construction of very costly end-of-pipe controls.

EPA contends that neither scenario is valid with regards to developing WQBELs for storm water discharges or establishing compliance with WQBELs. EPA acknowledges that wet weather discharges are technically difficult to model and evaluate financially, because they are intermittent and highly variable. Wet weather discharges also occur under more diverse hydrologic or climatic conditions than continuous discharges from industrial or municipal facilities, which are evaluated under critical low flow or drought conditions. If the EPA had enough data to completely characterize all the conditions and do the necessary modelling, WQBELs would be developed using dynamic models to account for the intermittent loadings and exposures from the storm water discharges. In the absence of this data, EPA will continue to advocate the use of BMPs, as discussed in the CTR preamble. Therefore, EPA believes there is inadequate information at the current time to conclude whether the CTR will have any cost impact on storm water dischargers. Until that information is available, it is premature to project that storm water dischargers would be subject to strict numeric WQBELs and would incur any costs beyond those for which they are already legally responsible under the Clean Water Act. EPA will continue to work with the State to implement storm water permits that comply with water quality standards with an emphasis on pollution prevention and best management practices rather than costly end-of-pipe controls.

See also response to CTR-040-004.

EPA disagrees that the CTR must meet the requirements of the Porter Cologne Act. As a Federal agency, EPA is not subject to the requirements of the Porter-Cologne Act, which is State law. See also response to CTR-020-002 (Category C-21; Legal Issues).

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Comment ID: CTR-013-003

Comment Author: County of Los Angeles

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-013 incorporates by reference letter CTR-027

Attachments? N

## CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following concerns which greatly impact the Los Angeles County Stormwater Program:

3. The economic analysis used by The USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. Again, setting aside the issue of WQBELS for MS4s, the economic analysis is inadequate. Under Executive Order 12866, the USEPA must determine whether the CTR is "significant" and subject to OMB review. One of the criteria in assessing whether a proposed regulation is significant is to determine if it has an adverse affect resulting in an annual cost of \$100 million or more. To address this criterion, the USEPA estimated the cost and benefit of the proposed regulations. Based on this analysis, the USEPA determined that the CTR was not a "significant regulatory action."

In its economic analysis, the USEPA's entire focus of the compliance cost was on the point sources which included Public-Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). This assumption appears to be applied to both municipal and industrial stormwater interests. We point to studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district which show this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance.

It may be argued that an MS4 would seek regulatory relief from the criteria before incurring the cost of end-of-pipe treatment. While this is probably a reasonable assumption, the economic analysis failed to address the cost for either treatment, BMP program, or regulatory relief for MS4s. As a result, the overall cost for compliance is significantly underestimated. By assigning zero cost to the MS4s for compliance, the cost benefit analysis is severely flawed.

We recommend that the USEPA not implement the proposed criteria to MS4 discharges without an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-013-003

EPA disagrees with the comment that its economic analysis is flawed or incomplete.

EPA did not include benefits or costs of controlling storm water discharges in the proposed or final Economic Analysis. EPA believes that many storm water dischargers can avoid violation of water quality standards through application of best management practices that are already required by current

storm water permits. This conclusion is supported by EPA's analysis of the data submitted by several commenters (see response to CTR-040-004). EPA articulated its position on the use of BMPs in storm water permits in the Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits (61 FR 43761, August 19, 1996).

The commenter claims that even with the application of current BMPs, its storm water dischargers would still violate water quality standards due to the CTR criteria. The commenter appears to assume that the storm water discharge would be subject to numeric water quality based effluent limits which would be equivalent to the criteria values and applied as effluent limits never to be exceeded, or calculated in the same manner that effluent limits are calculated for other point sources, such as POTWs. The commenter then appears to assume that such WQBELs would then require the construction of very costly end-of-pipe controls.

EPA contends that neither scenario is valid with regards to developing WQBELs for storm water discharges or establishing compliance with WQBELs. EPA acknowledges that wet weather discharges are technically difficult to model and evaluate financially, because they are intermittent and highly variable. Wet weather discharges also occur under more diverse hydrologic or climatic conditions than continuous discharges from industrial or municipal facilities, which are evaluated under critical low flow or drought conditions. If the EPA had enough data to completely characterize all the conditions and do the necessary modelling, WQBELs would be developed using dynamic models to account for the intermittent loadings and exposures from the storm water discharges. In the absence of this data, EPA will continue to advocate the use of BMPs, as discussed in the CTR preamble. Therefore, EPA believes there is inadequate information at the current time to conclude whether the CTR will have any cost impact on storm water dischargers. Until that information is available, it is premature to project that storm water dischargers would be subject to strict numeric WQBELs and would incur any costs beyond those for which they are already legally responsible under the Clean Water Act. EPA will continue to work with the State to implement storm water permits that comply with water quality standards with an emphasis on pollution prevention and best management practices rather than costly end-of-pipe controls.

With respect to the studies conducted by the County of Sacramento and Fresno Metropolitan Flood district see response to CTR-040-004.

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Comment ID: CTR-013-008b  
Comment Author: County of Los Angeles  
Document Type: Storm Water Auth.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References: Letter CTR-013 incorporates by reference letter CTR-027

Attachments? N  
CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following concerns which greatly impact the Los Angeles County Stormwater Program:

8. The proposed rule applies to all current and future MS4 dischargers, including small communities.

The small communities will be significantly impacted by the proposed rule. In Los Angeles County, 77 of the 85 co-permittee cities are communities with a population of less than 100,000. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies, however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities, however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule(\*2), it indicates that there are no small entities to be impacted by the rule and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Therefore, unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

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(\*2) Federal Register, August 5, 1997, Vol. 62, No. 150, Page 42191

Response to: CTR-013-008b

See response to CTR-001-008b and the preamble to the final rule.

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Comment ID: CTR-014-003

Comment Author: City of Lakewood

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-014 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

#### **CROSS REFERENCES**

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Comment: 3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-014-003

See response to CTR-013-003.

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Comment ID: CTR-014-004b

Comment Author: City of Lakewood

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-014 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: 4. The proposed rule applies to all current and future MS4 dischargers, including small communities. These small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule(\*1) it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase 11. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Thank you for this opportunity to comment on the proposed CTR. Respectfully,

Lisa Ann Rapp Director of Public Works

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(\*1) Federal Register, August 5, 1997, Vol. 62, No. 150, Page 42191

Response to: CTR-014-004b

See response to CTR-013-008b.

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Comment ID: CTR-018-001  
Comment Author: Ventura Countywide SWQMP  
Document Type: Storm Water Auth.  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: I would like to take this opportunity to submit in writing the specific concerns of the municipal stormwater program in Ventura County that I expressed on September 18, 1997 at the Public Hearings on the subject proposed rule.

In August of 1994, a countywide municipal NPDES permit was issued to the Ventura County Flood Control District, the County of Ventura and the ten cities in Ventura County. We are now entering the fourth year of our permit term.

At the time the eleven municipalities in Ventura County applied for the stormwater permit, only three were actually required to do so. The other eight entered the program voluntarily. In reality, five of these co-permittees would not even be required to be covered under Phase II, since their populations range from 8 to 30,000.

The Ventura Countywide Stormwater Quality Management Program was formulated to achieve compliance with the maximum extent practicable discharge standard through the use of Best Management Practices (BMPs). While the primary goal and driving force of the program is to achieve compliance with water quality standards, the economic and technological feasibility of achieving all of the proposed criteria is not practical given the diverse nature of an urbanized area, the number of discharge points and the numerous sources of pollutants for urban runoff.

Under our monitoring program, we have collected urban runoff water quality data for the past four years. The attainability analysis-using this data has indicated that even if a BMP program was fully implemented at exorbitant expense, we may not be able to achieve compliance with proposed criteria for copper, lead, zinc, thallium, nickel, and silver.

The alternative to BMP implementation would be to collect and treat stormwater discharges. Stormwater regulations make it clear that municipal stormwater permits are to implement programs to address the sources of pollutants, not to provide end of pipe treatment.

Although the cost of compliance with this rule will significantly impact all communities, the cost could be even more significant and prohibitive for the smaller ones that have made a proactive choice to apply for permit coverage. Currently, in Ventura County, we are spending approximately \$5.00 per capita to implement a BMP based program. Yet the economic analysis concludes that the maximum cost of implementing the California Toxics Rule in California, for all dischargers, will be approximately \$2.50 to \$3.00 per person. We believe that the economic analysis for the proposed rule has not accurately evaluated the financial impact to municipalities, particularly the smaller ones.

Thank you for the opportunity to provide comments to the proposed rule. If you have any questions or would like to discuss these comments further, feel free to call me at (805)654-2040,

Response to: CTR-018-001

See responses to CTR-013-003 and CTR-040-004.

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Comment ID: CTR-019-001b

Comment Author: Richards, Watson & Gershon

Document Type: Local Government

State of Origin: CA

Represented Org: Cities of Barst

Document Date: 09/26/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-019 incorporates by reference letters CTR-001, CTR-013, CTR-027 and CTR-036

Attachments? N

CROSS REFERENCES I-01

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Comment: We recognize that the basic purpose for the proposed rule is to establish water quality criteria for priority toxic pollutants for point source discharges. However, in proposing to extend that criteria to storm water discharges, it is clear that EPA has not fully assessed the potential impact of such an extension on local governmental agencies, nor the complete lack of feasibility of attempting to apply numeric effluent standards to discharges to municipal separate storm sewer systems ("MS4s"), or the enormous cost of such an effort which would potentially require a complete reengineering and if not reconstruction of MS4s in California to include end-of-pipe treatment.

Our comments should be considered in the proper context. The cities which we represent are acutely aware of the problems associated with pollution from... urban runoff. Their residents and businesses share a common concern to preserve and enhance the water quality of our bays, rivers, estuaries and the Pacific Ocean. Our cities are fully committed to doing what they reasonably can to achieve these objectives. Our cities have been working with staff of the State Water Resources Control Board ("SWRCB") and its Regional Water Quality Control Boards ("RWQCB's") to develop effective storm water management programs under current municipal NPDES permits which comply with state and federal law. However, the proposed rule does not appear to reflect or recognize that individual cities'

fiscal and administrative resources for implementing unfunded mandates are limited. Of all governmental agencies in California involved in the process, the many small cities which we represent are the least suited to bear the brunt of the responsibility for controlling pollution from urban runoff.

The primary portion of the proposed rule that has caused concern among our cities is the statement at pages 42186-42187 of preamble that:

"When this rulemaking is complete, these criteria will be used to determine water-quality standards in California and will therefore be the basis of WQBELs in NPDES permits for wet weather point sources. However, EPA recognizes that it is commonly infeasible to express WQBELs as numeric limits for wet weather discharges and that in such cases best management practices ("BMPs") may serve as WQBELS. (Emphasis added.)

Our concern is further heightened by the comment at page 42187 of preamble that:

"It is therefore anticipated that WQBELS, including those necessary to meet the criteria set forth in this proposed rule, will be expressed as BMPs in wet weather dischargers' NPDES permits, when the permitting authority determines that it is infeasible to express WQBELS as numeric limits." (Emphasis added.)

The comments appear to indicate that in any further municipal NPDES permitting situations, the proposed rule potentially can be interpreted to require the implementation of WQBELs unless an analysis is prepared determining the infeasibility of each of the WQBELs as numeric limits.

As applied to storm water discharges, WQBELs are almost by definition infeasible. It should also be kept in mind that it is not the cities themselves that are the sources of stormwater pollution; municipal facilities have not been identified, to our knowledge, as being significant sources of contaminated urban runoff. Rather, the sources of this type of pollution, to the extent they can be identified, appear to be primarily the result of hydrological changes brought about by urbanization. These are activities over which cities have very little practical control. Nevertheless, the cities and counties of California are bearing the full and financially unassisted responsibility of ending stormwater pollution themselves.

We agree with the comments of the County of Los Angeles and the ACCWP that EPA's effort to apply numeric effluent limits to municipal storm water discharges is in direct conflict with the plain language of Congress in adopting the "maximum extent practicable" standard for controlling pollution in storm water discharges to a MS4. The proposed rule as applied to wet weather flows is also clearly inconsistent with both the EPA's and the SWRCB's approach of addressing this problem through the adoption of Best Management Practices ("BMP's").

As noted in the SWRCB's own Municipal Storm Water Best Management and Practices Guidebook, "the sources of storm water pollution are extensive, ill-defined and highly variable." The State Board previously determined in its order entitled "In the Matter of Petition of Natural Resources Defense Council, Inc. for Review of Waste Discharge Requirements Order No. 90-079," Order No. WQ 91-04 (May 16, 1991), that:

"We find here also that the approach of the Regional Board requiring the dischargers to implement a program of best management practices which will reduce pollutants and runoff and prohibiting non-storm water discharges, is appropriate and proper. We base our conclusion on the difficulty of establishing numeric effluent limitations which have a rational basis, the lack of technology available to treat storm water discharges at the end of the pipe, the huge expense such treatment would entail, and the level of

pollutant reduction which we anticipate from the Board's regulatory program. We feel compelled to note here our agreement with the Regional Board that this permit does truly represent a massive undertaking." (Emphasis added.)

As discussed in detail in the technical comments filed in response to the proposed rule, the EPA has not explained how the proposed numeric effluent guidelines can be achieved through the implementation of BMP's. Under the circumstances, the ultimate result of the application of the rule to storm water discharges would be end of pipe treatment controls.

However, the EPA has already recognized, as the SWRCB, that end of pipe treatment controls for storm water discharges are technically unfeasible and unreasonable. The EPA has recognized that "it was not the intent of Congress to acquire municipal permits to required end of pipe treatment technology but to implement a comprehensive stormwater management program to reduce the discharge of pollutants from municipal storm sewer systems." 55 Fed.Reg., p. 48038 (November 16, 1990).

Each of our cities strongly believe that the proposed rule must be modified to clearly state that numeric effluent guidelines do not and will not apply to discharges to the municipal separate sewer systems.

Response to: CTR-019-001b

See response to CTR-040-004.

