City of San Gabriel Comments
In Re: Los Angeles River Bacteria TMDL

I. *City Supports Comments Made by the City of Signal Hill on Behalf of the Coalition for Practical Regulation*

CPR addresses a number of issues not referenced herein. The City is in support of CPR's comments with the exception of its proposal to meet waste load allocations (WLA) for those permittees that are situated in Reaches 1 and 2 of the Los Angeles River. It should be noted that the City, though identified in the LAR-BTMDL as being located in Reach 2 of the Los Angeles River, is more specifically located in Reach 2 of the Rio Hondo River. This distinction is important because Reach 2 of the Rio Hondo is situated upstream the spreading grounds.

II. *LAR-BTMDL Does Not Identify REC1 Beneficial Use Impairments to Reach 2, Rio Hondo River*

The LAR-BTMDL does not specify the REC1 beneficial use impairment that bacteria contained in wet and dry weather runoff discharged from within its boundaries is presumed to impair. Nowhere in the TMDL is there mention of the water bodies that are impaired for REC1 due to indicator bacteria. The City does not know which water body is impacted and which REC1 (e.g., swimming, bathing, water skiing, etc.) is being impaired due to indicator bacteria. The TMDL merely asserts that: (1) indicator bacteria counts exceeded the federal standard for all reaches of the Los Angeles River; and (2) that bacteria have been known to pose a human health risk.

III. *Beneficial Use Survey Needed*

Even USEPA will admit that an exceedance of the federal standard for indicator bacteria does not automatically mean that a human health risk exists for those who make contact with a water body. In deed, the USEPA has funded a beneficial use survey for REC1 under a 205(j) grant on behalf of middle Santa Ana River permittees who are also subject to a bacteria indicator TMDL. A beneficial use study is also needed for each of the affected reaches of the Los Angeles River. The study should identify how bacteria, human and non-human, are responsible for causing illness in humans who make water contact with specific bodies within each reach. Study results, along with additional monitoring, are likely to necessitate a reduction in the final waste load allocation (WLA) for each reach. <u>The Regional Board should not adopt the LAR-BTMDL until a REC1 beneficial use study is completed for all reaches</u>.

IV. *LAR-BTMDL Is Overfly Concerned with All Bacteria*

The LAR-BTMDL is not concerned, apparently, with identifying human bacteria and distinguishing it from non-human sources, including birds and wildlife that should be considered as "uncontrollable" non-anthropogenic background sources. The TMDL admits that the *indicator bacteria used to assess water quality are not specific to human sewage; therefore, fecal matter from animals and birds can also be a source of elevated levels of bacteria.* The TMDL assumes that all bacteria cause human illness. This is also revealed in the TMDL's position on bacteriodales monitoring human indicators and pathogens such as the adenovirus. It states that monitoring of them is "encouraged but not required."

Treating all bacteria as pathogenic culprits harmful to humans is ill advised. To begin with it is not clear if bacteria alone are responsible for causing illness in those who make contact with water that exceeds the federal bacteria indicator standard. Illnesses could be caused by viruses and protozoa in addition to specific bacteria. Further, the Santa Monica Bay epidemiologic study done in 1999, which is referred in the TMDL, implies a causal relationship, albeit highly generalized, between indicator bacteria and illnesses. The TMDL states that the study:

> *… found swimming in urban runoff-contaminated waters resulted in an increased risk of chills, ear discharge, vomiting, coughing with phlegm and significant respiratory diseases. These studies demonstrate that there is a causal relationship between illness and recreational water quality, as measured by fecal indicator bacteria densities*.[1]

The TMDL appears to use the study to justify the need for a bacteria TMDL that calls for structural and non-structural BMPs at a cost of 5.4 billion dollars over 23 year period.

The Santa Monica study, however, is not a true epidemiological study as mentioned in a 2008 National Resource Council report commissioned by USEPA. To begin with, the study generally concluded that fecal indicator densities demonstrate a causal relationship between recreational water quality and illness. The NRC report, on the hand, asserted that the Santa Monica study merely *indicated that the risks of several health outcomes <u>were higher for people who swam at storm-drain locations compared to those who swam farther from the drain</u>.* Further, the NRC report suggests that the Santa Monica epidemiological study was not like most other studies because:

> *… it did not include highly credible gastrointestinal illness, which is curious because the vast majority of epidemiological studies worldwide suggests a causal*

[1] *Los Angeles River Bacteria TMDL, April 2010, page 4.*

dose-related relationship between gastrointestinal symptoms and recreational water quality measured by bacterial indicator counts[2]

