

January 11, 2013

Wayne Chiu, P.E.

San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Subject: Comments on San Diego Region MS4 Permit - Tentative Order R9-2013-0001

Dear Mr. Chiu,

Thank you for the opportunity to comment on the Tentative Order R9-2013-0001, an updated NPDES permit for the San Diego region. It is encouraging to see the progress on this permit, in particular the incorporation of watershed planning and TMDL compliance sections. My comments here specifically pertain to verification of proprietary treatment controls. Attached to this letter is an additional table of specific change requests and comments.

This tentative order appropriately prioritizes runoff reduction strategies, specifically infiltration, rainwater harvesting and evapotranspiration. Contech supports this approach and the allowance of the use of biotreatment systems where runoff retention is infeasible. Where neither of these approaches is feasible, treatment controls may be used to intercept pollutants before they leave the site. Also, where retention BMPs are specified, treatment controls may be appropriate as pretreatment.

In past permit terms permittees have been required to review and rank the effectiveness of treatment controls relative to the requirement that pollutants of concern be managed by BMPs with medium or high effectiveness. This has been done at the broad BMP category level, most notably in Table 3 of the 2008 Model SUSMP. However, this broad characterization of classes of systems cannot begin to capture the myriad of specific proprietary device designs and sizing strategies. What is needed is a BMP specific verification program. The permittees should be directed to collaboratively initiate this review, or should be directed to only allow technologies that have been verified by an independent program that serves this purpose.

Until 2008, Caltrans published the Treatment BMP Technology Report which contained ratings for specific manufactured devices. The State of Washington Department of Ecology currently administers a verification program following the Technology Acceptance Protocol – Ecology (TAPE). There is a multistate collaborative that includes California called the Technology Acceptance Reciprocity Partnership (TARP) that has developed specific testing protocols and peer review processes for proprietary technologies. In California, the Sacramento Stormwater Quality Partnership has established a verification program. All of these programs are designed to ensure that the performance and operational feasibility of proprietary BMPs is known and reliable. At this point there is no equivalent program in the San Diego region that can give plan reviewers this assurance.

Whether specified for pretreatment upstream of infiltration or standalone treatment as part of an alternative compliance approach, clear direction from the Board regarding the need for technology specific performance verification to ensure adequate performance. The comments above and attached reference several leading programs that I encourage you to consider for reciprocation of approvals.

Please contact me if you would like further discussion or clarification on any of the issues introduced here or in the attached comments.

Sincerely,



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Suggested Changes
Tentative Order No. R9-2013-0001
Draft NPDES NO. CAS0109266
San Diego Region MS4 Permit Reissuance

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Section	Page	Existing Text	Proposed Change or Comment	Justification
II.E.3.a.(1)(a)	73	"Onsite BMPs must be located so as to remove pollutants ... prior to discharge ... and as close to the source as possible..."	Remove "as close to the source as possible".	While it is typically advantageous to remove pollutants close to the source as possible, this should not be a requirement. Site developers and engineers should have the discretion to locate onsite BMPs wherever is most desirable as long as pollutants are removed prior to discharge from the site. For example routing all site runoff to fewer larger systems instead of installing more distributed smaller systems may allow provide economies of scale and decrease future inspection and maintenance burdens.
II.E.3.b.(3)(a)(i)	77	"...direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas"	The section should stipulate that the DCV must be retained by adjacent permeable areas.	If runoff is simply routed to pervious areas, but is not retained there, runoff will result. Since there are no design or performance requirements for these permeable areas, adequate treatment of runoff is not assured. Without assurance of adequate treatment or retention of runoff from the design storm, these areas should not be exempted.
II.E.3.c.(1)(a)(ii)	78	Definition of volume-based sizing requirements	This section should include an annual capture standard of 80%.	Projects pursuing runoff reduction via rainwater harvesting or with infiltration systems with drawdown times other than 48 hours may retain a significantly different amount of runoff on an annual basis than systems designed around the runoff volume from the 85th percentile storm. An annual capture compliance pathway should be added that is equivalent to the annual runoff capture percentage resulting from 85th percentile DCV based designs. In the Los Angeles and Santa Ana Regions, the equivalent average annual capture volume has been determined to be 80% based on continuous simulation modeling.
II.E.3.c.(1)(c)(iii)	79	Treatment Control Standards	Add the following language: Performance of proprietary treatment systems must be demonstrated in full scale-field laboratory or field performance monitoring following sampling protocols established by the Technology Acceptance Reciprocity Partnership, the Washington State Department of Ecology or similarly robust protocols.	Among permittees in the region, there is currently a very wide range of interpretations of requirement that BMPs must provide medium or high pollutant removal efficiency. In many cases, devices with are approved on the basis of unsubstantiated performance claims simply because they can be construed to fit within one of the broad BMP categories in Table 3 of the 2008 Model SUSMP. For proprietary BMPs, verification of specific technologies is needed to ensure that adequate treatment is provided. The permittees should either be directed to collaboratively evaluate and rate specific technologies, or should defer to one of the existing verification programs that serves this purpose.
II.E.3.c.(2)(b)	80	"...must compensate for the loss of sediment supply due to the development project, should loss of sediment supply occur as a result of the development project"	Clarity regarding the Board's expectations for maintaining the natural sediment balance in light of competing flow and pollutant mitigation demands is needed. In addition, practical examples of how to achieve this requirement are needed.	The importance of maintaining natural sediment supply is undisputed. However, at this point, no practical way has been identified that can accomplish this while concurrently controlling runoff volumes, rates, and priority pollutants. This requirement, while scientifically valid is technically unachievable. Clarity regarding the Board's expectation is needed.