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Comment ID: CTR-019-002a

Comment Author: Richards, Watson & Gershon

Document Type: Local Government

State of Origin: CA

Represented Org: Cities of Barst

Document Date: 09/26/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-019 incorporates by reference letters CTR-001, CTR-013, CTR-027 and CTR-036

Attachments? N

CROSS REFERENCES S

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Comment: UNFUNDED MANDATED PROGRAMS

One of the express purposes of the Unfunded Mandates Reform Act of 1995 is "to end the imposition, in the absence of full consideration of Congress of Federal mandates on State, local and tribal governments without adequate Federal funding, in a manner that may displace other essential State, local and tribal governmental priorities." 2 U.S.C. section 1501(2). The proposed rule in its current form seems to have been drafted without regard to its fiscal impact on cities. The rule could require treatment of storm water discharges, despite the fact that no funding mechanism, nor any assistance, financial or otherwise, is being provided to the cities by either USEPA or the State of California. If the USEPA wishes to impose these treatment programs, it needs to provide funds to pay for their implementation.

We believe that USEPA's analysis under the Unfunded Mandates Reform Act of 1995 that the CTR will not result in an expenditure in the aggregate of more than \$100,000,000.00 a year is wrong. As pointed

by other local government entities which have submitted comments, the USEPA appears to assume that a BMP program will lead to compliance with numeric effluent guidelines and that there will be no associated additional costs for the BMP program. However, the economic analysis does not appear to analyze the potential cost of end of pipe treatment controls and analyze in any sort of detail what sort of BMP's would be necessary to achieve numeric effluent guidelines for the toxic pollutants. The economic analysis itself acknowledges that under its existing NPDES stormwater permit, the cities and counties of the Los Angeles area plan to spend \$15,000,000 annually on public education in a program to curb illegal dumping. That cost estimate was based upon the analysis by the SWRCB of the 1990 permit. The actual costs of implementing all of the programs under the 1990 permit have been considerably more. For example, the cost estimates prepared by the San Gabriel Valley COG in connection with the LA. County permit, estimated implementation costs at \$8.98 per person per year. The City of Long Beach estimated that it was already spending, as of early 1996, \$12.4 million a year and that the estimated costs of implementing the programs under the current permit adopted in July 1996 would be another \$3.4 million or about \$16.1 million total. That number extrapolated to approximately \$38.35 per person per year. The comparative cost numbers prepared by the Santa Monica Bay Restoration Project in connection with the existing Los Angeles permit estimated an average cost of dedicated stormwater program funding of \$3.34 a month per household or approximately \$13.36 per person per year. Using that number as a base, a city with a population of approximately 40,000 people can expect to spend \$500,000 a year under its current stormwater programs. Extrapolating those numbers over the State of California, it is quite clear that the costs of implementing the existing stormwater program are in the hundred of millions of dollars a year.

Considering these economic analyses, it is quite clear that the financial impact of requiring end of pipe treatment controls or other means to achieve numeric effluent guidelines would quite easily exceed \$100 million a year.

The foregoing numbers, of course, do not include potential increased costs to residents, business and industry complying with the discharge prohibitions and other requirements under the City's current municipal permits nor does the EPA's economic analysis calculate the potential costs to regulated dischargers, that is, business and industries required to either obtain an individual NPDES stormwater permit or who are covered under a general permit by filing a notice of intent.

Necessarily, the expenditure of such large amounts of money is an important public policy question, particularly in a situation where neither the State of California nor the federal government has been willing to provide any meaningful source of funds to local agencies to carry out these programs.

Response to: CTR-019-002a

See response to CTR-013-003.

With respect to EPA's compliance with UMRA see the preamble to the final rule.

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Comment ID: CTR-019-003a

Comment Author: Richards, Watson & Gershon

Document Type: Local Government

State of Origin: CA

Represented Org: Cities of Barst

Document Date: 09/26/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-019 incorporates by reference letters CTR-001, CTR-013, CTR-027 and CTR-036

Attachments? N

CROSS REFERENCES R

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Comment: THE PROPOSED RULE DOES NOT COMPLY WITH THE REGULATORY FLEXIBILITY ACT

USEPA's analysis under the Regulatory Flexibility Act and Executive Order No. 12866 that the CTR will not affect a significant number of small entities is simply wrong. Most of the cities which we represent have populations of less than 20,000; many have less than 10,000. As noted by the County of Los Angeles, 77 of the co-permittee cities have populations of less than 100,000. Many of these cities are primarily residential and with limited tax revenues. Nevertheless the proposed CTR would impose the same financial requirements on these cities as would be imposed on larger entities. These cities do not receive funds from either the State of California or the federal government for their storm water programs or other urban runoff control measures.

Response to: CTR-019-003a

EPA believes it properly described the potential impact of the implementation of the CTR on storm water discharges in the preamble to the proposed CTR and in its Economic Analysis (for further discussion see responses to CTR-013-003 and CTR-040-004). EPA believes it is in full compliance with its legal obligations under Executive Order 12866 (see response to CTRH-002-006a; Category I: Stormwater/Wet Weather Flows), the Regulatory Flexibility Act (see response to CTR-013-008b).

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Comment ID: CTR-021-006a

Comment Author: LeBoeuf, Lamb, Green & MacRae

Document Type: Local Government

State of Origin: CA

Represented Org: City of Sunnyva

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-021 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES E-01c

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I-01

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Comment: It is with a sense of reluctance that Sunnyvale joins in CASA/Tri-TAC's adverse comments on the CTR and the EA, and Sunnyvale does so in a spirit of constructive criticism and with an expectation that the Agency will make the necessary adjustments in its approach towards the CTR before the final rule is promulgated. In addition, in the same spirit and with the same expectation, Sunnyvale would like to make the following points on its own behalf:

3. Failure to Address Important Stormwater-Related Issues. In addition to its POTW, Sunnyvale is the

owner of a system of storm drains which contribute wet weather flows to the South Bay. We are concerned that the EA entirely neglects the potential impacts of the proposed CTR on the storm drains. The EA entirely omits any meaningful analysis of the costs of bringing storm drains into compliance with the proposed CTR, thereby significantly understating the overall costs of the CTR. We believe that this omission is violative of the Agency's legal obligations under the authorities cited in the preceding paragraph.

In addition, we join in the comments being filed by the various other operators of stormwater collection systems to the effect that EPA has overstated the legal requirements for storm drains to comply with numerical criteria.

Response to: CTR-021-006a

EPA believes it properly described the potential impact of the implementation of the CTR on storm water dischargers in the preamble to the proposed CTR and in its Economic Analysis (for further discussion see responses to CTR-013-003 and CTR-040-004). EPA believes it is in full compliance with its legal obligations under Executive Order 12866 (see response to CTRH-002-006a; Category I: Stormwater/Wet Weather Flows), the Regulatory Flexibility Act (see response to CTR-013-008b), and the Unfunded Mandates Act (see preamble to the final rule).

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Comment ID: CTR-024-003

Comment Author: City of Hawthorne

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-024 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: 3. The economic analysis used by The USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost of a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-024-003

See response to CTR-013-003.

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Comment ID: CTR-024-004b

Comment Author: City of Hawthorne

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-024 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: 4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule(\*1), it indicates that there are no small entities to be impacted by the rule, and therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

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(\*1) Federal Register, August 5, 1997, Vol. 62, No. 150, page 42191

Response to: CTR-024-004b

See response to CTR-013-008b.

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Comment ID: CTR-027-003

Comment Author: California SWQTF

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040

Attachments? N

CROSS REFERENCES

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Comment: 3. The economic analysis used by USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. Again setting aside the issue of WQBELs for MS4s, the economic analysis is inadequate. Under Executive Order 12866 USEPA must determine whether the CTR is "significant" and subject to OMB review. One of the criteria in assessing whether a proposed regulation is significant is to determine if it has an adverse effect resulting in an annual cost of \$100 million or more. To address this criterion USEPA estimated the cost and benefit of the proposed regulations. Based on this analysis USEPA determined that the CTR was not a "significant regulatory action".

USEPA used two different economic models in assessing the CTR. The model that proved more applicable consisted of an analysis that focused on direct compliance costs (such as capital costs and O&M for end-of-pipe control, indirect source control, (e.g. pretreatment programs) pollution prevention, monitoring and costs for pursuing alternative methods of compliance). However, the entire focus of the compliance cost was on the point sources with individual NPDES permits, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in USEPA's analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP program (over and above what an MS4 has in place already). This assumption appears to be applied to both municipal and industrial stormwater interests. We point to studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District which show this to be incorrect, i.e. an aggressive BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for an aggressive BMP program is significant and would increase much more substantially if an MS4 was required to construct end-of-pipe treatment for compliance.

It may be argued that an MS4 would seek regulatory relief from the criteria before incurring the cost of end-of-pipe treatment. Even assuming such relief would be forthcoming, the economic analysis failed to address the cost for treatment, or for a BMP program, or for seeking regulatory relief for MS4s. As a result the overall cost for compliance is significantly underestimated. By assigning zero cost to the MS4s for compliance, the cost benefit analysis is severely flawed.

Recommendation: USEPA should not implement the proposed criteria until such time an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-027-003

See response to CTR-013-003.

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Comment ID: CTR-027-009b

Comment Author: California SWQTF  
Document Type: Storm Water Auth.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040  
Attachments? N  
CROSS REFERENCES R

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Comment: 9. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems if the proposed criteria are adopted. While most small communities have not conducted discharge characterization studies; it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless EPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule (\*3), USEPA indicates that no small entities are impacted by the rule, and, therefore, USEPA did not need to complete an analysis required under the Act. USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. USEPA should have conducted an analysis on the economic impacts to smaller communities.

Recommendation: Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be promulgated until USEPA has complied with the requirements of the Regulatory Flexibility Act.

(\*3) Federal Register, August 5, 1997, Vol. 62, No. 150, page 42191

Response to: CTR-027-009b

See response to CTR-013-008b.

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Comment ID: CTR-027-010  
Comment Author: California SWQTF  
Document Type: Storm Water Auth.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040  
Attachments? N

## CROSS REFERENCES

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Comment: 10. The proposed rule failed to address the economic impacts it may have on industrial stormwater dischargers. Industrial stormwater dischargers that are currently regulated by a stormwater permit, and all future industrial dischargers that will come into the program under Phase II will be required to comply with the proposed criteria. Cost of compliance with the proposed criteria for certain industries may be prohibitive, yet USEPA did not address this potential impact in its economic analysis. In addition many of these industries are small entities that should be addressed under the Regulatory Flexibility Act.

Recommendation: The proposed rule should not be promulgated until USEPA conducts an adequate economic analysis that addresses the economic impact the rule may have on industrial stormwater dischargers, including the impact to small industries.

Response to: CTR-027-010

EPA believes it that it has conducted an adequate analysis which addresses industrial stormwater dischargers and that the CTR must be promulgated under the Clean Water Act. For further discussion see responses to CTR-013-003 and CTR-013-008b.

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Comment ID: CTR-028-001b

Comment Author: City of Folsom

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-028 incorporates by reference letter CTR-040

Attachments? N

CROSS REFERENCES R

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Comment: The City is a small community with a population of less than 50,000. We volunteered to participate in the Sacramento Stormwater Management Program as a co-permittee on the NPDES permit because we understood that it was a BMP-based program aimed at reducing the discharge of pollutants to the maximum extent practicable. We are very concerned with the CTR's Preamble statement that municipal stormwater agencies must comply with effluent limitations based on water quality criteria. As the County has stated in its comments, this will result in enormous costs without producing significant environmental benefits.

We are also concerned that the EPA Administrator has certified that the CTR will have no effect on small entities such as the City. Based on the estimated compliance costs prepared by the County and the statewide estimates prepared by the California Storm Water Quality Task Force, the CTR will have significant economic effects on small communities throughout the State. For example, our proportional share of the countywide costs to comply with effluent limitations, based on the proposed water quality criteria, could be over \$10 million per year.

We urge EPA to reconsider its position that municipal stormwater discharges must comply with water quality standards. EPA should remove the Preamble statement or clarify that municipal stormwater

discharges are only required to reduce the discharge of pollutants to the maximum extent practicable.

Alternatively, EPA must revise its economic analysis to include the costs to municipal stormwater agencies and the EPA Administrator must withdraw her certification and, pursuant to the requirements of the Regulatory Flexibility Act, assess the economic impacts of the CTR on small entities.

Response to: CTR-028-001b

See response to Comment CTR-013-003, CTR-013-008b, and CTR-040-004.

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Comment ID: CTR-031-002d

Comment Author: Fresno Metro. Flood Ctrl Dist.

Document Type: Flood Ctrl. District

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-031 incorporates by reference letter CTR-027

Attachments? N

CROSS REFERENCES F

C-17a

C-17b

V

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Comment: 2. Since the preamble implies that CTR criteria may be applied in NPDES permits for municipal storm water dischargers as numeric effluent limitations, the proposed rule is flawed with regard to: a) setting attainable, scientifically valid criteria in a manner consistent with state and federal regulatory approaches; b) assessing the potential economic impact on the public served by municipal storm water dischargers; c) assessing environmental impacts pursuant to the National Environmental Policy Act and the Endangered Species Act; and d) providing for the coordinated review and evaluation of the proposed CTR in conjunction with the proposed State Implementation Plan.

Response to: CTR-031-002d

See response to CTR-013-003.

With respect to comments about the Endangered Species Act see response to CTR-031-002e (Category V; Collaborative Approach). With respect to the comment about coordination with the State Implementation Plan see response to CTR-031-008b (Category V; Collaborative Approach).

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Comment ID: CTR-031-006a

Comment Author: Fresno Metro. Flood Ctrl Dist.

Document Type: Flood Ctrl. District

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-031 incorporates by reference letter CTR-027  
Attachments? N  
CROSS REFERENCES R  
E-01c

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Comment: b. If the CTR as proposed in the current draft is applied to municipal storm water dischargers so as to require numeric effluent limitations in municipal stormwater permits, the cost to the public will be phenomenal. In the economic analysis of the CTR, EPA failed to consider these costs, and failed to consider the costs to industrial storm water dischargers as well.

The District Is urban storm water drainage system captures through retention 90% of its annual average runoff, and discharges 90% after detention (1% is directly discharged without treatment). The system cost in 1997 dollars is estimated at \$500 million.

The only option available to the District to mitigate violations of the proposed criteria would be to expand system storage to capture 100% of average annual runoff. Increasing system storage by 20,000 acre feet (estimated additional storage required for average years), at the current cost of \$11,000-\$20,000 per acre foot of storage, would result in a capital expenditure of \$220,000,000 to \$400,000,000.

Even with this exorbitant investment, in approximately half of the rain seasons storage would be exceeded, and 100% of the discharges would be expected to exceed the dissolved metals criteria noted above.

Smaller cities (under 50,000) in California are currently subject to NPDES municipal storm water discharge permits, and many more will be included upon implementation of the Stormwater Phase II program. EPA's failure to assess economic impacts on small cities would appear to be contrary to the requirements of the Federal Regulatory Flexibility Act.

