

Attachment I – Policy Comments

1. Expand Coverage of Municipal Regional Permit

This permit is an opportunity to implement a truly comprehensive regional storm water program by including Marin, Sonoma, Napa and Solano Counties and the non –CSO portion of the City and County of San Francisco, Caltrans, BART and the public agencies listed in Attachment 3 to the SWRCB’s Phase II NPDES Permit as permittees. This will provide for the participation in and coordination of all Bay Area storm water programs.

The North Bay Counties include growing communities contributing loadings of Pollutants of Concern (POC) covered by TMDLs and discharges to San Francisco Bay. The Water Board’s trash assessment program identified significant trash problems in those counties that weren’t being addressed. These communities must be subject to the same regulatory approach as the remaining Bay Area communities to achieve equitable, effective, consistent and uniform pollutant reductions.

There are over 170 public agencies listed in Attachment 3 to the SWRCB’s Phase II NPDES permit that are not regulated by storm water programs. Many of these facilities mimic smaller municipalities that are regulated by the Tentative Order and are primarily schools, community colleges and universities. They have extensive operations with impervious surfaces including buildings, roadways, large parking lots, paved playgrounds, athletic facilities, maintenance operations, etc. They generate huge volumes of traffic. In many cases the schools, community colleges and universities represent the single largest entity in a municipality with the largest area of impervious surface.

The Orinda Union School District has actually adopted a resolution exempting itself from the City of Orinda’s ordinance pertaining to construction of instructional and related facilities on all its schools sites pursuant to Government Code section 53094. The District’s action was taken to exempt itself from the City’s creek protection requirements. Miramonte High School of the Acalanes Unified High School District recently reconstructed a large parking lot with curb cuts draining directly to an immediate adjacent creek. The Non-Traditional Small MS4s must not be allowed to avoid requirements that have been imposed on a regulated community and that could jeopardize a permittee’s compliance with the NPDES permit.

Caltrans is subject to a statewide NPDES permit - SWRCB Order 99-06 DWQ. There are periodic opportunities to comment on the Caltrans storm water management plan implementing the SWRCB’s order. The Municipal Regional Permit must include a finding describing how the Water Board intends to ensure that the Caltrans storm water management plan includes the elements or programs that will implement the applicable requirements in the Regional Permit. The finding could include a list the major provisions that Caltrans would be expected to implement.

2. Trash Control Program

The discharge of trash and solid waste to the Bay Area's creeks, wetlands, Bay and Ocean have been prohibited in Water Board's water quality plans and policies since the mid 60's, Basin Plans since 1975 and have been prohibited in Countywide NPDES permits for over 17 years. The Permittees have been implementing municipal maintenance practices and public education programs for over 15 years that are aimed at reducing the discharge of gross pollutants including trash. However, ongoing violations of the NPDES Permits discharge prohibitions and receiving water limitations have been well documented by the Water Board staff's Rapid Trash Assessment Protocol, testimony received by the Water Board on March 14, 2007 and 303(d) submittals of February 28, 2007.

The Los Angeles Regional Water Quality Control Board has taken aggressive regulatory action to address trash in that region's waterways. Its actions have been appealed to the State Board, have been upheld by the courts and approved by the State Board and USEPA. The magnitude of and impacts on the environment from trash in the Bay Area's waterways are comparable or greater than found in Los Angeles. The Bay Area's trash control program should be at least as aggressive as that in Los Angeles and have compliance schedules at least as restrictive.

The Bay Area needs a much more aggressive trash control program than that included in the Tentative Order and must include the following elements:

- Goal of "Zero Trash" and "Control of Gross Pollutants"
- Definitions of gross pollutants, trash and litter, debris, full capture devices, "High" trash generation areas
- Require implementation of full capture devices for "High" trash generation land uses and enhanced control measures where installation full capture devices is not feasible
- Require annual 10% reduction in the "discharge" of trash until 70% is achieved at which time a determination would be made on "Acceptable Levels" of trash in individual water bodies that do not constitute nuisance or adversely and unreasonably impair beneficial water uses using the Rapid Trash Assessment Protocols
- Urge municipalities to include and address gross pollutants including sediments as part of trash control program
- Require flood control districts to assume greater role and responsibility in controlling trash and gross pollutants
- Require documentation of compliance with annual trash load reduction "Only" through actual measurement of trash removed from discharges
- Compliance with "Zero Trash" goal measured photographically in waterbodies
- Start enforcement actions for violation of Discharge Prohibitions in existing NPDES Permits
- Require full capture devices on new storm water pump stations, new flood control projects, rehabilitation of pump stations as a condition of water quality certifications

- Establish that municipalities and flood control districts will not be considered in compliance with MEP performance based unless they aggressively pursue construction grants available from state bond initiatives

The comprehensive trash control program must have at least three components that address the major sources of trash that enter waterways. Each has a separate and distinct control approach for eliminating or reducing the trash and separate reporting requirements:

- Discharges from Storm Drains – Requires implementation of full capture devices or enhanced municipal maintenance practices documented by end –of-pipe monitoring to measure load reductions
- Illegal Dumping – Requires permittees to achieve cleanup through enforcement of ordinances or performing cleanup documented by a program that identifies locations of the illegal dumping and cleanup efforts
- Homeless Camps – Requires coordination with multiple agencies and organizations that address homeless issues and that perform relocation, shelter removal and site cleanup documented primarily through coordination efforts and possible cleanup

3. Low Impact Development and Hydromodification

Low impact development has been widely viewed as an approach that effectively mitigates the hydrologic, physical, water quality and biological impacts of increased storm water runoff volumes and rates from land development. Impervious surfaces is used as a surrogate to explain and sometimes predict how severely the stream indicators change in response to different levels of watershed development.