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II.E.3.c.(2)(d)	80	Hydromodification Exemptions	Exemptions from the San Diego Hydromodification Management Plan should be included in this section.	The San Diego Hydromodification Management Plan was developed collaboratively with stakeholders representing the scientific, engineering, public interest and regulatory communities. It should serve as a guide for hydromodification management requirements in this order.
II.E.3.c.(3)(b)(i)	81	"Onsite LID Biofiltration Treatment Control BMPs"	A requirement should be added that proprietary biofiltration BMPs must achieve final approval by the New Jersey Department of Environmental Protection according to the Technology Acceptance Reciprocity Partnership (TARP) Tier II testing protocol, by the Washington State Department of Ecology according to the Technology Acceptance Protocol - Ecology (TAPE), or by the Sacramento Stormwater Quality Partnership following their Sacramento are field testing protocol prior to installation.	There are several high rate biotreatment systems commercially available that provide a significant land area savings and comparable pollutant removal performance to their larger conventional public domain systems. There are several performance verification programs designed specifically for these high rate systems. Final approval by the Washington State Department of Ecology, the New Jersey Department of Environmental Protection or the Sacramento Stormwater Quality Partnership provides assurance that systems are highly effective and are operationally robust. Adding this requirement for proprietary designs will ensure that unproven systems are not allowed.
II.E.3.c.(3)(b)(i)[c]	82	"Biofilter...the design capture volume.."	A flow-based design pathway should be added.	Many biofilters and other biotreatment systems are more properly sized to treat a specific design flow rate than a runoff volume. In previous guidance documents and permits, treatment of the runoff rate produced from the site during a sustained 0.2 inch per hour intensity has been considered to treat an equivalent runoff volume compared designing around a 0.75 inch storm depth. That design option should be retained in this section.
II.E.3.c.(3)(a)(i)	86	"Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration."	Pretreatment including filtration through at least 4 inches of media/soil or by a hydrodynamic separator approved for pretreatment by the Washington State Department of Ecology or the New Jersey Department of Environmental Protection. Catch basin inserts may be provided to control trash and other gross solids, but must not be allowed as pretreatment.	Clear pretreatment standards are required to ensure longevity of infiltration systems. As written, it is likely that catch basin inserts with a token amount of filtration media will be specified as pretreatment. There are many catch basin inserts and other devices commercially available with media depths in the range of 2" or less that at design rates have media contact times on the order of one second. Some of these devices are being marketed and accepted by permittees as media filters under the assumption that they will provide benefits similar to true media filters such as sand filters and cartridge based media filters. The result is a proliferation of systems that foul very rapidly and predominately operate in bypass mode unless very frequent maintenance is performed. In the absence of a vendor specific technology assessment by the permittees, there are several programs that can be relied on to identify those proprietary pretreatment systems with demonstrated performance and operational feasibility.
II.E.3.d.(3)	87	"Updated procedures for designing structural BMPs, including and updated performance requirements to be consistent with the requirements of Provision E.3.c..."	Specific guidance regarding evaluation of proprietary treatment systems is needed. Either the permittees need to conduct a technology specific performance and operational feasibility verification assessment or they can reference one of the existing programs that serve this purpose.	There has been a tremendous amount of work completed through the Technology Acceptance Reciprocity Partnership (TARP) and by the Washington Department of Ecology to evaluate the performance and operational feasibility of proprietary treatment systems. Due to the proliferation of designs and sizing strategies, there needs to be oversight of the specification of these treatment systems to ensure that claimed benefits are actually provided.

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II.E.3.e.(3)(a)	89	"All (100 percent) of the structural BMPs at Priority Development Projects that are designated as high priority...."	A definition of "high priority" should be given.	There is no definition or guidance provided to advise permittees regarding what constitutes "high priority". Specifying the types of BMPs, land uses etc. that are considered high priority or setting a % of total BMPs that must be identified as high priority would prevent permittees from characterizing none or very few of their BMPs as "high priority", thereby avoiding inspection requirements.