The District includes in its constituency industrial businesses. The District serves these businesses and assists in the oversight of their pollution prevention and storm water permit compliance efforts. Regardless of EPA's approach to applying the CTR to municipal storm water permits, industrial storm water dischargers are directly and seriously affected by application of the CTR. EPA's failure to assess these economic impacts on our communities is short-sighted and a breach of good public policy.

Response to: CTR-031-006a

With respect to the commenter's estimate of its stormwater costs see response to CTR-040-004. With respect to EPA's compliance with the Regulatory Flexibility Act see response to CTR-013-008b.

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Comment ID: CTR-034-014e  
Comment Author: SCAP  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References: Letter CTR-034 incorporates by reference letter CTR-035  
Attachments? N

## CROSS REFERENCES E-01g08

E-01b

E-01e

E-01v

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Comment: \* In general, we are pleased that EPA prepared an analysis of the economic impacts of the proposed CTR, and that a major portion of EPA's work focused on determining the potential impacts on POTWs. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Detailed comments can be found in Attachment 2. A few of the areas of concern are listed below:

- \* Small facilities appear to be under represented in EPA's sample of POTWS, especially for minor dischargers.
- \* The cost triggers used as regulatory relief thresholds are unrealistic, and are not consistent with EPA regulations and policies.
- \* The assumptions used to determine cost estimates for indirect dischargers appear to omit a large proportion of potentially affected industries.
- \* The Economic Analysis does not take into account projected population and industrial growth over time, which may influence effluent quality and quantity. Statewide, the population is projected to grow by nearly 50% by 2020.
- \* The use of average cost estimates masks economic impacts on individual dischargers, which may be particularly acute for small communities.
- \* The economic Analysis ignores the costs that may be incurred by stormwater dischargers and nonpoint sources to reduce loadings so that CTR criteria may be met in ambient waters.

Response to: CTR-034-014e

For analysis of the final CTR, EPA updated its Economic Analysis to reflect the most recent data and information for each sample facility and also increased the sample size for minor facilities. Based on this revised analysis, EPA estimated that minor POTWs will incur costs of approximately \$5,000 per facility per year under the low cost scenario and \$7,800 per facility per year under the high cost scenario.

EPA acknowledges that evaluating the impact of each individual direct discharger to inland waters, enclosed bays, and estuaries within the State of California would be the most accurate method to determine impacts of the CTR. However, the resources that would be required to perform such an analysis for each of the over 1,241 direct dischargers are beyond the resources typically available for development of environmental regulations. Therefore, in developing the methodology for estimating the compliance costs for the proposed CTR, time and budget constraints limited EPA's costing review to a subset of the regulated community. However, EPA believes that the sample selected adequately represents the various types of direct dischargers in the State.

EPA acknowledges that minor dischargers were sampled less frequently as compared to the major dischargers. However, by definition, under the NPDES permit program, facilities classified as minor would not be expected to discharge toxic pollutants in toxic amounts. Since the CTR addresses only

toxic pollutants, EPA would not expect significant, if any, impact to minor dischargers.

In analyses of the final CTR, EPA increased the sample of minors by five randomly selected facilities to bolster its analysis. EPA estimated costs of \$872 per minor facility under the low scenario, and \$2,682 per minor facility under the high scenario due to the CTR.

EPA also replaced Silvergate with South Bay in the sample in order to improve the estimate of the impacts of the CTR on the electric utility industry. The draft CTR cost analysis included costs for Silvergate, but the facility had closed and the data available was over five years old. The addition of South Bay, an electric utility facility with no costs, to the sample results in a more realistic, lower overall cost estimate for the electric utility industry.

As described in EA that accompanied the proposed CTR (SAIC and Jones and Stokes Associates, 1997), EPA assumed that regulatory alternatives such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc., are considered under certain circumstances. Specifically, under the low-end scenario, regulatory alternatives were assumed necessary if the cost for a sample facility exceeded \$200 per toxic pounds-equivalent.

EPA assumes that a facility, when faced with the challenge of meeting water quality-based effluent limitations (WQBELs) based on CTR criteria, will select the most cost-effective controls, including regulatory alternatives. In fact, this has been the case in California, where several major POTWs have performed studies in pursuit of regulatory alternatives such as metals translators and site-specific criteria, rather than install costly controls to comply with WQBELs. EPA acknowledges that the actual cost-effectiveness value will vary by facility depending upon many factors, including the characteristics and volume of discharge, the receiving water, etc. However, EPA disagrees that the cost trigger is unrealistic, as it was reasonably based upon the highest reported cost-effectiveness values for industry categories subject to effluent limitations guidelines and standards.

Nonetheless, in the high-end estimate developed for the cost analysis accompanying the final CTR, no cost trigger was used and, thus, EPA's high-end cost estimate did not include the use of a regulatory alternative for any sample facility.

Reference: SAIC and Jones and Stokes Associates, Inc. 1997. Analysis of Potential Costs Related to the Implementation of the California Toxics Rule. Prepared for U.S. EPA, Office of Science and Technology and U.S. EPA Region IX, May 5.

EPA disagrees with the commenter's assertion that the costs for San Jose and Sunnyvale cannot be used to extrapolate costs to indirect users at other POTWs. The procedures for identifying indirect sources contributing specific pollutants to POTWs and developing and implementing a source control plan to minimize these discharges are similar for all types of pollutants. Additionally, similar to San Jose and Sunnyvale, metals were the primary pollutants of concern for POTWs evaluated in the cost analysis. Apart from these studies, EPA has no data upon which to establish facility-level compliance costs for indirect dischargers. To account for this uncertainty, EPA has revised its assumption regarding the percentages of indirect dischargers that may incur these costs. The percentage of facilities that may incur these costs was revised from the initial estimate of from 10% to 30% to a new estimate of from 30% to 70%. EPA believes that these new estimates are highly conservative (i.e. tend to overestimate costs).

Average per facility investment costs for industrial participants were estimated using the mass audit studies for copper and nickel pollution prevention projects with paybacks of less than five years. The average cost per indirect discharger was estimated to be \$61,526 or \$15,000 per year at an interest rate of

7 percent and over a period of five years. The total annual costs to the indirect discharger population in California then were estimated by multiplying the annualized cost (\$15,000) by the total number of potentially affected indirect dischargers.

Under the MAS, the pounds removed by the pollution prevention projects with paybacks of less than five years were 560 pounds per year for copper and 148 pounds per year for nickel. Since neither San Jose nor Sunnyvale required nickel reductions, EPA did not consider pounds removed. Both San Jose and Sunnyvale did require copper reductions under the high-end cost analysis. For San Jose, required reductions equaled approximately 746 non-toxic-weighted pounds per year, however, for Sunnyvale, required reductions equaled 87 pounds per year. Since the industrial facilities to which the MAS results were applied are not as large as the San Jose facility (160 million gallons per day) whose reduction requirements exceed the MAS results, EPA estimated that load reductions from implementing the pollution prevention projects would be adequate.

EPA estimated annual (steady state) benefits and annualized costs. EPA also compared, 20- and 30-years streams of benefits and costs to account for differences in the schedule for experiencing benefits and costs (up-front capital cost and a phase-in of benefits). EPA did not forecast economic, demographic, or policy changes over these time periods. However, EPA does not expect changes in these variables to negatively impact the anticipated ratio of benefits and costs. Instead, EPA believes that increased population and economic activity in the future would likely increase the benefits of achieving standards for toxic pollutants in California waters compared to the cost of controls.

EPA selected sample facilities in order to represent different industry categories, but also various facility sizes with different flow magnitudes. For example, EPA analyzed POTW facilities which fell into three flow categories representing facilities serving very large, medium, and small communities. Costs were averaged for the sample facilities within each flow category for an industry type and then extrapolated to the universe of facilities which matched the industry type and the range in flow for that flow category. Thus, costs calculated for facilities operating in very large communities would not be applied to facilities serving very small communities.

EPA did not include benefits or costs of controlling nonpoint sources or storm water dischargers in its estimates of benefits and costs of the CTR. EPA believes that the final rule will not have a direct effect on sources not permitted under the NPDES program (e.g., nonpoint sources) or NPDES sources not typically subject to numeric water quality-based effluent limits (e.g., wet weather discharges). Any potential indirect effect on nonpoint sources and wet weather discharges, such as runoff from farms, urban areas, and abandoned mines, and contaminated sediment, is either unknown at this time or not a result of this rule. Many of the programs developed to control nonpoint sources and wet weather discharges are already in place. Costs due to these programs have already been incurred or will soon be incurred owing to existing federal, State, and local environmental programs that are distinct from the CTR.

EPA also acknowledges that nonpoint sources and wet weather discharges are technically difficult to model and evaluate costs because they are intermittent and highly variable. Nonpoint source and wet weather discharges also occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, evaluating agricultural nonpoint source discharges and storm water discharges and their effects on the environment is highly site-specific and data intensive. Until this information is available, it is premature to project that the sources would incur any costs beyond those for which they are already responsible under current regulations of the Clean Water Act.

See also responses to CTR-013-003 and CTR-040-004.

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Comment ID: CTR-035-044c  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? N  
CROSS REFERENCES E-01c01  
E-01d01

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Comment: pp. 42188-42189 - Potential Costs Do Not Meet the \$100 Million Threshold Under E 0. 12866 (also see discussion above) As noted on p. 42188, one component of the definition of a "significant regulatory action" is that the rule may have an annual effect on the economy of \$100 million or more. EPA states on p.42189 that "the annualized potential costs that direct and indirect dischargers may incur as a result of State implementation of permit limits based on water quality standards using today's proposed criteria are estimated to be between \$15 million and \$87 million." We believe that this range significantly underestimates the potential costs that may be realized from the implementation of this rule. This belief is based on the numerous assumptions used by EPA that would have served to underestimate potential costs, including assumptions about regulatory flexibility that are clearly contradicted in the Preamble to the rule itself. These issues are further enumerated in Attachment 2, which contains an analysis prepared by the environmental economics firm, M. Cubed. Furthermore, we strongly believe that EPA has a duty to look at a full range of potential costs that may be incurred, and not just to look at the costs under optimistic assumptions. This duty is especially acute in light of the uncertainties of how the CTR will be implemented by the State.

We examined the potential costs for the POTW sector to determine the reasonableness of EPA's cost estimates. Our preliminary analysis indicates that for 23 major POTWs the annualized costs could reach \$400 million.\*3 This estimate includes the cost to construct and operate end-of-pipe treatment processes where these would be necessary to achieve projected effluent limits. Unlike the EPA cost estimates, we have assumed that regulatory relief options may not be available, and that, based on the pollutants causing compliance problems, pollution prevention and treatment plant optimization might not be sufficient to reliably achieve compliance. Thus, we feel that this estimate reflects a more accurate depiction of the potential POTW "high-end" compliance costs that could result from the draft CTR. Based on this analysis, we believe that EPA should re-analyze the potential costs for POTWs to meet water quality-based effluent limits based on the criteria in the CTR.

As noted on p. ES-2 of the Economic Analysis (U.S. EPA, 1997a), EPA estimated only the costs to point sources, and did not estimate the potential costs for compliance for nonpoint source dischargers, despite the fact that the majority of water bodies in California are impaired due to nonpoint source discharges (SWRCB, 1996). In addition, EPA failed to estimate the costs of compliance for wet weather dischargers, such as municipal and industrial stormwater dischargers. These omissions also lead us to believe that the potential total costs of the rule are far greater than \$100 million. EPA must correct these deficiencies and redo the Economic Analysis.

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(\*3) Backup information for these cost estimates is available upon request.

Response to: CTR-035-044c

In response to comments received by EPA on the economic analysis that accompanied the proposed CTR, EPA collected additional data for the sample facilities. EPA also revised its estimate of potential compliance costs attributable to the CTR.

EPA's low estimate of total annualized costs of the final CTR is \$33.5 million per year and its high estimate is \$61.0 million per year. The low and high estimates vary based on whether effluent data or permit limits are used to assess the need for additional controls. They also vary based on whether or not alternative regulatory approaches, such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc., are considered under certain circumstances. EPA believes that its estimates of costs and benefits are sound.

EPA believes that several general observations can be made regarding studies submitted by commenters and how they differ from the EPA cost study for the final CTR. Many commenters assumed that the mere presence of a pollutant would result in costs to comply with a CTR-based WQBEL. It should be noted that the presence of a pollutant in an ambient inland water, enclosed bay, or estuary does not require permitting authorities to establish a WQBEL for that pollutant. The establishment of a permit limit is appropriate only where the permitting authority determines that a pollutant is likely to be present, and that the pollutant concentration has a "reasonable potential" to cause or contribute to an exceedance of the applicable water quality standard. Where the pollutant is not likely to be present, or is not present at levels that have reasonable potential to cause or contribute to a water quality standard exceedance, a WQBEL may not be necessary.

The majority of cost estimates provided by commenters include the costs for the addition of end-of-pipe treatment to achieve proposed CTR-based WQBELs. This was particularly the case when WQBELs were expected to be below analytical detection levels. EPA disagrees that end-of-pipe treatment is necessary to achieve CTR-based WQBELs in all cases. As discussed in SAIC (1995), there are documented cases where waste minimization or source control techniques have been used to comply with existing permit limits established below detection levels. Other examples include the Western Lake Superior Sanitary District (WLSSD), who after evaluating the costs involved to meet more stringent WQBELs for mercury with end-of-pipe treatment, concluded that pollution prevention techniques were the preferable control strategy. As a result, WLSSD published a guide designed to "assist wastewater treatment plant staff with creating and implementing their own mercury reduction projects." As a result of the efforts of WLSSD, effluent mercury levels were found to decrease from 0.58 parts per billion (ppb) to 0.015 ppb.

Although waste minimization or source controls are not always applicable, EPA assumes in its low estimate of costs that a facility would first evaluate whether process changes or modifications are feasible, prior to incurring costs for adding treatment.

In addition, many commenters assumed that compliance would be based on the WQBEL, regardless of whether it is below the analytical method detection level (MDL). This is not consistent with current practice. Instead, the State may use the "minimum level" (ML) (as defined in 40 CFR Part 136) as the required compliance point where a permit limit is established at a value below the MDL. The ML is a value at which the limited parameter can be accurately quantified, and is always greater than or equal to the MDL. To ensure that its cost estimates were conservative (i.e., erring on the side of higher costs),

EPA used the MDL as the compliance level. Although EPA used the pollutant MDL for costing purposes, the Agency acknowledges that estimating treatment costs for WQBELs below the MDL is speculative and likely unrealistic.

