

**VENTURA TECHNICAL GUIDANCE MANUAL COMMENTS (SEPTEMBER 27, 2010 DRAFT)**

Commenter	Section	Comment
<p>Renee Purdy, Regional Board</p>	<p>1 - 3</p>	<p>First, the TGM should state clearly in the Introduction that the goal of the Planning and Land Development Program is to minimize runoff pollution by limiting effective impervious area (EIA) to no more than 5% of the project area and retaining stormwater on-site.</p> <p>The current wording (on p. 1-2) doesn't specifically identify limiting EIA and maximizing onsite retention as the preferred course of action, but seems to give equal weight to retention BMPs, biofiltration BMPs, and Treatment Control Measures. In the Introduction and throughout the document, these concepts of limiting EIA and maximizing onsite retention need to be more strongly emphasized, while biofiltration and treatment control measures should be clearly identified as alternative approaches only when the EIA and onsite retention requirements cannot be met due to technical infeasibility. In line with this, generally we believe that discussions of Retention BMPs should be separated from Biofiltration BMPs (e.g. on p. 1-5) to make clear the distinction and the requirement to select retention BMPs over biofiltration BMPs where technically feasible to do so.</p> <p>Additionally, the Draft TGM needs to clearly identify a step in the design process to comply with the requirement to limit EIA to no more than 5% of the project area, i.e. there needs to be a step in the process to illustrate, from a site design perspective, that a developer has disconnected impervious area such that the 5% EIA limitation is achieved (or that EIA has been minimized as much as possible if it is technically infeasible to achieve the 5% limitation). Perhaps this would occur in Step 3. Ivar mentioned this at our earlier meeting, but we don't see where it is clearly addressed.</p> <p>Finally, we would like to discuss the new section "Determining Maximum Volume Feasibly Retained and Biofiltered" with you further. It is not clear how you intend this section to be used, and we are concerned about the potential for misuse. I recall discussing the idea of providing some rules of thumb, but it needs to be clear that each project must be evaluated individually and in detail to determine the ability to achieve the 5% EIA limitation and onsite retention requirements (i.e. the maximum extent practicable standard may be different for different projects). And, there must be a specific demonstration based upon the individual project conditions/setting if alternative compliance measures (including biofiltration) will be used for the stormwater management measures due to technical infeasibility.</p>
<p>Mark Hsieh, Director of Engineering  VTN West, Inc</p>	<p>App E</p>	<p>According to page 2-11, allowed design storm methodology, method 3 (0.75 in rainfall) can only be used for project size less than 5 acres. The sample calculation shown in Appendix E had the project area of 10 Acres. Is this meant I can use method 3 for the project area greater than 5 Acres? If I can, what is the limitation of project area for Method 3? Can I divide the project and provide 2 BMP and then use Method 1 or 2 to determine SQDV? I have question regarding the method of determining the SQDV. We have a project which has total project area approx. 113 acres. Based on TGM page 2-11, we need to use Method 4 (SWMM) to determine the SQDV. Appendix E does not provide too much information about the method. Can we just use method 1 or 2 to calculate SQDV? Or can you provide more information regarding SWMM? Can I divide the project and provide 2 BMP and then use Method 1 or 2 to determine SQDV?</p>

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Lorraine Walter	Bioretention with Underdrain Fact Sheet	<p>Mulch: What is the reason for the strange mulch specs on page 126. No bark, trunk or branch wood? Surely someone made a mistake there. How can it be "woody" buy not made from wood? Those specs will also eliminate many options for local, maybe even onsite sources of mulch, which is not so good for source reduction/recycling goals. Why a 12-month aging requirement? By then the material will be more of a compost, which will break down and disappear much sooner than a nice woody mulch. Woody mulches last a long time and thus reduce maintenance costs. I'm no expert on stormwater management of course, but it seems to me it doesn't rain here enough to worry so much about the "floating away" issue. Seems like an east coast carry-over concern. I recommend having a local landscape architect look at those mulch specs.</p> <p>Shade Trees: What is the reason for limiting shade trees to a single trunk? Although coast live oak trees are not commonly used as landscape trees, they sometimes are, or existing oak trees are retained and serve as shade trees. Oak trees are encouraged by many local tree protection ordinances and are commonly multi-trunked. Can this issue have more wriggle room?</p> <p>Plants: What is the purpose of the requirement to have landscape architects certify that all plants conform to the standards of the current edition of American Standard for Nursery Stock as approved by the American Standards Institute, Inc.? A long-time local landscape architect tells me "I do not know of any landscape Architect that reviews plants with this standard in mind."</p> <p>Minimum # of Plants: The requirement for a minimum number of plants does not specify the area or unit the minimum refers to.</p> <p>It is recommended that a minimum of three tree, three shrubs, and three herbaceous groundcover species be incorporated to protect against facility failure due to disease and insect infestations of a single species.</p> <p>Per planter? Planters can be of any size.</p> <p>Natives: Have you asked local landscape architects whether our native plants can grow in that specific soil blend required? Natives typically like and only really thrive in our native soil...</p> <p>Watering: How realistic is it to on the one hand require plants that are tolerant of saturated conditions and then on the other hand require plants that do not require water after establishment? Do you have a list of locally-suitable plants that can meet these criteria? We may need to be realistic and acknowledge that many plants in these bioretention areas are going to need more water than others in our low-water using landscapes. And this is fine as long as the landscape's overall water budget is within required limits. The draft manual does not mention who has reviewed the document, but again, I would strongly urge the involvement of local landscapes architects. I can provide contact information if needed.</p>
Mack	App D	Needs improvement to provide performance criteria for new proprietary BMPs.

