BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY
BUILDING INDUSTRY ASSOCIATION OF SOUTHERN CALIFORNIA
ASSOCIATED GENERAL CONTRACTORS, SAN DIEGO
SAN DIEGO REGIONAL CHAMBER OF COMMERCE
BUILDING OWNERS AND MANAGERS ASSOCIATION
SAN DIEGO ASSOCIATION OF REALTORS
ASSOCIATED BUILDERS AND CONTRACTORS
BUSINESS LEADERSHIP ALLIANCE
NAIOP

September 12, 2012

VIA E-MAIL AND HAND DELIVERY

Ms. Laurie Walsh
WRC Engineer
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: REVISED ADMINISTRATIVE DRAFT REGIONAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) (Tentative Order No. R9-2012-0011)

Dear Ms. Walsh:

The following trade and professional associations, for the purposes of this communication known as, the regulated community, are responding as a Coalition. Spearheaded by the Building Industry Association of San Diego County (BIASD), Business Leadership Alliance (BLA), Associated General Contractors, San Diego (AGC), NAIOP (National Association of Industrial & Office Properties), Associated Builders & Contractors (ABC), the San Diego Regional Chamber of Commerce, the San Diego Association of Realtors® (SDAR), and the Building Owners & Managers Association (BOMA) and the members thereof, we appreciate the opportunity to provide comments on the Administrative Draft of the San Diego County Regional MS4 Permit (Administrative Draft Permit). We submit these comments in addition to and in support of comments made by our affiliate the Building Industry Association of Southern California and its coalition partners. This Coalition employs over 200,000 San Diegans and generates in excess of $ 3 billion dollars of economic activity in the San Diego region.

Alternative Methodologies to Address Water Quality and Hydromodification Concerns

The Coalition supports stream and habitat restoration/rehabilitation as an essential part of hydromodification control, and recommends that alternative compliance presented in the Administrative Draft permit Section E.3.c.(4)(c), Mitigation, should be encouraged. Hydromodification management is an issue that is larger than the individual discharger and needs to be addressed at the local watershed level. Within a watershed, a combination of conventional on-site controls for some projects and alternative compliance for other projects is appropriate.

In some cases, restoration/rehabilitation projects can provide more benefit to the receiving waters than conventional on-site low impact development (LID) and hydromodification management practices. For example, new developments in watersheds that are already experiencing hydromodification from existing development could potentially provide a greater benefit to the receiving water by directing funds to alternative compliance mitigation projects in the stream rather than conventional BMPs on the project site. Within already developed watersheds, the benefit of conventional on-site BMPs may be measurable when compared to the hydromodification effect of existing development.

The Coalition recommends that alternative compliance should be an option accorded equal status with conventional on-site low impact development and hydromodification management practices, and that the permit should provide a simple path or "off-ramp" to alternative compliance. The permit Sections discussed below should be modified to simplify the path to alternative compliance, which would encourage project applicants to pursue this path.

Section E.3.c.(4)(a)(i) of the Administrative Draft permit requires a site-specific and/or design analysis performed by a registered professional engineer, geologist, architect, or landscape architect be provided by the project applicant in order for a Copermittee to approve alternative compliance. The analysis would be required to prove technical infeasibility of retention LID and hydromodification management BMPs. If stream and habitat restoration/rehabilitation projects enhance the beneficial uses within the watershed and provide the same or better level of water quality protection, they should not require proof of infeasibility of on-site retention LID and hydromodification management BMPs.

Section E.3.c.(4)(a)(ii) of the Administrative Draft permit requires a project applicant to demonstrate that retention LID and/or hydromodification management BMPs per Provisions E.3.c.(2) and E.3.c.(3) were incorporated into the project design to the maximum extent technically feasible given the project site conditions. Section E.3.c.(2)(c) requires the project must implement flow-thru LID BMPs for the portion of the design capture volume of runoff that is not retained on-site. Altogether this means the project must implement a mix of conventional retention LID BMPs and flow-thru LID BMPs in addition to alternative compliance. In some cases the benefit of conventional BMPs may be unmeasurable in the context of a watershed that is already experiencing hydromodification, and it would be more beneficial to direct all funds toward stream restoration/rehabilitation (alternative compliance). If stream and habitat restoration/rehabilitation projects enhance the beneficial uses within the watershed and provide the same or better level of water quality protection, projects should not be required to provide a mix of conventional retention LID BMPs and flow-thru LID BMPs in addition to alternative compliance.