Finally, many of the commenters included costs related to installation of treatment for storm water discharges. As further described in the responses to CTR-021-008, CTR-013-003 and CTR-040-004, EPA believes that the final CTR will not significantly affect the current storm water program being implemented by the State, which includes the requirement to develop best management practices to control pollutants in storm water discharges. As such, EPA believes that inclusion of end-of-pipe treatment costs for storm water are inappropriate.

With respect to EPA's analysis of nonpoint source dischargers see response to CTR-034-014e.

Reference: SAIC. 1995. Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance. Prepared for U.S. EPA, Office of Science and Technology, March 13.

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Comment ID: CTR-036-002a

Comment Author: County of Orange

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040

Attachments? N

CROSS REFERENCES E-01c

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Comment: Cost to Implement the Proposed Rule

The inclusion of municipal stormwater discharges under the proposed rule renders the economic analysis invalid, noting municipal studies that show that stormwater discharges cannot comply with all of the proposed criteria with anything short of major national or regional product substitutions, or end-of-pipe treatment:

The Fresno Metropolitan Flood Control District conducted an attainability analysis on stormwater discharges from its urbanized area detention basins. The analysis showed that even with pollutant reductions in the basins, the proposed criteria would not be met.

The Sacramento Stormwater Program conducted an attainability analysis and found that even with an aggressive BMP program the urbanized area would not achieve certain of the water quality criteria, and that the cost of treatment would be on the order of \$2 billion.

A preliminary attainability analysis conducted by Orange County, based on a limited dataset, indicates similar findings to Fresno and Sacramento in spite of the implementation of a significant BMP program over a multi-year period (see Attachment 2).

A nationwide attainability study, conducted by American Public Works Association in 1992, estimated capital costs and annual operations costs to be \$406,734,900,000 and \$542,036,700,000. Significantly, these estimates omitted the costs associated with engineering, administration, permitting and land acquisition.

Even if end-of-pipe treatment were to be implemented for all urban stormwater, the contribution of toxic pollutants from this source is so minor (less than 3% according to the economic analysis) that they could not be justified by the marginal water quality benefits achieved. Clearly a rule that is known from the outset to inevitably result in massive expenditures which provide little water quality benefit or inevitable municipal noncompliance is not appropriate for California.

The rulemaking process of the federal government is obligated to fully explore the economic implications of the proposed regulatory action through compliance with Executive Order 12866, the Unfunded Mandates Report Act, of 1995 (the "Reform Act"), and the Regulatory Flexibility Act (the "RFA"). In its economic analysis EPA appears to have understated costs and circumvented these requirements resulting in a lack of disclosure of the true impacts of the Rule.

Executive Order 12866 requires any "significant" federal regulatory action to be referred to the Office of Management and Budget for review before it can be approved. In this context a "significant" action includes one which will "have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy". Though admitting that there "may be a cost to some dischargers" to comply with water quality standards which will be derived from these toxics criteria, EPA nonetheless argues that the proposed rule is not a significant action because it "establishes ambient water quality criteria which, by themselves, do not directly impose economic impacts." [62 Fed. Reg. 42188].

First nothing in E.O. 12866 indicates that only actions with direct economic impacts are to be considered by OMB. Second, for EPA to ignore the link between the toxics criteria contained in the proposed rule and the obligations they impose is unfounded.

In short, EPA cannot have it both ways. It cannot indicate that stormwater discharges are subject to the proposed toxics rule and then turn a blind eye toward the costs associated with implementation of this rule. The costs of the proposed rule are direct and significant, greatly exceeding the annual % 100 million threshold, and therefore the rule must be submitted to OMB for review.

Response to: CTR-036-002a

EPA believes it properly described the potential impact of the implementation of the CTR on storm drains in the preamble to the proposed CTR and in its Economic Analysis (for further discussion see response to CTR-013-003). With respect to the analyses by the Fresno Metropolitan Flood District and the Sacramento Stormwater program see response to CTR-040-004. EPA believes it is in full compliance with its legal obligations under Executive Order 12866 (see response to CTRH-002-006a; Category I: Stormwater/Wet Weather Flows), the Regulatory Flexibility Act (see the preamble to today's rule, response to CTR-013-008b, and CTR-050-007a), and the Unfunded Mandates Act (see the preamble to today's rule and response to CTR-036-006a).

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Comment ID: CTR-036-003b  
Comment Author: County of Orange  
Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040

Attachments? N

CROSS REFERENCES S

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Comment: EPA also has failed to meet its obligations under the Unfunded Mandates Reform Act of 1995 (the "Reform Act"). As with E.O. 12866, the Reform Act requires federal agencies to assess the effects of their regulatory actions on state, local and tribal governments, and on the private sector [U.S.C. section 1531]. Among other things, the Reform Act requires the preparation of a cost-benefit analysis and the examination of a range of alternatives, whenever the proposed action may result in expenditures in excess of \$100 million [2 U.S.C. sections 1532, 1535]. In addition, the Reform Act contains a number of specific requirements where an action may significantly or uniquely impact small governments [2 U.S.C. section 1533].

EPA asserts again that it does not have to comply with the Reform Act because the proposed rule "imposes no direct enforceable duties on the State or any local government or on the private sector." [62 Fed. Reg 42160, 42191]. For the reasons discussed earlier, this assertion is without merit. As EPA acknowledges, these criteria will serve as the basis for any water quality standards promulgated by the State, which in turn will be binding on local government and private industry. Unless EPA is prepared to view these criteria as being optional, it therefore cannot in good conscience state that they do not create an enforceable duty. Given this, EPA must comply with the mandates of the Reform Act

Response to: CTR-036-003b

With respect to EPA's compliance with UMRA see response to CTR-036-006a (Category S:UMRA) and the preamble to the final rule.

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Comment ID: CTR-036-004a

Comment Author: County of Orange

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040

Attachments? N

CROSS REFERENCES R

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Comment: Finally, EPA has not met its duties under the Regulatory Flexibility Act (the "RFA"). Under the RFA, federal agencies are required to conduct an initial regulatory flexibility analysis ("IRFA") describing the impact of a proposed regulatory action on small entities. Once more relying on the claim that the proposed rule does not establish criteria that are directly applicable to small entities, EPA states that the mandates of RFA do not apply [62 Fed. Reg. 41160, 42191-92].

This position is contrary to both the letter and the spirit of the RFA. The fact that the toxics criteria contained in the proposed rule must be translated into water quality standards and, in turn, NPDES permit effluent limitations, does not negate the fact that the burden of complying and implementing such toxics criteria ultimately will be borne by individual municipalities and business entities. As noted above, the costs to municipalities alone could run into billion of dollars placing a severe strain on their budgets and forcing them to divert funds currently allocated to other important municipal services, including public safety.

Moreover, EPA's statement that "California will have a number of discretionary choices associated with permit writing" is disingenuous and ironic in light of EPA's rationale for issuing the proposed rule. The toxics criteria will necessarily narrow the State's discretion in issuing NPDES permits and in establishing effluent limits for such permits. If EPA had meant for the State to have any serious discretion, it would not be promulgating these criteria in the first place.

Response to: CTR-036-004a

The purpose of the CTR is to fill the current gaps in water quality criteria in inland surface waters, enclosed bays, and estuaries. EPA disagrees that the State will not have substantial discretion in issuing NPDES permits under the rule. The CTR establishes pollutant levels necessary to protect designated uses. Establishing numeric criteria in the CTR does not limit the discretion of permit writers to use appropriate and flexible tools such as mixing zones or translators for dissolved metals criteria in establishing effluent limits. In addition, if a discharger believes the CTR criterion is inappropriately overprotective of the designated use, the discharger can request the State and EPA to approve a site-specific criterion or to downgrade the designated use.

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Comment ID: CTR-040-004

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES

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Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

1. Concern: The Rule, as presently proposed, appears to require discharges from municipal stormwater programs to meet water quality based effluent limits (WQBELs).

\* The enclosed attainability analysis (See Attachment A) demonstrates that implementation of an

aggressive BMP-based program will cost on the order of \$20 million per year. And, despite the implementation of ever escalating BMPs, the Sacramento Stormwater Management Program will not achieve several of the proposed aquatic life criteria (for copper, lead, and zinc) and human health criteria (for PAHs).

Response to: CTR-040-004

EPA disagrees with the commenter's interpretation of the language regarding wet weather discharges in the proposed CTR, and has clarified the language in the section of the CTR that discusses the applicability of the rule to wet weather discharges. EPA believes that the CTR language allows the practice of applying maximum extent practicable (MEP) to MS4 permits, along with best management practices (BMPs) as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELs.

Section 402(p)(3)(B) requires municipal separate storm water systems to 1) prohibit non-storm water discharges, and 2) reduce the discharge of pollutants in storm water to MEP. The Agency has purposely not defined MEP to allow municipalities flexibility in designing pollution control measures. MEP is a dynamic performance standard which requires the municipality to demonstrate permit compliance in many ways including the use of BMPs, proper maintenance of their BMPs, and ongoing assessment of BMP performance in reducing pollutant discharges. EPA has determined that, where sufficient information does not exist on which to base WQBELs, or where infeasible, the use of BMPs is consistent with the requirement that municipal storm water programs require controls to reduce the discharge of pollutants to MEP in order to attain and maintain water quality standards.

EPA articulated its position on the use of BMPs in storm water permits in the Interim Permitting Approach For Water Quality-Based Effluent Limitations In Storm Water Permits signed by the Assistant Administrator for Water, Robert Perciasepe on August 1, 1996 (61 FR 43761, August 19, 1996). The policy focuses on the question of the applicability of WQBELs to MS4 permits, and whether or not numeric effluent limitations are required, or could be represented by other control mechanisms such as BMPs. The policy affirms the use of best management practices as a means to attain water quality standards in storm water permits. The policy reads as follows:

In response to recent questions regarding the type of water quality-based effluent limitations that are most appropriate for National Pollutant Discharge Elimination System (NPDES) storm water permits, the Environmental Protection Agency (EPA) is adopting an interim permitting approach for regulating wet weather storm water discharges. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), EPA will use an interim permitting approach for NPDES storm water permits.

The interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate.

This interim permitting approach is not intended to affect those storm water permits that already include appropriately derived numeric water quality-based effluent limitations. Since the policy only applies to water quality-based effluent limitations, it is not intended to affect technology-based limitations, such as those based on effluent guidelines or the permit writer's best professional judgement, that are incorporated into storm water permits.

Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.

This interim permitting approach applies only to EPA; however, EPA also encourages authorized States and Tribes to adopt similar policies for storm water permits. This interim permitting approach provides time, where necessary, to more fully assess the range of issues and possible options for the control of storm water discharges for the protection of water quality. This interim permitting approach may be modified as a result of the ongoing Urban Wet Weather Flows Federal Advisory Committee policy dialogue on this subject.

EPA also reviewed the attached report entitled "Technical Report Assessing the Attainability of Water Quality Criteria Proposed in the California Toxics Rule," a report prepared for Sacramento County Stormwater Management Program by Larry Walker Associates (LWA). In response, EPA has the following concerns and comments regarding various aspects of the report and its conclusions.

#### General Limitations of the Analysis

- \* LWA do not provide the raw data upon which they base their conclusions regarding potential compliance problems with the proposed CTR water quality criteria. Without the raw data, EPA could not fully assess the validity of the analysis.
- \* The data may not be representative of the storm water discharges to the American and Sacramento Rivers. Most samples were collected for first-flush events, usually one hour or less in duration. As a result, the in stream exposure period is probably one hour at most, which corresponds to the exposure period for acute criteria, not chronic criteria as used in the LWA analysis.
- \* LWA report that applying BMPs to storm water would not result in attainment of criteria as proposed in the CTR. However, LWA focus on the most stringent (and unlikely) scenario for attainability of criteria (i.e., applying chronic criteria with no allowance for dilution). According to LWA's own analysis, BMPs would nearly achieve compliance under the scenario of applying acute criteria and dilution factors to storm water flows. If mathematical errors in LWA's Table's 11 and 12 are corrected, the analysis demonstrates compliance with acute criteria for even the 99.91 percentile values of copper, lead, and zinc in the Sacramento River, and for lead in the American River, with no additional treatment.
- \* The analysis also may not be reflective of the compliance scenario for other California waters. The metals criteria are based on a low hardness value for the American River (25 mg/l as CaCO<sub>3</sub>). This hardness value is lower than any of the hardness values observed for the economic analysis of sample facilities throughout California. As a result, the criteria for the American River are very stringent (i.e., criteria become more stringent with lower hardness) compared to criteria for California waters in general.
- \* LWA compare the concentration of the dissolved fraction of metals in the discharge to the instream criterion values expressed as dissolved metals to assess compliance. This approach may be overly stringent because it does not account for the partitioning of dissolved metals present in the discharge to suspended solids present in receiving waters (particularly during a storm event when suspended solids are elevated). Thus, less dissolved metals may be available in the water column than LWA's analysis

would estimate. In addition, this is not the approach that is used to determine compliance under the NPDES program. The NPDES regulations require all permit limits for metals to be expressed in terms of "total recoverable metals" [40 CFR 122.45]. In order to determine whether a discharge would meet NPDES permit limits developed to protect water quality, the instream criteria should not be used directly, but should be converted to a water quality-based effluent limit (WQBEL) using the EPA standards-to-permits procedures. The development of WQBELs expressed as total recoverable metals accounts for the partitioning of dissolved metals (present in the discharge) to suspended solids that are present in the receiving water. EPA used this approach in its cost evaluations.

\* Cost estimates provided in the LWA analysis for complying with the CTR appear to mix BMP implementation costs to comply with Sacramento's storm water permit with new compliance costs resulting from the CTR. EPA's economic analysis only evaluates the incremental impact of the water quality standards for toxics compared to the baseline program to avoid a double counting of costs (and benefits).

### Specific Data and Sampling Issues

\* LWA calculated average event mean concentrations (AEMC) to represent the entire urbanized drainage area of Sacramento County. Samples were combined to calculate AEMCs (based on contributions of 95% commercial/residential and 5% industrial) utilizing three sampling locations. Although LWA indicate that both grab and composite samples were collected to estimate the AEMCs, as well as annual loadings, it is unclear how the different sample types were used. According to the EPA's Guidance Manual For The Preparation of Part 2 of the NPDES Permit Applications for Discharges From Municipal Separate Storm Sewer Systems (EPA 833-B-92-002), an event mean concentration (EMC) is determined from analyses of flow-weighted composite samples. In order to qualify as a valid sample, the storm event must be sampled for at least three hours, or for the entire storm if the event lasts less than three hours. Of great importance in such derivations is consistency in methodology, i.e., the first method employed must always be employed to ensure that results can be compared. LWA do not provide any information to confirm the consistency of sampling procedures.