The LAR-BTMDL should be revised to include a genuine epidemiological study, such as the one completed by the City of Dana Point and the California Regional Boards. *The study examined several new techniques for measuring traditional fecal indicator bacteria, new species of bacteria, and viruses to determine whether they yield a better relationship to human health outcomes than the indicators presently used in California.*[3]

V. *LAR-BTMDL Exceeds Federal Requirements In Re: TMDL Implementation*

The LAR-BTMDL requires affected municipal NPDES permittees (permittees) to comply with strict numeric waste load allocations for indicator bacteria. Regional Board staff asserts that *Porter Cologne Water Quality Control Act prohibits it from prescribing the method of achieving compliance with water quality standards, and likewise TMDLs (Water Code §13360).* Nevertheless, Regional Board staff has developed "potential" implementation strategies to meet the WLA, but with the proviso that *there is no requirement to follow the particular strategies proposed herein as long as the maximum allowable exceedance days are not exceeded.* In other words, a permittee is not required to pursue any of the implementation strategies "recommended" by Regional Board staff but if a permittee proposes its own and that strategy, and that strategy fails to meet the WLA, then that permittee will be out of compliance and subject to enforcement action and third party litigation.

In effect Los Angeles Regional Board staff is proposing a compliance standard that exceeds federal requirements. This is in sharp contrast to the San Diego Regional Board's bacteria TMDL for San Diego beaches, which asserts:

Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs which may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs[4]

In other words, subject permittees should be able to translate a TMDL WLA into a narrative, non-numeric WQBEL consisting of BMPs that address the WLA. If, however, the BMPs do not succeed in meeting the WLA, the permittee would not be found in violation of the TMDL, but would instead, be required to ramp-up BMPs. This provision is no different from the adaptive/iterative process that is

[2] *Urban Stormwater Management in the United States, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, National Research Council, 2008, page 194.*

[3] Ibid.

[4] *California Regional Water Quality Control Board San Diego Region Revised Total Maximum Daily Loads for Indicator Bacteria Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek) Final Technical Report, February 10, 2010.*

suggested in the current MS4 permit (albeit not as clearly as other Southern California MS4 permits) in responding to a receiving water exceedance.

In the San Diego County MS4 permit adopted in 2007, the use of WQBELs to meet TMDLs is required as the following excerpt from it illustrates:

> *The establishment of WQBELs expressed as iterative BMPs to achieve the Waste Load Allocation (WLA) compliance schedule is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL*[5]

It should be noted that the aforementioned San Diego beach bacteria TMDL has yet to be incorporated into the 2007 San Diego permit. But based on the language in the TMDL it is clear that the San Diego Regional Board intends to use WQBELs to determine WLA compliance.

VI. *LAR-BTMDL Is Concerned with All Bacteria*

The LAR-BTMDL is not interested, apparently, in identifying human bacteria and distinguishing it from non-human sources, including birds and wildlife, which should actually be considered as "uncontrollable" non-anthropogenic background sources. The TMDL admits that the *indicator bacteria used to assess water quality are not specific to human sewage; therefore, fecal matter from animals and birds can also be a source of elevated levels of bacteria.* The TMDL assumes, incorrectly, that all bacteria cause human illness. This is also revealed in the TMDL's position on relying on bacteriodales monitoring to evaluate human-specific indicators such as the adenovirus as pathogens. It states that monitoring of them *is encouraged but not required.*

Focusing on all bacteria instead of human and animal sources and other pathogens identified through bacteriodales monitoring would pinpoint the pathogen problem. This would give permittees an important tool in choosing appropriate best management practices (BMPs) – structural and non-structural to deploy against a correctly assessed pathogen problem. It would, in other words, facilitate cost-effective compliance.

VII. *Compliance with WLAs Should Be Limited to Controllable Sources*

The LAR-BTMDL requires compliance with WLAs regardless of whether bacteria sources are controllable or not. In fact, the TMDL does not make a distinction between the two, unlike the San Diego beaches bacteria TMDL. This TMDL defines controllable sources of bacteria as anthropogenic non-point sources, *identified by land use types and coverages*.[6] This category includes agriculture,

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[5]*California Regional Water Quality Control Board, San Diego Region, Order No. R9-2007, NPDES No. CAS0108758, Waste Discharge Requirements for Discharge of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s), January 2007.*

[6]*San Diego Beaches Bacteria TMDL, op. cit, page 4.*

dairy/intensive livestock, and horse ranches. Uncontrollable nonpoint sources, on the other hand, include discharges from open recreation, open space, and water land uses (collectively referred to as open space land uses). They are considered uncontrollable because they come from mostly natural sources (e.g. bird and wildlife feces). In the interest of economy and in reducing bacteria loadings from pollution sources in urban runoff, Regional Board staff should amend the TMDL to be subject only to controllable sources of bacteria.