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Stakeholder Workshop	2	Clarify how to define ROW for private streets (green streets standard)
	2	Off-site mitigation should be allowed to do a pollutant load analysis to justify a different land use mix instead of just limiting it to “similar land uses.”
	4	Make sure Site Planning Fact Sheet emphasizes sizing flood control and hydromod control BMPs first, as they may dominate the control feature sizing.
	6	Remove BMP design specifications that are not critical to water quality protection (such as width and paving requirements for access roads).
	6	Take out the discussion on CDFG/ESA maintenance agreements in 6.2.
	2	SF hillside requirement - need to distinguish between Lot vs. home. Defer to other reg. re. sensitive areas (eg. 401 cert).
	2	Other project categories need clear definitions for critical terms like “transit center” and “affordable housing.”
	6	Clarify stormwater harvesting can use other storage options beyond cisterns.
	1	Grandfathering - Request that submitted construction plans be able to comply with 2002 TGM – we may need to run this by Planners
Workgroup Comments	2	Alternative compliance project categories (e.g., low income housing) applies everywhere (not just in existing urban centers) BMP Selection and POCs Mitigation projects and like-for-like land use – will add “or conduct pollutant loading analysis” Offsite Mitigation – still have to provide treatment onsite?
BIA/SC & CICWQ	1.5	Applicability, Effective Date, Nos. 1-5, our review of the TGM suggests that there may be a situation where a project requires only non-discretionary approvals and we believe the intent of this section is to also grandfather these projects that have undergone significant design investment. For example, if a building and safety permit application has been submitted to a local municipal building and safety department (where the project did not require a discretionary approval by a planning agency) the project would have been designed in conformance with requirements in the 2002 version of the TGM. The TGM should clarify this; the clarification would appear in Section 1.5, Applicability, Effective Date, No. 1.
	2.7	Step 6, Alternative Compliance and the existing urban area boundaries shown in Appendix B, we suggest that these boundaries are consistent with and reflect those boundaries identified in established city urban restriction boundary (CURB) mapping and SOAR boundaries. It has been and continues to be our understanding that all priority projects located within the established CURB/SOAR boundaries would be eligible for Alternative Compliance as a result of