\* LWA completed a discharge characterization project (DCP) for storm water discharges in 1996 (not included as part of commenter's submission). LWA state that the DCP evaluated all urban runoff monitoring data available. However, it is not clear whether the data set used for the DCP was the same as that analyzed for the current report, or whether it was more extensive. LWA state that the DCP used "statistical modeling" (unnamed methodology) to "characterize and estimate" mass loadings. They also state that data on heavy metals, conventional and non-conventional pollutants were "updated for 1996/1997 data. However, they do not report which procedures governed the "update," whether the data sets were consistent, or under what circumstances they were sampled and analyzed. EPA believes that this lack of information makes it impossible to evaluate the methodologies used to extrapolate the data set and draw conclusions as to its appropriateness in demonstrating nonattainability of toxic criteria. In addition, LWA cite a "robust statistical method" for deciding whether to use detection limit values for nondetect data. This method is not described.

\* It appears from Charts 1 through 5 presented in the report, that LWA use a limited data set (not included as part of commenter's submission) for each of the pollutants of concern, and use statistical projections to predict "worst case" (i.e., 95th, 99th, and 99.91th percentiles) discharge values. These predicted discharge concentrations are then used to assess whether instream criteria would be met. This is an extremely conservative approach that would not be used by EPA to establish compliance with water quality-based effluent limits or water quality criteria. To assess the potential for metals and organics to exceed aquatic life and human health criteria during intermittent, high flow, storm water episodes, a

complex dynamic modeling effort would be required. This procedure is highly data intensive, and is beyond the scope of this costing analysis; nevertheless, it should have been employed in the LWA analysis to accurately determine the potential for exceedances of criteria. The generalized technical approach for assessing compliance with the applicable criteria is described in EPA's Technical Support Document for Water Quality-Based Toxics Control (March 1991). For typical point sources, this is performed by developing wasteload allocations (using steady-state models, under low flow conditions) and developing WQBELs based on these wasteload allocations. The process of developing wasteload allocations and WQBELs that would be protective of applicable criteria during storm events is significantly more difficult, and is not described in current EPA guidance. The EPA Center for Exposure Assessment Modeling (CEAM), located at the National Exposure Research Laboratory in Athens, Georgia, maintains and distributes environmental simulation models and databases for urban and rural nonpoint sources. Information on dynamic models and their use for storm water modeling can be obtained through CEAM.

#### Cost Methodology Issues

\* It is unclear why Tables 7 and 7a were included in the analysis. These tables appear to present costs associated with the implementation of the BMPs required by the current Sacramento MS4 permit. They are, therefore, distinct from any incremental attainment costs associated with treatment of storm water due to water quality criteria. The potential costs resulting from the alternative of collecting and treating all storm water prior to discharge are summarized in Figure C, however, no details, explanatory notes, or assumptions are presented in support of this estimate.

\* Figure B states that capital costs range from \$160 to \$187 million. However, EPA notes that only the higher value is presented in the summary. The choice to use only the higher value is not explained. It appears that the difference in the values results from the assumed level of engineering and other costs (50% of capital costs, as opposed to 30%, see Table 7). Other published sources have traditionally used a percentage more consistent with the lower of the two values referenced in Table 7 (see, for example, Estimating Costs for the Economic Benefits of RCRA Noncompliance, U.S. EPA, March 1997, page 1-4, where the percentage increase due to engineering and inspection, contractor's overhead and profit, and contingency is 35%).

#### Other Methodological Issues

\* LWA do not clearly state what proportion of the County's runoff enters the American River versus the Sacramento River. LWA base their presentation largely on discharges to the American River which has a two-fold lower hardness concentration, resulting in the most stringent metals criteria. As noted above, a hardness value of 25 mg/l (as CaCO<sub>3</sub>) is on the very low end of the range for receiving waters considered in the CTR analysis.

\* LWA focus their presentation on the "no dilution" scenario. However, both the American and Sacramento Rivers provide substantial dilution (reducing runoff concentrations by 51% and 86%, respectively). The analysis developed in the LWA report summarizes the results of this evaluation in Tables 11 and 12. In presenting the data, the LWA evaluation incorrectly calculates the dilution provided by the Sacramento River. When correctly calculated, the analysis indicates that the acute criteria for all of the metals would be met at the 99.91 percentile value in the Sacramento River. In addition the acute criterion for lead would be met for the American Rivers. Furthermore, compliance with copper and zinc criteria would practically be achieved assuming dilution and implementation of BMPs (i.e., 70% reduction of copper and zinc by BMPs). In their assessment of instream mixing, the LWA analysis used ambient background pollutant concentrations presented in Tables 11 and 12. While

all other values are indicated as "dissolved" concentrations, no such note is provided for the background data. If these values are expressed as total metals it would overestimate the background load and thus underestimate the available assimilative capacity of the stream.

\* Similarly, the LWA does not account for in-stream dilution in its evaluation of the potential for PAH compounds and pentachlorophenol to exceed human health criteria. In its evaluation, LWA again projects worst case (i.e., 95th, 99th, and 99.91th percentile) storm water concentration values and compares these values directly to ambient human health criteria. This approach significantly overestimates the potential for exceeding these criteria. Human health criteria are developed assuming a lifetime exposure to the pollutant at a daily ingestion rate of 2 liters of drinking water and ingestion of an assumed mass of aquatic organisms. To account for such long term exposures, EPA permitting procedures recommend using typical stream flows (e.g., harmonic mean) in developing wasteload allocations. The calculated wasteload allocations are also assumed to represent long-term averages (i.e., average monthly permit limits) rather than maximum daily values. Depending on the available dilution, this approach generally results in WQBELs much higher (i.e., less stringent) than the actual criterion values. Based on LWA projections, it appears that even a small allowance for dilution would resolve the compliance concerns or pentachlorophenol. The potential for compliance concerns identified by LWA for PAH compounds could only be accurately determined based on the results of the dynamic modeling assessment previously discussed.

\* In calculating the allowable discharge concentration ( $C_e$ ) for lead and zinc, LWA used detection level values for ambient background concentrations even though no lead or zinc were measured. Since background concentrations may actually be significantly lower than the detection level, this may result in an overly stringent  $C_e$  (and thus more costly to achieve).

Comments from the Fresno Metropolitan Flood Control District (Fresno) and the California Department of Transportation (Caltrans)

EPA also reviewed comments submitted by the Fresno Metropolitan Flood Control District (Fresno) and the California Department of Transportation (Caltrans) on the CTR provisions relating to storm water. In response, EPA has the following concerns and comments regarding various aspects of the submissions and their conclusions. Some of these issues are addressed in the above review of LWA's submission and are so referenced.

#### General Limitations of the Analysis

\* Neither Fresno nor Caltrans provide the raw data upon which they base their conclusions regarding potential compliance problems with the proposed CTR water quality criteria. Without the raw data, EPA could not fully assess the validity of the analysis.

\* Caltrans' data came from eight storm events at three urban freeway sites in the Los Angeles area, but the sampling methodology is not specified (i.e., first flush, peak, outfall, street, etc.). The data may not be representative of the storm water discharges for all Caltrans facilities. Fresno does not specify the sampling methodology nor the number of sites or storm events sampled.

\* Fresno reports that applying BMPs (including end-of-pipe) to storm water would not result in attainment of criteria as proposed in the CTR. However, Fresno presents a stringent (and unlikely) scenario for attainability of criteria (i.e., applying chronic criteria).

\* Caltrans reports that applying source reduction and nonstructural BMPs will not provide the reduction

necessary to meet the criteria. End-of-pipe treatment would be required. Although acute criteria are used in this analysis, no data or estimates are provided to demonstrate that BMPs would not result in reductions needed to comply with properly developed WQBELs.

- \* The analysis also may not be reflective of the compliance scenario for other California waters.
- \* Fresno and Caltrans compare the concentration of the dissolved fraction of metals in the discharge to the instream criterion values expressed as dissolved metals to assess compliance. See the response to LWA for EPA's discussion of the problems with this approach.
- \* Cost estimates provided in the Fresno and Caltrans analysis for complying with the CTR may mix BMP implementation costs to comply with local storm water permits with new compliance costs resulting from the CTR. EPA's economic analysis only evaluates the incremental impact of the water quality standards for toxics compared to the baseline program to avoid a double counting of costs (and benefits).

#### Specific Data and Sampling Issues

- \* Caltrans specifies that consistent procedures were used at all three sampling sites, but it does not specify the exact methodology (i.e., sampling duration, first flush, etc.). Of great importance in data analysis is consistency in methodology, i.e., the first method employed must always be employed to ensure that results can be compared.

Fresno does not describe its sampling procedures or methodology.

- \* Caltrans uses a limited data set (not included as part of commenter's submission) for each of the pollutants of concern, and uses statistical projections to predict "worst case" (i.e., 99.91th percentile) discharge values. These predicted discharge concentrations are then used to assess whether in stream criteria would be met. This is an extremely conservative approach that would not be used to establish compliance with water quality-based effluent limits or water quality criteria because compliance is based on measured values and not on statistically derived worst case values.

#### Summary and Recommendations

The LWA report was based on storm water data collected at outfalls discharging to the American and Sacramento Rivers. The report did not provide the raw data, nor did it provide detailed information on how these data were collected. The primary scenario described in the report (i.e., comparing projected worst case discharge concentrations directly to chronic aquatic life and human health criteria with no allowance for dilution) is highly conservative in comparison with the water quality-based permitting and compliance procedures that would be implemented by EPA. The LWA analysis also did not consider the equilibrium partitioning of dissolved and total metals that may occur instream during a storm event. An ancillary analysis summarized in the LWA report compared the maximum projected discharge concentrations (99.91 percentile values) of copper, lead, and zinc to the acute aquatic life criteria accounting for dilution. If errors are corrected in the LWA spreadsheet, the LWA data indicate that there would be no compliance problems for these parameters in the Sacramento River, and that BMPs would likely result in compliance in the American River. While the LWA analysis provides information that could be useful in determining "reasonable potential" for possible WQBEL development, the approach is not consistent with water quality-based permitting procedures or EPA's approach to compliance assessment.

To accurately determine whether additional treatment would be necessary to control storm water discharges to the American and Sacramento Rivers, EPA would conduct a comprehensive modeling effort to develop appropriate WQBELs. The WQBELs (for organics and total metals), would be developed using dynamic models to account for the intermittent loadings and exposures from the storm water discharges. EPA recognizes that the determination of appropriate WQBELs for storm water outfalls is a difficult modeling effort that requires intensive data collection and verification. The LWA report has not utilized this approach, and the necessary level of effort is not within the scope of the agency's CTR analysis.

In summary, the CTR language allows (consistent with EPA's policy) the practice of applying MEP to MS4 permits, along with BMPs as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELs. Neither the LWA report, nor the Fresno and Caltrans comments, provide a definitive argument that storm water dischargers cannot achieve compliance with the proposed water quality criteria or that compliance would result in widespread economic impact or hardship. Although none of the three comment submissions discussed above provide the raw data used for their analyses for EPA to fully assess the validity of the analyses, their methodology does not assess compliance with WQBELs as would be developed by EPA. In particular, the assessments do not account for dilution or the partitioning of dissolved metals to suspended solids present in the receiving waters. LWA and Caltrans also do not apply the appropriate criteria in assessing compliance and use statistical projections to predict "worst case" discharge concentrations, an approach that would not be used to establish compliance with WQBELs or water quality criteria. In addition, LWA's estimated costs do not accurately portray the incremental expense to Sacramento County resulting from implementation of the CTR, that is, the costs attributable to the CTR criteria that are over and above the cost of implementing the current storm water program.

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Comment ID: CTR-040-006

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES

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Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

1. Concern: The Rule, as presently proposed, appears to require discharges from municipal stormwater programs to meet water quality based effluent limits (WQBELs).

\* In order to achieve WQBELS, it will be necessary to intercept all of the urban runoff from the Sacramento metropolitan area (including that discharged to urban streams and the American River),

transport it to an area near the Sacramento River for equalizing storage and subsequent end-of-pipe treatment, and then discharge it to the Sacramento River (See Attachment A). The capital cost of this structural control program is estimated to be on the order of \$2.5 billion. Amortizing that cost over a 20-year period, at 7% interest and including annual operation and maintenance costs, the total annual cost to bring Sacramento urban stormwater into compliance with the proposed criteria is on the order of \$260 million per year.

\* Even this enormously expensive end-of-pipe treatment will not guarantee achievement of the proposed criteria (e.g., PAH removals of 99% may not be achievable with the proposed end-of-pipe treatment which formed the basis of the cost estimate).

Further, as indicated in the attainability analysis provided in Attachment A, this \$260 million per year program may not result in any net environmental benefits. Extensive ambient river monitoring over the past five years has shown that copper, lead, and zinc levels in the American and Sacramento Rivers generally comply with the proposed criteria and are not significantly impacted by stormwater discharges (PAH data are not available). On the other hand, the removal of stormwater discharges from the urban streams would likely have a negative environmental impact. It would lead to destruction of the aquatic and riparian habitat which currently exists. Thus, this \$260 million per year program would not lead to any of the types of benefits that formed the basis of EPA's benefits analysis, including fishing use benefits, reduced cancer benefits, or passive benefits. In this case, the cost is \$260 million per year and there may be no net environmental benefits. Therefore, pursuant to Presidential Executive Order 12866 and the Unfunded Mandates Reform Act, -EPA should consider alternative criteria for copper, lead, zinc and PAHs for those waters in the Sacramento area.

Response to: CTR-040-006

See response to CTR-040-004.

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Comment ID: CTR-040-007

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

**CROSS REFERENCES**

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Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

II. Concern: The economic analysis upon which the Rule is based is seriously flawed.

\* Consideration of any costs to urban stormwater dischargers is not included in the analysis.

Response to: CTR-040-007

See response to CTR-013-003.

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Comment ID: CTR-040-010a

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES R

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Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

\* The cities of Folsom and Galt, co-permittees in our stormwater program, both have populations less than 50,000. Their costs associated with complying with the effluent limitations proposed in the Rule would be significant (on the order of \$10 million annually for each city). Therefore, the EPA Administrator's certification that the Rule would have no effect on small entities, pursuant to the requirements of the Regulatory Flexibility Act, is incorrect.