The impacts of urbanization were identified in the early 1990s, but it was Derek Booth of the University of Washington and Tom Schueler of the Center for Watershed Protection in 1997 that identified the threshold of 10% impervious cover at which these impacts were taking place. It is now rather important that Tom Schueler of the Center for Watershed Protection in a March 2003 report “Impacts of Impervious Cover on Aquatic Systems”¹ summarized the review of over 225 research studies documenting even greater impacts from impervious cover. The 10% (2 acre lot) threshold for impervious cover was confirmed, but alarmingly he found that severe degradation of most stream quality indicators are expected beyond 25% (¼ acre lot) impervious cover.

Additional findings reported by Schueler include:

- The Impervious Cover Model used in assessments should only be applied in ecoregions where tested. That has not been done in the Bay Area or for arid or semiarid climates. It is unclear what, if any, impervious cover thresholds exist for intermittent and ephemeral streams like we have in the Bay Area.
- There are questions on whether widespread application of watershed practices and storm water management can mitigate the impact of impervious cover and more research is needed.

¹ Center for Watershed Protection, Impacts of Impervious Cover on Aquatic Systems, March 2003

- Extreme caution should be used in setting high expectations for watershed treatment to mitigate impervious cover.
- The potential performance of better site design or low-impact development has yet to be evaluated.
- Streams with more than 25% impervious cover in their watersheds cannot support beneficial water uses or attain water quality standards and are severely degraded from a physical and biological standpoint.

USGS studies² conducted in New England used 24 of 53 infrastructure, land cover, socioeconomic and population variables to calculate an urban index. The greatest change in aquatic health was found between low and moderate levels of the index while a threshold of the index was reached where a response did not change with urban density. A similar study was to be conducted in Utah to reflect semiarid conditions.

Considerable effort has gone into the development of requirements for and the development of individual county hydromodification plans and implementation guidance documents. There have been many good assessments of the damages to creeks and streams that have occurred from increased flows from increased impervious surface during land development. A number of sub watersheds have been identified that are vulnerable to further deterioration of hydrologic, physical, water quality and biological features.

It is time for a thorough review of the hydromodification management program to consider these more recent investigations. Given that a very high percentage of Bay Area watersheds are built out and many watersheds have far greater than 25% impervious cover (only 2 of 14 watersheds in Santa Clara County have watersheds less than 25%) it is questionable whether dispersed on site infiltration measures to limit increases in storm water runoff rates and durations for new and redevelopment projects in most watersheds is the most cost effective method of preventing further deterioration or improving the habitat in creeks. In stream restoration projects and large scale sub regional groundwater recharge projects that serve both new and existing development in watersheds with greater than 25% impervious cover should receive much higher emphasis and would be of greater benefit towards restoration of our creeks. Flood control districts should have a leadership role in this effort.

As a part of this review there should be a comprehensive assessment of the effectiveness and sustainability of low impact development best management practices to determine whether they are really working and being maintained. The Regional Board staff in the review and comment on new development and redevelopment projects and in the issuance of water quality certifications has promoted and required the use of swales, infiltration trenches, sand filters, pervious pavements and biofiltration systems. These systems are required in Provision C.3.d. to be designed to “treat at least 80% of the total runoff over the life of the project”. Public works infrastructure projects are typically designed for a life cycle of 50-years and new and redevelopment projects would be required to have a longer project life. The Tentative is requiring that storm water treatment

² USGS, The Effect of Urbanization on the Biological, Physical, and Chemical Characteristics of Coastal New England Streams, Professional Paper 1695, 2004

systems have a life cycle greater than many public works projects. This requirement must be considered in the siting, design, construction, operation and maintenance of the treatment systems and further must address restoration or replacement of these systems during the project's life.

The sustainability of these systems and the life cycle costs over the life of the projects they serve presents a huge institutional regulatory oversight challenge that have not been adequately addressed in the Tentative Order.

4. Bay Area Wide Uniform Consistent Hydromodification Management Plan

The Tentative Order would continue the five separate HMPs and require the development of a HMP for Vallejo. The recent analysis³ of the different HMP approaches identified strengths, weaknesses and errors in the BAHM and Contra Costa County approaches that need to be resolved. Combining the best elements of the two approaches after addressing the weakness in the Contra Costa program should be done and included in this permit and applied throughout the Bay Area. This would implement the Water Board's Finding 9. of Order No. R2.-2006-0050 issued to the Contra Costa program.

5. Prioritization of Elements of NPDES Permit Provisions

The Bay Area municipal storm water programs have been underway for almost 20-years with many municipalities regulated by NPDES Permits for almost 18-years. More than \$750 million has been spent during this period; however, it is very difficult to show improvements in the quality of runoff or our creeks or the Bay or whether the Bay Area's waters or wetlands have achieved greater protection commensurate with this expenditure.

The Tentative Order contains many improvements over the current countywide storm water permits and increases accountability and enforceability. Implementation of the new elements should result in increased protection of beneficial water uses. Full implementation of the Tentative Order will require a significant increase in resources. The Water Board staff should look for opportunities to defer, reduced in scope or the level of effort and to establish levels of implementation commensurate with available funding until additional funding can be achieved.

The deferral of new initiatives like the trash control program, hot spot cleanup of TMDL pollutants and BMP operation and maintenance program is not recommended and implementation of these programs should be pursued using the Water Boards existing enforcement and investigative authority. These programs can be undertaken without increased funding by reducing the less effective programs like street sweeping and public education. Street sweeping has long been found to have minimal benefits with recent studies showing that street sweeping results in poor quality of runoff.

³ Tetra Tech, Inc. Comparison of BAHM and Contra Costa Approaches to Hydromodification Management Plan Requirements, December 7, 2007 report to Janet O'Hara from Jonathan Butcher