The following are recommended changes to the language of the Administrative Draft permit. In addition to the suggested revisions below, the permit should clarify when and how the Regional

Water Quality Control Board will be involved in the review and approval of alternative compliance projects.

PROPOSED CHANGES TO PRIORITY DEVELOPMENT PROJECT PERMANENT BMP PERFORMANCE AND SIZING REQUIREMENTS

Section E.3.c.(2)

In addition to the BMP requirements listed for all development projects under Provision E.3.a, Priority Development Projects must also implement permanent BMPs that conform to performance and sizing requirements.

> (2) Retention and Treatment Control BMP Requirements Each Copermittee must require each Priority Development Project to implement BMPs to retain and treat pollutants onsite in the following order or provide alternative compliance pursuant to Provision E.3.c.(4):

Section E.3.c.(4)(a)

(a) Applicability

> Priority Development Projects may be allowed alternative compliance if:
>
> > (i) ~~The Copermittee reviews and approves site-specific hydrologic and/or design analysis performed by a registered professional engineer, geologist, architect, or landscape architect;~~ The project applicant is required to perform mitigation described in Provision E.3.c.(4)(c) with a net result of at least the same level of water quality protection as would have been achieved if the Priority Development Project had fully implemented the retention LID and hydromodification management BMP requirements under Provisions E.3.c.(2) and E.3.c.(3) onsite; or ;
> >
> > (ii) The project applicant demonstrates, and the Copermittee determines and documents, that retention LID and/or hydromodification management BMPs per Provisions E.3.c.(2) and E.3.c.(3) were incorporated into the project design to the maximum extent technically feasible given the project site conditions~~;~~ and the project applicant is required to perform mitigation described in Provision E.3.c.(4)(c) for the balance of the project design capture volume that is not retained on-site.
> >
> > (iii) ~~The project applicant is required to perform mitigation described in Provision E.3.c.(4)(c) with a net result of at least the same level of water quality protection as would have been achieved if the Priority Development Project had fully implemented the retention LID and hydromodification management BMP requirements under Provisions E.3.c.(2) and E.3.c.(3) onsite.~~

Illicit Discharge Detection and Elimination

The Coalition is concerned about the unanticipated consequences associated with the Permit's definition of "illicit discharges" and the application of that definition to discharges of ground water through subsurface drains. The permit defines an "illicit discharge" as "Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 CFR 122.26(b)(2)]." The permit goes on to define a non-storm water discharge as "All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges and NPDES permitted discharges." Finally, the permit presumes that any flow in a storm drain that occurs seventy two hours after a rain event is a non-storm water flow and thus an illicit flow in violation of the permit and the clean water act. For the reasons described below, this interpretation is neither enforceable nor technically feasible.

The proposed permit requires development and redevelopment projects to retain the 85th percentile storm event on the project site and either use or infiltrate that water. [Citation] The available area where soil is conducive to infiltration within the County of San Diego is extremely limited. These available areas include soil adjacent to river or stream beds, coastal sandy deposits, and valleys (e.g. along San Luis Rey River, beaches, and Mission Valley) and are a small fraction of the County area. Therefore, the parameters in the permit cannot be met on most projects. About 90 percent of the area of San Diego County belonging to Region 9 is likely deemed unfeasible for infiltration (soils Type C and D, see California Geological Survey - Preliminary Surface Geological Materials Map attached hereto).

Normally, these areas where infiltration can be performed are protected for environmental purposes (i.e. canyon drainages where the existing vegetation protects animal and waterway environments) However, in those areas where the native soils are permeable and development or redevelopment are permitted, building ordinances and design specifications require compacted fill at grade for higher density projects. The compacted fill has a reduced void structure and therefore does not facilitate water infiltration. Thus, this infiltration requirement as written pits the goal of minimizing urban sprawl though high density development with an attempt to infiltrate precipitation.

Because of the soil conditions in the geographic area regulated by this permit, much of the infiltrated water does not reach ground water aquifers but rather becomes perched water which tends to collect around subsurface utility lines, foundations and other structures. Unless the perched water can be allowed to escape there is a high probability of damage to critical infrastructure such as roads, utilities necessary to protect the health, safety and welfare of the community.