Response to: CTR-040-010a

See response to CTR-013-008b.

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Comment ID: CTR-040-014b

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES I-02

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Comment: RECOMMENDED MODIFICATIONS

To address our concerns, we recommend the following modifications which do not undermine the toxic pollutant control actions envisioned in EPA's economic analysis (e.g., BMPs for stormwater and source control). In fact, some of these recommendations would provide incentives for greater movement toward achieving the water quality criteria than would occur under the Rule as it is currently proposed.

I. Recommendation: Modify the Preamble statement that indicates municipal wet weather discharges must comply with water quality standards or WQBELs (Preamble pages 42186-42187).

\* It is not a requirement of the CWA or EPA that wet weather discharges must meet water quality criteria. If it were, the adverse economic impact on municipal stormwater programs would be enormous. The CWA, at best, is ambiguous on this issue; EPA regulations do not address it; and the Elliott memorandum, which appears to be the primary basis for EPA's position on this issue, is not a legitimate basis for such a position. The Elliott memorandum is an internal EPA memorandum and; therefore, is not an independent interpretation of the CWA. The Elliott memorandum does not constitute EPA policy and is based upon a false premise and an inaccurate reading of the preamble to EPA's 1988 proposed stormwater regulations. The Elliott memorandum contains other erroneous conclusions that have never been applied to municipal stormwater permits (e.g., that municipal stormwater dischargers must comply with water quality standards within three years of permit issuance).

\* EPA has routinely approved municipal stormwater NPDES permits that have not included requirements to comply with water quality standards (e.g., Tulsa, OK; Greensboro, NC; Denver, CO; Portland, OR; Cedar/Green (Seattle), WA; Sarasota County, FL; and Phoenix, AZ).

\* If EPA does not modify the Preamble statement to clarify that municipal stormwater dischargers are not required to comply with these water quality standards, then EPA must include the cost of the structural controls necessary for compliance in its economic analysis and, using these costs, address the requirements of Presidential Executive Order 12866, the Unfunded Mandates Reform Act, and the Regulatory Flexibility Act.

Response to: CTR-040-014b

EPA believes the applicability of water quality standards to storm water discharges is outside the scope of the rule. See response to CTR-001-003. With respect to the comment about potential costs to municipal storm water dischargers see responses to CTR-040-004 and CTR-021-006a.

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Comment ID: CTR-047-003

Comment Author: City of Santa Fe Springs

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-047 incorporates by reference letters CTR-013 and CTR-027.

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our storm water program:

3. In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-047-003

See response to CTR-013-003.

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Comment ID: CTR-047-004a

Comment Author: City of Santa Fe Springs

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-047 incorporates by reference letters CTR-013 and CTR-027.

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our storm water program:

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly by the proposed rule. In California, there are many small communities that are currently co-permittee to MS4 permits. Many of the larger municipalities in California have conducted storm water discharge characterization studies. These studies have shown that there are common pollutants associated with storm-water discharges from urbanized areas that could result in compliance problems with the proposed criteria . Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule, it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-047-004a

See response to CTR-013-008b.

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Comment ID: CTR-059-023b

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES E-01g08

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Comment: Economic Analysis

The Sanitation Districts commends EPA for preparing an analysis of the economic impacts of the proposed CTR, and for selecting POTWs for half of the case studies. We believe that EPA is correct in thinking that POTWs are likely to experience major impacts as a result of the promulgation of the CTR. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Our own attainability and cost analysis indicates that there are indeed fundamental flaws in the cost analysis. A few of the areas of concern are listed below:

\* The Economic Analysis ignores the costs that may be incurred by stormwater dischargers and nonpoint sources to reduce loadings so that CTR criteria may be met in ambient waters.

Response to: CTR-059-023b

See response to CTR-013-003.

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Comment ID: CTR-061-002

Comment Author: G. Fred Lee & Associates

Document Type: Academia

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References:

Attachments? Y

CROSS REFERENCES

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Comment: By far, the greatest deficiency with the CTR is the US EPA's failure to include a properly conducted economic analysis associated with the application of these criteria into standards governing the regulation of urban area and highway stormwater runoff-associated constituents. The application of these criteria to this situation will result in significant unnecessary expenditures for chemical constituent control in an effort to try to achieve the criteria values when implemented as standards for receiving waters for urban area and highway stormwater runoff.

Response to: CTR-061-002

See response to CTR-013-003.

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Comment ID: CTR-061-003

Comment Author: G. Fred Lee & Associates

Document Type: Academia

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References:

Attachments? Y

**CROSS REFERENCES**

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Comment: Overall Comments The California Toxics Rule (CTR), as proposed, is significantly deficient in providing an economic analysis that includes information on the cost, and an assessment of the water quality benefits, of ultimately having to meet state water quality standards based on CTR proposed criteria in the receiving waters for urban area and highway stormwater runoff. Without this information, the public, regulatory agencies and the regulated community cannot understand the significant technical deficiencies that exist in the US EPA CTR proposed rulemaking. The CTR should not be finalized until this information has been developed and provided to the public for review and comment. Urban stormwater discharge representative-speaker after speaker at the September 17, 1997 hearing on the proposed CTR was justifiably concerned about the confusing situation that exists today; they are being informed by the US EPA that NPDES-permitted urban stormwater runoff will be subject to meeting water quality standards (objectives) in the receiving waters for the stormwater runoff during the time of runoff and after through a process of ever-increasingly stringent and expensive BMPS.

As I testified at the September 17, 1997 hearing, it is well-understood in the stormwater runoff water quality management field that the US EPA "Gold Book" water quality criteria, including those being promulgated under the California Toxics Rule, are not designed to address short-term, episodic discharges of chemical constituents of the type that routinely occur in stormwater runoff from urban areas and highways. As a result, "administrative" exceedances of the proposed California Toxics Rule criteria can readily occur without any real impairment of the designated beneficial uses of the receiving waters for the stormwater runoff. By real impairment of aquatic life-related beneficial uses I mean alteration of the number, types and/or characteristics of desirable forms of aquatic life in the receiving waters for the runoff, that are of concern to the public who must ultimately pay for the control of chemical constituents in the stormwater runoff.

There has been a sufficient number of studies conducted on the characteristics of urban and highway

stormwater runoff to document that it will indeed be rare that the constituents present in urban stormwater runoff from residential and commercial areas are in toxic, available forms for a sufficient duration and magnitude in the receiving waters for the runoff to be adverse to aquatic life. As long as the US EPA persists with its improperly developed and adopted Independent Applicability Policy (by which chemical criteria/standards have to be met even if appropriately conducted studies show that the constituents of concern, such as heavy metals in urban stormwater runoff, are in non-toxic, unavailable forms) urban stormwater runoff water quality managers face ultimately having to spend large amounts of public funds to avoid "administrative" exceedances of inappropriate criteria/standards for urban stormwater runoff, with no expected improvement in the real beneficial uses of the waterbodies that are of concern to the public who must ultimately pay for the control programs.

Problems with "administrative" exceedances arise from what are well-known to be technically invalid and inappropriate approaches adopted by the US EPA in the 1980s for implementing the "Gold Book" criteria, that the Agency under various administrations has yet to address. These issues are discussed in the attached papers and in references provided therein. Even today, based on discussions at the US EPA's Multi-Regional Water Quality Criteria and Standards meeting that was held at the end of August 1997 in St. Louis, Missouri, the Agency is still unwilling to address in a meaningful way the problems in regulating urban stormwater runoff water quality. For the Agency to announce, as it did at that meeting, that wet-weather water quality management issues are no longer part of the ANPRM for water quality standards, represents a serious deficiency in the Agency's current policy that must be corrected if the public is to be protected from wasting large amounts of funds constructing structural BMPs to work toward achieving CTR-based water quality standards in the receiving/discharge waters for urban stormwater runoff.

As was pointed out by several speakers at the CTR hearing held on September 17, 1997, the US EPA Region 9 and US EPA headquarters made a significant error in developing the California Toxics Rule where those responsible chose to ignore the massive costs that regulated urban stormwater dischargers will ultimately have to bear as part of implementing the California Toxics Rule. I believe that if this matter were taken to the courts, the urban dischargers could force US EPA Region 9/Washington, D.C. to do a proper economic analysis of the cost of ultimately having to achieve water quality standards (objectives) based on CTR criteria. The fact that there is some ill-defined period of time during which the standards/criteria can be met through BMPS does not change the ultimate cost that will have to be borne by the public. It is my assessment that these costs will be on the order of at least \$1 to \$2 per person per day forever for the regulated communities.

Several of the urban stormwater dischargers who testified at the September 17, 1997 hearing reported that their preliminary cost estimates were even greater than those that I projected since not only would they have to construct and operate large treatment works to capture, store and treat urban stormwater runoff so that no more than one exceedance of a criterion/standard occurs every three years, but also they would have to acquire land near waterbodies where such treatment works could be developed. Representatives of Alameda County estimated that more than 50 facilities each the size of the Oakland Coliseum would have to be constructed to store the stormwater runoff from a two-inch, one-day storm. The construction of such facilities in near shore areas of Alameda County on San Francisco Bay might be justified if there were reason to believe that they would solve real, significant water quality use-impairments of San Francisco Bay occurring due to urban stormwater runoff-derived constituents that exceed proposed CTR criteria for protection of aquatic life. However, the fact is that after extensive study, none of the heavy metals in Bay Area urban stormwater discharges has been found to be in toxic, available forms that are causing real water quality use-impairments. Basically, the expenditures of dollars per person per day for the regulated community-dwellers that are now dictated by the Clean Water Act and the US EPA's Independent Applicability Policy arise from the US EPA's failing to address

the obvious, significant problems with the application of the "Gold Book" and now proposed CTR criteria to urban stormwater runoff-associated constituents.

I have found that the urban stormwater runoff water quality managers are not claiming that there are no water quality problems associated with their stormwater discharges. It appears that there may be real water quality problems in urban stormwater discharges due to chemicals such as the organophosphate pesticides (e.g., diazinon and chlorpyrifos) for which the US EPA has either failed to develop a criterion (diazinon) or has failed to implement an existing criterion (chlorpyrifos). I understand that finally, after years of delay during which it has been well-known by the US EPA that diazinon was causing widespread aquatic life toxicity, the Agency is now beginning again to formulate a water quality criterion for this chemical. Additional summary information on the organophosphate pesticide issue is presented in the attached paper, "Diazinon and Chlorpyrifos as Urban Stormwater Runoff Associated Pollutants," June (1997)

It is important to understand that the development of criteria for chemicals such as diazinon does not mean that those criteria will be properly implemented or enforced. The chlorpyrifos situation is an example; chlorpyrifos has been well-known to cause aquatic life toxicity in many communities' stormwater runoff, yet the Agency, including US EPA Region 9, has failed to admit publicly that there is a problem, much less act to control the toxicity problem. Under the current regulatory approach, stormwater dischargers could be required under CTR to spend massive amounts of public funds building "50 Oakland Coliseums" just to store stormwater runoff in Alameda County from a storm magnitude that occurs more frequently than once in three years because of administrative Exceedances of several CTR-regulated heavy metals in the stormwater runoff (which have been repeatedly found to be in non-toxic, unavailable forms, including the dissolved forms), while the treated stormwater discharge to San Francisco Bay could be highly toxic due to unregulated or inadequately regulated organophosphate pesticides. This is an artifact of the inappropriate approaches used by the Agency of focusing on chemicals rather than chemical impacts, i.e., on potential toxicants rather than toxicity. While this approach is bureaucratically simple to administer, it is technically invalid and can lead to a massive waste of public funds in implementing stormwater runoff water quality management programs.

Urban stormwater runoff water quality management is in chaos. This situation has been well-understood for at least five years. While attempts are being made to address these issues through the US EPA headquarters' various wet-weather committees, thus far the fundamental issue that was raised at the September 17, 1997 hearing by urban stormwater discharger after discharger, i.e., ultimately having to achieve water quality standards based on CTR criteria in the receiving waters for the discharge through ever-increasingly stringent BMPS, has not been adequately addressed. While the proposed CTR does not specify a time period over which the BMP ratcheting-down process will occur, there can be no doubt that time period will be set by the courts through litigation brought by environmental groups who will assert that an NPDES-permitted stormwater discharger is not making adequate progress toward achieving the ultimate goal of only one violation of a water quality standard every three years for regulated constituents. Because of the uncertainty of how the courts will handle this matter, stormwater dischargers could be faced with having to achieve water quality standards in the discharge waters within five to ten years. Clearly there is need now to understand the costs and true water quality benefits associated with achieving these standards as part of adopting the CTR as it is applied to regulating urban stormwater runoff water quality.

I have published extensively on these issues. Many of my papers and reports on this topic are available from my web site (<http://members.aol.com/gfredlee/gfl.htm>).

It is my recommendation that US EPA Region 9 and US EPA headquarters postpone any adoption of

the California Toxics Rule until the US EPA properly presents and discusses the potential costs and the potential water quality benefits in terms of real improvements in designated beneficial uses of receiving waters that will likely accrue as the result of regulated urban stormwater discharges' ultimately having to comply with water quality standards based on CTR criteria. The US EPA Region 9 should allow the stormwater dischargers the opportunity to provide information on the costs and benefits arising from applying these criteria to stormwater discharges as required by the Clean Water Act when it becomes clear that BMPS of the type that are readily available today will not eliminate the administrative Exceedances of water quality standards numerically equal to the aquatic life criteria set forth in the CTR. After allowing the urban stormwater dischargers to provide this information, the US EPA then should develop an economic analysis that reliably presents and discusses these issues. This CTR review process is the necessary first step to correcting the significant chaos that now exists in the urban stormwater runoff water quality management field.

Response to: CTR-061-003

See response to CTR-013-003 and CTR-040-004.

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Comment ID: CTR-061-017  
Comment Author: G. Fred Lee & Associates  
Document Type: Academia  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? Y  
CROSS REFERENCES

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Comment: Page 42186, third column, last paragraph and page 42187, first column, first paragraph discuss the application to wet-weather loads. The proposed US EPA criteria will tend to significantly over-regulate wet-weather flows such as urban area and highway stormwater runoff. It is estimated that these costs are on the order of \$1 to \$2 per person per day. This issue is discussed in the attached papers and in other papers on my web site.

Response to: CTR-061-017

See response to CTR-013-003.

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Comment ID: CTR-061-019  
Comment Author: G. Fred Lee & Associates  
Document Type: Academia  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? Y

## CROSS REFERENCES

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Comment: Comments on Economic Analysis of the Proposed Water Quality Toxics Rule

Page ES-2, second paragraph, "Scope of Economic Analysis," states, "In addition, EPA does not calculate costs for NPDES sources which are not typically subject to American WQBEL's including sources required to hold NPDES permits stormwater permit and other wet weather dischargers."

This is a significant deficiency in the cost analysis which makes the CTR largely unreliable. As long as NPDES stormwater dischargers are required to work toward the goal of achieving water quality standards in the receiving waters for stormwater runoff, the cost of achieving these standards must be included in evaluating the potential economic impacts of adopting these criteria. While most NPDES wastewater discharges meet or are close to meeting these criteria at the edge of a mixing zone for the discharge, NPDES-permitted stormwater dischargers in Phase I as well as the soon-to-be-released Phase 2 are not yet even beginning to effectively comply with the requirement of meeting water quality standards in the stormwater runoff during wet-weather runoff events. While it is unknown at this time what the situation will actually be in the future with respect to compliance with water quality standards for NPDES-regulated urban and highway stormwater runoff, until there is a clear, unequivocal policy adopted that exempts urban area and highway stormwater runoff from meeting these criteria, the costs of meeting such standards must be included in a proper evaluation of the cost of implementing these criteria.

Response to: CTR-061-019

See response to CTR-013-003.

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Comment ID: CTR-062-003

Comment Author: City of Downey

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-062 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

3. The economic analysis used by the U.S. EPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The U.S. EPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in the U.S. EPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the U.S. EPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP program (over and above what an MS4 has in place already).

Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP-program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The U.S. EPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers in conducted and assessed.

Response to: CTR-062-003

See response to CTR-013-003.

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Comment ID: CTR-062-004a

Comment Author: City of Downey

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-062 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

4. The proposed rule applies to all current and future MS4 discharges, including small communities. The small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the U.S. EPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the U.S. EPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule, it indicates that there are no small entities to be impacted by the rule, and, therefore, the U.S. EPA did not need to complete an analysis required under the Act. The U.S. EPA neglected to address small MS4 communities in California that are currently subject to MS4 permits, and those smaller communities that may be impacted through Phase II. The U.S. EPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the U.S. EPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-062-004a

See response to CTR-013-008b.

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Comment ID: CTR-071-003

Comment Author: City of Rosemead

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-071 incorporates by reference letter CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan, Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-071-003

See also response to CTR-013-003.

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Comment ID: CTR-071-004a

Comment Author: City of Rosemead

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-071 incorporates by reference letter CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issue as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for small communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis of the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-071-004a

See response to CTR-013-008b.

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Comment ID: CTR-072-003

Comment Author: City of Bell Gardens

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-072 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

**CROSS REFERENCES**

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial

treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-072-003

See response to CTR-013-003.

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Comment ID: CTR-072-004a

Comment Author: City of Bell Gardens

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-072 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits, Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issue as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for small communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis of the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-072-004a

See response to CTR-013-008b.

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Comment ID: CTR-073-003

Comment Author: City of Paramount

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-073 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-073-003

See response to CTR-013-003.

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Comment ID: CTR-073-004a

Comment Author: City of Paramount

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-073 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program.

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issue as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for small communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permit, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis of the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-073-004a

See response to CTR-013-008b.

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Comment ID: CTR-074-003

Comment Author: City of San Gabriel

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-074 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control District shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-074-003

See response to CTR-013-003.

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Comment ID: CTR-074-004a

Comment Author: City of San Gabriel

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-074 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the

proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule, it indicated that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-074-004a

See response to CTR-013-008b.

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Comment ID: CTR-075-003

Comment Author: City of El Monte

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-075 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program;

3. The economic analysis used by The USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-related community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works(POTWs), industrial treatment facilities, and industrial users discharging to POTWS. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to M84 dischargers is conducted and assessed.

Response to: CTR-075-003

See response to CTR-013-003.

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Comment ID: CTR-075-004a

Comment Author: City of El Monte

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-075 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program;

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly affected by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule:, it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase II. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-075-004a

See response to CTR-013-008b.

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Comment ID: CTR-076-003

Comment Author: City of Cudahy

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-076 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

**CROSS REFERENCES**

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

3. The economic analysis used by The USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-076-003

See response to CTR-013-003.

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Comment ID: CTR-076-004a

Comment Author: City of Cudahy

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-076 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

**CROSS REFERENCES R**

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

4. The proposed rule applies to all current and future MS4 dischargers, including small communities. The small communities will be significantly by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharge from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small

communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

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Response to: CTR-076-004a

See response to CTR-013-008b.

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Comment ID: CTR-078-003

Comment Author: City of Maywood

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-078 incorporates by reference letter CTR-013

Attachments? N

**CROSS REFERENCES**

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

3. The economic analysis used by The USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater-regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in USEPA analysis is the cost for the stormwater program to comply with the proposed

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-078-003

See response to CTR-013-003.

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Comment ID: CTR-078-004a

Comment Author: City of Maywood

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-078 incorporates by reference letter CTR-013

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

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Response to: CTR-078-004a

See response to CTR-013-008b.

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Comment ID: CTR-079-003

Comment Author: City of Glendale

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-079 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

3. The economic analysis used by the USEPA is flawed and inadequately addresses the impacts of the CTR on the stormwater regulated community. The USEPA's economic analysis focused entirely on the compliance cost of point sources, which included Public Owned Treatment Works (POTWs), industrial treatment facilities, and industrial users discharging to POTWs. A major omission in the USEPA analysis is the cost for the stormwater program to comply with the proposed criteria.

In its analysis the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-079-003

See response to CTR-013-003.

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Comment ID: CTR-079-004a

Comment Author: City of Glendale

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-079 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES R

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Comment: In addition, we would like to emphasize the following key issues on the California Toxic Rule (CTR), which are of major impact to our stormwater program:

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Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

Response to: CTR-079-004a

See response to CTR-013-008b.

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Comment ID: CTR-080-001

Comment Author: City of Los Angeles

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: J Storm Water Economics

References: Letter CTR-080 incorporates by reference letters CTR-013 and CTR-027

Attachments? N

CROSS REFERENCES

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Comment: The City of Los Angeles is hereby transmitting its comments regarding the proposed California Toxics Rule (CTR). I would like to begin by stating that the City currently spends an average of \$28 million annually on its Stormwater Management Program. The majority of Program activities are guided by the Los Angeles County Municipal Stormwater Permit, which dictates the use of Best Management Practices to control pollutants to the maximum extent practicable. We are primarily concerned with how the CTR may impact the Stormwater Management Program.

\* The City recommends that a parallel economic analysis be conducted to address the impacts of the CTR on the stormwater-regulated community.

Response to: CTR-080-001

See response to CTR-013-003.

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Comment ID: CTRE-002-003  
Comment Author: G. Fred Lee & Associates  
Document Type: Academia  
State of Origin: CA  
Represented Org:  
Document Date: 09/18/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: As was pointed out by several speakers at the hearing yesterday, US EPA Region 9 and US EPA headquarters made a significant error in developing the California Toxics Rule where they chose to ignore the massive costs that regulated urban stormwater dischargers will ultimately have to bear as part of implementing the California Toxics Rule. From my perspective, and I do not speak for any discharger, I believe that if this matter were taken to the courts, the urban dischargers could force US EPA Region 9/Washington, D.C. to do a proper economic analysis of the cost of ultimately having to achieve water quality standards (objectives) based on CTR criteria. The fact that there is some ill-defined period of time during which the standards/criteria can be met through BMPs does not change the ultimate cost that will have to become by the public. It is my assessment that these costs will be on the order of at least \$1 to \$2 per person per day forever for the regulated communities.

Several of the urban stormwater dischargers who testified at yesterday's hearing reported that their preliminary cost estimates were even greater than those that I projected since not only would they have to construct and operate large treatment works to capture, store and treat urban stormwater runoff so that no more than one exceedance of a criterion/standard occurs every three years, but also they would have to acquire land near waterbodies where such treatment works could be developed. As you heard, Alameda County estimated that over 50 facilities the size of the Oakland Coliseum would have to be constructed to store the stormwater runoff from a two-inch, one-day storm. While the construction of such facilities in near shore areas of Alameda County on San Francisco Bay might be justified if there was reason to believe that they would solve real, significant water quality use impairments of San Francisco Bay that are occurring due to urban stormwater runoff-derived constituents that exceed proposed CTR criteria for protection of aquatic life, the facts are that after extensive study, none of the heavy metals in Bay Area urban stormwater discharges had been found to be in toxic, available form. Basically, the expenditures of dollars per -person per day for the regulated community dwellers that are now dictated by the Clean Water Act and the US EPA's Independent Applicability Policy arise from the US EPA failing to address the obvious, significant problems with the application of the "Gold Book" and now proposed CTR criteria to urban stormwater runoff-associated constituents.

Response to: CTRE-002-003

EPA did not include benefits or costs of controlling nonpoint sources or storm water dischargers in its estimates of benefits and costs of the CTR. EPA believes that the final rule will not have a direct effect on sources not permitted under the NPDES program (e.g., nonpoint sources) or NPDES sources not typically subject to numeric water quality-based effluent limits (e.g., wet weather discharges). Any potential indirect effect on nonpoint sources and wet weather discharges, such as runoff from farms, urban areas, and abandoned mines, and contaminated sediment, is unknown at this time. Many of the programs developed to control nonpoint sources and wet weather discharges are already in place. Costs

due to these programs have already been incurred or will soon be incurred owing to existing federal, State, and local environmental programs.

EPA also acknowledges that nonpoint sources and wet weather discharges are technically difficult to model and evaluate costs because they are intermittent and highly variable. Nonpoint source and wet weather discharges also occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, evaluating agricultural nonpoint source discharges and storm water discharges and their effects on the environment is highly site-specific and data intensive.

See also response to CTR-040-004.

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Comment ID: CTRH-001-001b  
Comment Author: Robert Hale  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: CA Stormwater Task Force  
Document Date: 09/17/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? N  
CROSS REFERENCES I-1

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Comment: MR. HALE: Good afternoon. My name is Robert Hale and I'm the chairman of the California Stormwater Quality Task Force which is located at 951 Turner Court, Suite 300, in Hayward.

This task force is a statewide organization representing municipal separate storm sewer systems that hold National Pollutant Discharge Elimination System, NPDES, permits to discharge stormwater.

My comments today are on behalf of the -- principally on behalf of that task force. I also am chairman of the management committee of the Alameda Countywide Clean Water Program. I will make some comments with respect to Alameda County.

As proposed by EPA, the preamble language, which is the principal point here in referring to numeric effluent limitations and water quality based effluent limitations, is clearly inconsistent with the plain language used by Congress in incorporating the maximum extent practicable standard into Section 402(p)(3)(B) of the Clean Water Act.

You may argue that this reference is only in the preamble and not in the main text of the rule; but it's my understanding, however, that the preamble itself is supposed to explain and clarify the meaning of the rule and the Clean Water Act. This proposed language would instead appear to be trying to change one of the fundamental points of the Clean Water Act.

The reason I think this point is fundamental is that the cost to society, and to our county in this case and to the states, is an important consideration. Congress considers the entirety of the tasks that the country has to do, rather than going for broke on one issue such as stormwater quality.

In short, the Congress balances the larger picture, and the language in Section 402(p)(3)(B) actually

reflects that balance. I believe that Section 402(p) says what it says for a good reason. The only economically feasible means of achieving water quality standards is through best management practices.

To illustrate this point, I work in Alameda County as chairman of the Clean Water Program there, and I did some rough calculations here. We often get storms as much as 2 inches in a 24-hour period. That's several times a winter. If you had a one-day storm, as I figure it, that will work out to 5 billion gallons of runoff water.

To treat this much water, if we were driven to this sort of the extreme case by the language in the preamble -- and I'm not talking about the text of the rule so much as the language in that preamble -- if it were to drive us in this extreme case to have -- to do end-of-pipe treatment for our discharges in order to meet the standards that are there, and to keep up -- basically keep up with the storms, which often come one behind the other within a couple days, it would necessitate building dozens, perhaps more, treatment plants of substantial size and would necessitate the use or acquisition of valuable industrial properties on the margins of the bay. Which I just did a little separate figuring here; I'm figuring it costs about \$3 a gallon to treat -- to secondarily treat sanitary sewage and about \$4 a gallon to store it.

I estimate that a storm of this size -- to be able to handle a storm of this size would cost between 35 and \$50 billion for Alameda County alone. This is for a population of 1.35 million residents.

And this does not account for the acquisition of property needed to do this, assuming we could store it in facilities or properties we already own. And it also does not account for the secondary treatment. In fact, we might have some difficulty achieving the standards that are in the rule.

And there's a way you can express this getting down to the nuts and bolts of it, which I like to do. I did some rough estimates of the size of the Oakland Coliseum, and if you were to use structures the size of the Oakland Coliseum for storing this water from one of these storms, I figured it would come out to -- you'd need 50 of them to store the runoff from this one storm that I've got here.

And I know some of you might be thinking about how the A's are doing right now and this might not be a bad idea. We can, say, think about leaving an extra one there for the A's and Raiders and build 50 more of them.

But the point is, we're talking about a tremendous investment in the infrastructure here, and it's very difficult for us to keep up with.

So let's see. Just a few more points here.

So we're not really talking about upgrades to existing delivery and treatment systems. We would have to start from scratch and build pumping systems, conveyance systems, to build an entire infrastructure. The cost would be prohibitive for us in Alameda County. This is a -- sort of one of the worst-case scenarios. And I think that the economic rule -- or the economic analysis in the rule doesn't do this justice.

So --

MR. MORRIS: Have you done any modelling?

MR. HALE: This is strictly back-of-the-envelope type calculations at this point. I don't know whether or not -- what discharges the storm concentrations would result in.

The first question I have on modeling is to see what these discharges of stormwater with these effluent concentrations -- under the storm conditions if we would be -- would have a higher flow than the drought flow condition which was modeled.

When you have a storm event, the stream conditions are different, the hydrology is different, the modeling characteristics. We could work out the scenario. And it's true that when you've got a huge storm, water fires right out the bay and out the Golden Gate. We might even probably need to talk about that and work on that.