The Permit offers the alternative of retention and use of water on site. As discussed at the Permit workshops, this alternative is both impractical and likely in violation of California law. First, because of the unique rain patterns in Southern California the scale of any retention structures would be enormous and costly well beyond any benefit to water quality particularly as applied to critical infrastructure projects such as roads and airports. Second, assuming that it is technically

feasible to capture the runoff, doing so is likely to contravene other state laws and policies such as protection of wetland habitats[1], and previously granted water rights.[2]

The permit impermissibly assumes that any water flowing in a storm drain seventy two hours after an arbitrary 0.1 inch storm event is non-storm water. First, the natural drainage from even an undeveloped site can take more than seventy two hours in many cases. As a matter of fact, a simple review of USGS precipitation and runoff records in a natural watershed in the area, such a San Mateo Creek, proves without a doubt that wet periods may take more than a month to fully drain natural runoff especially in wet years even for relatively small watersheds. Second, natural precipitation which is infiltrated on site is likely to emerge as perched water and enter the storm drain system day, weeks or months after was originally infiltrated. Third, hydromodification BMPs may take much more than 72 hours to drain, especially for those BMPs were a significant volume of detention occurs under amended soil and the drainage is constrained by a very small orifice. Thus, the seventy two hour definition after a 0.1 inch storm event lacks any scientific bases and is, therefore, both arbitrary and capricious.

For the reasons stated above, the Coalition recommends that the Permit language be modified as follows:

ILLICIT DISCHARGE DETECTION AND ELIMINATION -- NON-STORM WATER DISCHARGES

Section 2.a.1

(1) Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG919001 (Order No. R9-2007-0034, or subsequent order) for discharges to San Diego Bay, or NPDES Permit No. CAG919002 (Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay:

(a) Uncontaminated pumped ground water;

~~(b) Discharges from foundation drains;~~

~~(c) Water from crawl space pumps; and~~

~~(d) Water from footing drains.~~

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[1] By capturing all events smaller or equal than the 85th percentile rain event, the runoff volumes are likely to be less than they were in the predevelopment condition, thereby drying up streams and valuable wetland habitat. The use of a universally accepted rainfall-runoff methodology such as the NRCS Method proves that events smaller than the 85th percentile rainfall event may generate a significant percentage of their volume as a runoff, depending on the soil type, antecedent conditions and vegetation type.

[2] If the amount of water being retained on site exceeds the amount of water retained in pre development condition, the additional water being retained will likely violate the prior appropriation rights and pueblo rights of others.

(2) Discharges of non-storm water from water line flushing and water main breaks to the MS4 must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG 679001 (Order No. R9-2010-0003, or subsequent order). This includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 must be addressed as illicit discharges, unless the discharges have coverage under a separate NPDES permit.

(3) Discharges of non-storm water to the MS4 from the following categories must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a source of pollutants to receiving waters:

(a) Diverted stream flows;

(b) Rising ground waters;

(c) Uncontaminated ground water infiltration to MS4s;

(d) Springs;

(e) Flows from riparian habitats and wetlands; ~~and~~

(f) Discharges from potable water sources~~.~~;

(g) Foundation and footing drains

(h) Water from crawl space or basement pumps

(i) Hillside/canyon drains

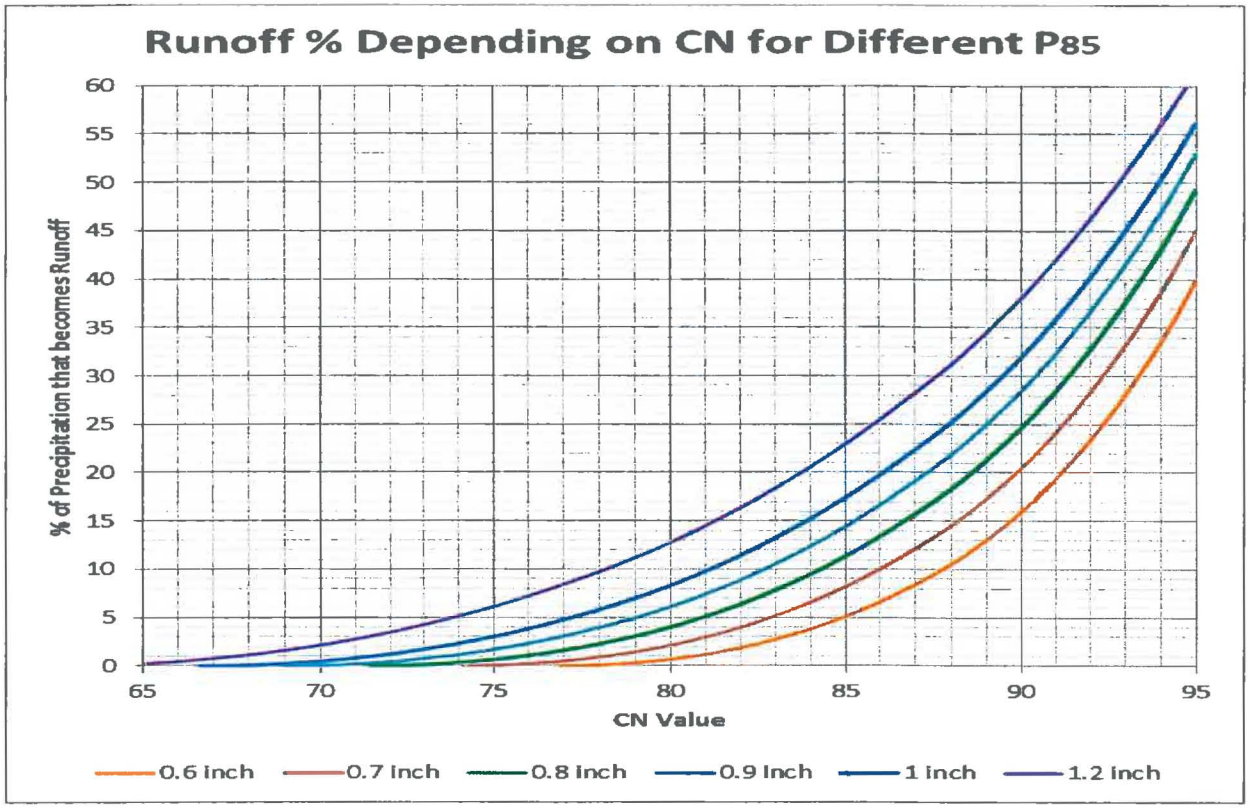
Add to Appendix C – Definitions:

Groundwater – water that occurs beneath the water table in soil and geologic formation that are fully saturated as evaluated by a licensed geotechnical consultant or geologist.

BMP Performance and Sizing Requirements

The Coalition is concerned about the unintended consequences associated with the Permit's definition of LID implementation. We propose a more detailed and clear definition of the volume required for LID, as runoff should not be reduced below the expected runoff produced by the 24 hour – 85th percentile storm in natural conditions (nor the runoff produced by smaller storms in those cases where they indeed generate runoff). In natural conditions, runoff is not only a function of the precipitation event (the main variable) but also a function of the soil type, the natural vegetation type, and the Antecedent Moisture Condition (AMC) before the storm event (degree of saturation of the soil at the beginning of the storm). The current definition also lacks clarity in terms of the intent of the infiltration/retention LID: it is not clear if the volume retained is associated with the first storms of the season, or if it is associated with all storms smaller or equal than the 24 hour – 85th percentile storm event.

In San Diego County, many times the 24 hour - 85th percentile precipitation event (P_{85}) generates runoff in natural conditions, as impervious soils (Type D) are predominant in the County, and poor or fair natural vegetation is common in many areas. The Coalition has prepared a figure that illustrates the percentage of runoff as a function of the Curve Number value (a well-known parameter for hydrologists and engineers to determine runoff via NRCS (SCS) method, which is a function of soil type, vegetation, and AMC), for different values of P_{85}. It is clear that runoff as a percentage of the precipitation can be as small as 0% or as large as 60% depending on the conditions of the natural terrain and the size of P_{85}.



Removal of naturally occurring flows generated by storms similar to the 24 hour – 85th percentile storm for those natural environments where such flows do occur may have negative impacts to existing habitats, as excessive retention may alter the natural water balance. Additionally, excessive retention in soils that have a naturally limited capacity for infiltration increases the risks of failure on vital infrastructure due to lateral water migration.

Also, the intent of the permit to retain the seasonal first flush only (and not all runoff from all events smaller or equal than the 24 hour – 85th percentile event) is not clear in the current language. It is clear in the technical literature (see for example CALTRANS CTSW-RT-05-73-02.6) that first flush treatment has a justification based on the fact that most of the time, in Southern California, treating the first storm of the season may remove built up contamination. Additionally, the first 20% - 40% of the storm volume may remove 50% - 70% of the total contaminant load (excluding sediments and trash). Finally, first flush treatment is justified by the theory of diminishing returns, because

BMPs have a better efficiency removing higher loads, and the cost of treatment is more dependent on the volume of water than on the concentration of contaminants.