Response to: CTRH-001-001b

EPA disagrees with the comments. See response to CTR-001-003. For a discussion of EPA's evaluation of studies concerning costs associated with achieving water quality criteria for storm water discharges, see responses to Comments CTR-013-003 and CTR-040-004. For a discussion of the scientific validity of CTR criteria, See response to CTR-031-004c.

EPA disagrees with the cost estimates provided by the commenter as EPA does not believe that storage and treatment of stormwater would be required to ensure compliance with the CTR. See response to CTR-021-006b.

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Comment ID: CTRH-001-029  
Comment Author: Michelle Pla  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: S.F. Public Utilities Com  
Document Date: 09/17/97  
Subject Matter Code: J Storm Water Economics  
References:

Attachments? N

**CROSS REFERENCES**

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Comment: We're going to submit more responses in written comments having to do with other issues such as wet weather. I would really encourage you to listen carefully to those who have experience in building wet weather facilities.

We know it costs \$4 a gallon for storage. We know the latest cost of building treatment facilities is about \$3 a gallon, so those are real numbers. And so I think you do need to pay attention to the wet weather issue as well.

Response to: CTRH-001-029

See response to CTR-021-006b and CTR-001-007.

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Comment ID: CTRH-001-033  
Comment Author: Dave Brent  
Document Type: Public Hearing  
State of Origin: CA

Represented Org: CA Water Qual. Task Force  
Document Date: 09/17/97  
Subject Matter Code: J Storm Water Economics  
References:

Attachments? N

**CROSS REFERENCES**

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Comment: Second, we are concerned that the compliance cost for the stormwater programs to meet the objectives of the proposed rule will be significant. Already the city spends about \$1.2 million to implement a program that services 400,000 people.

Unfortunately, even with the proactive stormwater programs implemented in the State of California, BMP programs will probably fall short of the water quality standard for several of the constituents included in the rule. And in cases where objectives are achieved, it will take several years.

As my counterpart and co-permittee from Sacramento County, Kathy Russick will describe, the City of Sacramento has estimated cost for compliance based on five of the constituents in the CTR: copper -- dissolved copper, dissolved lead and dissolved zinc, pentachlorophenol and PAHs.

These costs -- this study indicates that the costs will be very extreme to even come close to meeting those objectives and the objectives -- and this is from six years of monitoring data and six years of a proactive BMP program, so we are basing this on fact. And again, Kathy will elaborate on this in her discussion.

And also the analysis -- economic analysis focuses only on POTW discharges, not industrial discharges. Again, with the costs we're seeing for stormwater compliance, we feel that the analysis falls short and that EPA should revisit the economic analysis and include not only the cost for municipal stormwater programs to comply, but also the cost for the industrial stormwater programs.

Response to: CTRH-001-033

The commenter claims that BMP programs will fall short of the water quality standards for several pollutants included in the CTR. EPA disagrees with the commenter and believes that BMP programs, when properly implemented, will be sufficient to ensure compliance with CTR-based standards.

See also the response to CTR-021-006b, CTR-001-007, and the preamble to the final rule.

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Comment ID: CTRH-001-054  
Comment Author: Michael Lozeau  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: S.F. Bay/Delta Keeper  
Document Date: 09/17/97  
Subject Matter Code: J Storm Water Economics  
References:

Attachments? N

**CROSS REFERENCES**

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Comment: In closing, in terms of some of the comments made by especially the municipal stormwater

programs, first, I'd like to just make a comment that economic analysis might be required by executive order, but it isn't required by the Clean Water Act; that standards, in fact, cannot include any kind of economic consideration in terms of coming up with a scientifically based number.

The Act mandates a scientifically based number. State level doesn't do that, but the federal level is quite clear. And you have no authority to include in your numbers an economic criteria. So I'll just remind you of that, to -- just to balance off the comments today with -- not exactly balance. At least one person said that.

And also in terms of the storm -- fears of the stormwater programs, they're quite fearful of the language in here. I would simply remind folks, 402(p) under the permits section doesn't rewrite 303D, formulate the TMDLs and load allocation requirements. It doesn't rewrite the need for permits to go beyond best available technology or whatever they need to do to meet the criteria- it doesn't rewrite 301.

So 402(p) takes a back seat effectively to a situation where you had a violation of standards in the ambient water. Those permits would by definition be subject to a particular regional board's discretion to revise them as proposed.

I don't think any realistic look at the future indicates that all the permits will be rewritten with numerical effluent limits, given the magnitude of that program. I would just put in my word of reason that there's really nothing to be afraid of. The South Bay has a stormwater program, and in Santa Clara County we have a stormwater program that looks like every other municipal stormwater program in the area.

And I think that's about it.

Response to: CTRH-001-054

EPA agrees with the commenter that criteria must be science-based and are established so as to ensure the protection of designated uses of California waters. EPA performed an Economic Analysis of the implementation of the rule to determine the potential economic impact of the CTR, not to establish standards or criteria. Also see response to CTR-042-007a.

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Comment ID: CTRH-002-005  
Comment Author: Chris Compton  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: County of Orange  
Document Date: 09/18/97  
Subject Matter Code: J Storm Water Economics  
References:  
Attachments? N  
**CROSS REFERENCES**

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Comment: EPA also failed to address the impacts of the proposed rule on industrial stormwater discharges. This rule could significantly impact industries in a municipal area that is subject to stormwater permits.

Response to: CTRH-002-005

See response to CTR-021-006b and CTR-001-007.

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Comment ID: CTRH-002-006b  
Comment Author: Chris Compton  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: County of Orange  
Document Date: 09/18/97  
Subject Matter Code: J Storm Water Economics  
References:

Attachments? N

CROSS REFERENCES I

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Comment: Does the California Toxics Rule meet the legal requirements of the Clean Water Act and other federal policies and laws?

Previous municipal stormwater speakers have questioned, as we have, EPA's interpretation of Section 402(p) of the Clean Water Act. In addition, the California Toxics Rule raises significant questions regarding its conformance with other federal policies and laws including Executive Order 12866, the Unfunded Mandates Reform Act, the Regulatory Flexibility Act, and the authority for EPA to adopt blanket criteria without considering the designated uses of such waters as required under the Clean Water Act.

To give you just one example, I'd like to briefly compare the California Toxics Rule with the compliance of Executive Order 12866:

Under Executive Order 12866, any "significant" federal regulatory action must be referred to the Office of Management and Budget for review before it can be approved. In this context, a "significant" action includes one which will "have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy." Though admitting that there "may be a cost to some dischargers" to comply with the water quality standards that will be derived from these toxics criteria, the EPA nonetheless argues that the proposed rule is not a significant action because it "establishes ambient water quality criteria which, by themselves, do not directly impose economic impacts."

First, nothing in Executive Order 12866 indicates that only actions with direct economic impacts are to be considered by OMB. Second, for the EPA to ignore the link between the toxics criteria in the proposed rule and the obligations being imposed is very questionable. Is EPA conceding that State and regional water boards may simply ignore these criteria when promulgating water quality standards and issuing permits? Nothing in the preamble indicates that EPA views these criteria as merely advisory.

Despite stating that Executive order 12866 is not applicable, EPA goes on to include an economic analysis which purports to demonstrate that the proposed rule will result in a net economic benefit. The problem with this analysis is that it completely ignores the enormous cost that municipalities will bear if they are forced to bring their stormwater discharges into compliance with these toxics criteria. For example, a 1990 study conducted for the Sacramento Stormwater Program estimated that it would cost nearly \$2 billion to implement a treatment program to achieve the water quality criteria proposed in the former Inland Surface Water Plan. Costs to comply with the proposed toxics criteria would be similar, if

not higher, than those proposed in the Inland Surface Water Plan. Ultimately, the costs of compliance may reach into the ten of billions of dollars.

In short, EPA cannot have it both ways. It cannot state that stormwater discharges are subject to the proposed toxics rule and then turn a blind eye toward the costs associated with the implementation of this rule. The costs of the proposed rules are direct and significant, and therefore the rule must be submitted to OMB for review.

We have comparable concerns with the other federal laws that I cited previously, and we will elaborate on them in our written comments.

Response to: CTRH-002-006b

See response to CTRH-002-006a.

EPA established criteria in order to comply with the requirements of the Clean Water Act. In order for such criteria to achieve their intended purpose, the implementation scheme must be such that the final results protect aquatic life and human health. EPA disagrees that designated uses are not considered. It is through the implementation of the CTR that site-specific factors of water bodies and discharging facilities (e.g., hardness, pH, stream flows, or site-specific criteria studies) are considered and designated uses are protected.

EPA disagrees with the commenter that municipalities will bear "enormous" costs to bring their stormwater discharges into compliance with the CTR criteria, however, EPA was not able to evaluate the commenter's compliance cost estimate of "tens of billions of dollars" because the commenter did not provide a methodology or any data for EPA to evaluate. Also see response to CTR-021-006b, CTR-021-005c, and the preamble to the final rule.

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Comment ID: CTRH-002-009  
Comment Author: Chris Compton  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: County of Orange  
Document Date: 09/18/97  
Subject Matter Code: J Storm Water Economics

References:

Attachments? N

**CROSS REFERENCES**

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Comment: We recommend that EPA conduct an economic analysis to assess the full impacts of the wet weather discharge requirements of the proposed rule and further evaluate the actual benefits of implementation of the rule.

The County of Orange encourages EPA to work cooperatively with California municipal stormwater stakeholders to resolve these issues. Through the California Stormwater Quality Task Force, the municipal stormwater dischargers have demonstrated our ability to work cooperatively with the EPA and State Water Resources Control Board to develop mutually effective solutions to facilitate implementation of the stormwater program. Such intergovernmental coordination is needed to develop a feasible

program to protect the environment.

Response to: CTRH-002-009

See responses to CTR-021-006b and CTR-034-016.

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Comment ID: CTRH-002-017

Comment Author: Alex Sheydayi

Document Type: Public Hearing

State of Origin: CA

Represented Org: Ventura Co. Flood Control

Document Date: 09/18/97

Subject Matter Code: J Storm Water Economics

References:

Attachments? N

CROSS REFERENCES

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Comment: MR. SHEYDAYI: Good afternoon. I'm Alex Sheydayi of the Ventura County Flood Control District, and I'm here to speak on behalf of the Ventura County Management Program.

Before I make my comments, I would also like to express my -- our program's support for the comments that were made by Mr. Crompton earlier and also by our speakers in San Francisco that spoke on behalf of the Municipal Water Quality Management Programs statewide.

Our program -- The permit for our program was issued in August of '94. And our program basically consists of 12 permittees in the flood control district which is the municipality and the municipal permittee which is the County of Ventura and ten cities in the county.

At the time that we applied for the stormwater permit, only three municipalities in the county were required to do so. The others entered the program voluntarily in order to maintain a uniform program countywide. Currently, of the 12 corporate permittees, five corporate permittees would not even be required to have permits under Phase 20 because they have populations far west than that required for Phase 20. So you can see we have very small communities that are participating in the program voluntarily.

The commission earlier stated that one of the reasons many of the corporate permittees entered the program voluntarily is to maintain a uniform program countywide. And one of the incentives for doing that was the fact that the program was a BMP-driven program to comply with the requirements of a permit to the maximum extent practicable under the Clean Water Act.

We have also recently completed a four-year monitoring program and, using the information from the monitoring program, we have attainability of the data that we have collected for our program. This attainability data indicates that even if we comply -- apply the BMP program to the maximum extent possible, the expenditure of radial funds, we would still not be able to meet the requirements of the proposed criteria for several of the metals and other constituents, which would then -- of course, our program would go into a treatment mode for stormwater discharges. We believe that this was going to be very costly for us, particularly very costly for smaller communities who don't have the base to spread the cost of such an expense over their population.

Our programs, like so many other municipal programs in California, were based on implementation of programs to address source of weakness, not to provide the treatment. Just to give you an idea of why we concur with the other speakers concerning the economic analysis and the fallacy of the economic analysis, let me just give you a very quick example of the cost that we are currently incurring. We are currently spending \$5 per -- for every man, woman, and child in Ventura County to implement a BMP-based program. And yet if you'll look at the pages that were presented in the CTR of the maximum \$87 million statewide, the number will be approximately two and a half to three dollars for every person in California to implement the CTR — not just the stormwater dischargers, but for all dischargers statewide. So we think that there is something wrong with this whole analysis if we are currently exceeding the cost of the assumptions made in the analysis for compliance with CTR.

We also, as I said earlier, believe that the analysis should take into consideration the size of the communities, and as Mr. Crompton mentioned earlier, most of the municipal programs in California are very small communities and the cost of applying the treatment would be very, very difficult for them to comply with.

That's the end of my comment. I thank you for the opportunity to speak.

MR. MORRIS: Are you going to submit the data and the analyses that you did that show why -- You said you have a lot of data. Are they going to --

MR. SHEYDAYI: We are not going to submit them on the comments. We are going to be submitting that data -- It's still relatively in raw form, but we will be submitting that data to the regional board with our annual report in November.

MR. MORRIS: If you could get me or send me a copy or Diane a copy of the data and how you calculated your WQBEL, your permit limit based on the new criteria, that would be useful. I'd like to see how you did that.

MR. SHEYDAYI: Okay. We'll send you whatever we can put together.

MR. MORRIS: I think there is a misconception that people have to implement the criteria for stormwater dischargers at the drought low condition and the 7Q10 condition. That's not the case. When we issue a permit, you keep that limit for a stormwater discharge, you usually model the condition that occurs in. If you do it right, that gives you a model that gives you concentration in the receiving water and the duration of the exposure of that concentration, and then you'll compare that to the criterion and flood flow or rain flow or storm flow. Right? Usually you have enough to keep your WQBEL below the criteria and you don't see the effects. If you do a good model, you shouldn't have any impact.

If you look across the country, across the U.S., there are many, many states that have standards on the books, water quality standards that are far more stringent than the numbers we're promulgating or proposing to promulgate in Southern California. If you look at their standards, you won't see any black boxes on the end of those stormwater discharges. Nobody builds treatment for stormwater treatment in this country. They've been implementing standards for 15 years. California is no different.

Response to: CTRH-002-017

The costs attributable to the CTR are only those incremental costs which will be incurred to go from compliance with existing permits to compliance with more stringent CTR-based limits. EPA's revised

cost estimates from the Economic Analysis range from \$33.5 million to \$61.0 million annually. The commenter compares BMP costs of \$5 per person to potential CTR compliance costs, however, this is not relevant because CTR costs are incremental costs and are not based on the costs of existing programs. See also responses to CTR-021-006b and CTR-035-048.

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