For the reasons stated above, the Coalition recommends that the Permit language be modified as follows:

Section E.3.c.(2)(b)

Each Priority Development Project must be required to implement LID BMPs that are sized and designed to retain the volume equivalent to the runoff volume produced from a 24-hour 85th percentile storm event produced in natural conditions. 15 ("design capture volume");

Footnote 15~~: This volume is not a single volume to be applied to all areas covered by this Order. The size of the 85th percentile storm event is different for various parts of the San Diego Region. The Copermittees are encouraged to calculate the 85th percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction. In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85th percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its BMP Design Manuals.~~ Runoff volumes must be calculated using the NRCS Method applying average AMC-II conditions, natural NRCS soil types, and the corresponding natural vegetation that exist or existed prior to development; a different hydrologic method could be approved by the Copermittees. LID is not intended to retain the runoff of all events that generate a runoff volume equal to or smaller than the runoff produced by the 24 hour - 85th percentile storm event; rather to retain the first flush up to the 85th percentile runoff difference. The 85th percentile runoff in natural conditions could be 0 or larger depending on the original natural vegetation and soil type. The time needed to use the totality of volume retained must be compatible with current regulations and water usage in the area. Proper vector control will be required in the retention facility if usage and infiltration of the retained water is expected to exceed 96 hours.

Sediment Supply Requirements

The requirement to address sediment balance is briefly mentioned in the new permit in the form of compensation of the potential sediment supply loss due to the proposal of a priority project. The sediment balance within a watershed (or the establishment of new sediment equilibrium as a consequence of many years of development in multiple watersheds) is an extremely complex issue. The Coalition is therefore very concerned about the lack of direction regarding this issue, the myriad of factors affecting a highly variable phenomena and the possibility of wasting valuable resources preparing a useless Sediment Management Plan for Priority Projects. Such plans lack direction, proper design equations, and basic understanding of the sediment transport phenomena in Mediterranean climates.

Sediment yield and sediment transport are functions of the geology of the terrain, the topography of the watershed and the slope of the main channels, the grain size distribution of the sediments existing in the network of channels, the vegetation, the annual precipitation and its distribution, the state of the vegetation prior to the rainfall (burned, dry, stable), the geometry of the main creeks

and channels, the Antecedent Moisture Condition of the soil, the equilibrium conditions of slopes and of the sediments already in the network of channels in terms of stability, the existence of reservoirs or dams and the frequency and duration of their discharges in extreme events, and many other factors.

Trying to accommodate such complex factors into a one-size-fits-all solution is a recipe for disaster. Also, trying to deal with the sediment problem in a typical pre-formatted Sediment Management Plan is not only impractical, but also ineffective and resource-consuming. Sediment transport analysis made in the Tijuana River with 73 years of daily runoff data has proven, for example, that more than 70% of the sediment transport occurs less than 0.15% of the time; sediment analysis in the Santa Clara watershed has generated very similar results, with the added complication of hyperpycnal flow transport (flows with density higher than the salt water due to high sediment content), generating significant geomorphological changes in the watershed.

In addition to the complexity of the problem, many proposed solutions (such as the use of the Lane Relationship) denote the lack of understanding of sediment transport theory, as the Lane Relationship is not a quantitative equation that can be used for design, but a qualitative relation that only can be used for the purposes of discussion about the main factors affecting sediment equilibrium.

An added difficulty is related to the compensation process. It is evident that, even if sediment supply loss can be proven for a given project, adding artificial sediments to a natural creek triggers so many permits and environmental and water quality constraints, that such an alternative is infeasible. Even if the sediment addition is allowed, it is not clear what amount, size distribution, and time-variable sediment injection is required to mimic a naturally variable sediment production and transport condition that is not clearly measured nor understood.

For the above stated reason, the Coalition recommends that the permit language be modified as follows:

Section E.3.C(3)(b)

First option:

Eliminate the language until a more comprehensive and reasonable approach is developed to deal with restoration/rehabilitation projects and measurement of loss of sediment supply:

~~(b) Post-project runoff flow rates and durations 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.~~

Second option:

Incorporate rehabilitation/restoration projects and/or protection of clearly identifiable sediment producing areas as the only feasible alternative to deal with sediment supply:

(b) Post-project runoff flow rates and durations 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. Redevelopment projects that increase pervious areas from pre-development conditions are not subject to such compensation. Compensation should be tied to restoration/rehabilitation projects for downstream creeks and/or funding for protection of identified sediment-supply areas in the watershed.

Thank you for consideration of the Coalition's comments on the Administrative Draft of the Permit. We look forward to working with the Regional Quality Control Board and its staff on improving the final draft with a goal toward achieving improved water quality in harmony with the Regional Board's Basin Plan.

Very truly yours,

Borre Winckel
President & CEO of the BIASD
On behalf of the Coalition