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		technical infeasibility as indentified in Section 3.2, No. 12, a. We ask that these boundaries be made consistent and clear, and that maps of sufficient detail be produced by the District for project proponents working in Ventura County.
	6	The BMP design criteria contained in Section 6, Stormwater BMP Design, are very specific and detailed. While we appreciate the clarity that this provides, we also know that such engineering is frequently influenced by site-specific conditions. We suggest that the introduction to the section clarify that the design criteria are the best practices and suggested designs, while allowing for other designs to be approved by the local jurisdictions.
	2	We have reviewed the TGM and find that the interpretation of the implementation requirements for LID Biofiltration and Biotreatment BMPs is consistent with the Los Angeles Regional Water Quality Control Board Member transcript and clarifying statements made by LA Board staff during the Ventura MS4 permit adoption hearing on July 8, 2010.
Calleguas Municipal Water District	1.4 and 4.7	<p>The District has been an active proponent of integrated water resource management in its participation in the Calleguas Creek Watershed Management Plan and in the Watersheds Coalition of Ventura County’s Integrated Regional Water Management Plan. We support the incorporation of IWRM principles as they have been included in the technical guidance manual Section 1.4 Stormwater Management Principles, Section 4.6 Apply LID at Various Scales “Regional/Watershed,” and Section 4.7 Implement Integrated Water Resource Management Practices.</p> <p>We also request continued involvement in partnership with the Ventura Countywide Stormwater Quality Management Program to identify regional opportunities for offsite mitigation projects that will best promote water supply reliability.</p>
	6.2	<p><u>Maintenance Responsibility:</u> As noted in my public comments at the September 29, 2010 stakeholder meeting to review the technical guidance manual, I believe the third full paragraph beginning, “The primary purpose of Biofiltration BMPs . . .” (page 6-2), confuses takings under the federal Endangered Species Act with federal Clean Water Act provisions concerning discharges to the Waters of the United States. Maintenance of stormwater facilities will necessarily need to comply with applicable federal and state law. The technical guidance manual does not need to prescribe how those laws will apply. As discussed at the stakeholder meeting, this paragraph may be eliminated from the manual without changing the effectiveness of the program or affecting maintenance practices in compliance with the Endangered Species Act and Clean Water Act. I recommend removing the paragraph from the manual.</p>
Contech	2 and 6	<p>The interpretation of the term “biofiltration” and subsequent selection criteria in the Technical Guidance Manual is a blatant violation of the Maximum Extent Practicable Standard. As the TGM notes in its definition of “Maximum Extent Practicable”, CWA §402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable”. This goal is also appropriately listed first in the statement of TGM goals in section 1.1. The definition of MEP was addressed by Elizabeth Jennings, Senior Staff Council for the SWRCB in a memo dated February 11, 1993, entitled “Definition of Maximum Extent Practicable”. The crux of the definition is as follows:</p> <p>“To achieve the maximum extent practicable standard, municipalities must employ whatever Best Management Practices</p>

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		<p>(BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the maximum extent practicable means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive.”</p> <p>The TGM and NPDES permit properly mandate that retention BMPs be implemented to the maximum extent technically feasible prior to the consideration of BMPs that allow some discharge of stormwater runoff from the water quality design storm. Retention is clearly the most effective BMP. However, limiting so called “treat and release” BMPs to biofiltration forces site designers to exhaust options for implementation of some inferior vegetated BMPs prior to allowing consideration of more effective BMPs that are not vegetated. Specifically, vegetated swales and filter strips are included as biotreatment BMPs and as such, their use is prioritized over media filters which are not included as acceptable means of reducing effective impervious area. This is a blatant contradiction of BMP performance research from within California and around the Nation which consistently shows that media filters are more effective than swales and strips in removing most common stormwater pollutants.</p> <p>The International BMP Database includes numerous swale, strip and media filtration performance studies from California as well as other locations. A recent summary document describing the performance of “biofilters” and “media filters” can be found at:</p> <p><a href="http://www.bmpdatabase.org/BMPPerformance.htm">http://www.bmpdatabase.org/BMPPerformance.htm</a></p> <p>It shows that media filters outperform biofilters for most conventional pollutants. In fact, swales and strips are more likely to increase downstream loading of nutrients, bacteria, pesticides and herbicides. Depending on irrigation efficiency, they may also contribute to dry weather runoff. The TGM accurately notes that dense scour resistant vegetative cover is required for proper performance. Such vegetation is likely to increase demand for irrigation water, fertilizer and herbicides, especially if turf is specified as allowed in the TGM. Conventional swales and strips are hardly climate appropriate BMP choices.</p> <p>On the positive side, swales and strips may provide some runoff volume reduction benefit, but that benefit is not reliable given irrigation inputs and the back-to-back nature of rainy season storm events in Ventura County. If soils are amended to increase retention capacity, the proper place to take design credit would be under the hydrologic source control provision.</p> <p>Simply put, including swales and strips as acceptable biofilters and requiring that they be used even where media filters are technically feasible and not cost prohibitive violates the MEP standard.</p>
		<p>There are at least two possible remedies:</p> <ol style="list-style-type: none"> <li data-bbox="659 1385 1927 1450">1. Remove swales and strips from the biofiltration category and place them in the treatment control section of the manual. Biofiltration designs, like the BIO-1 and BIO2 options in the TGM, that force water through a media bed</li> </ol>

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		<p>are superior in performance to vegetated filter strips and swales. Therefore, their preference over swales and strips is defensible. However, it is not clear that such designs, for example the planter box design in the TGM, outperform non-vegetated media filters. Putting swales and strips in the treatment control section will require site designers to make a performance based BMP selection. Hydrologic source control credit would potentially be available for swales and strips.</p> <p>2. Retain swales and strips as biofiltration options. Add a provision allowing media filters or other BMPs that are at least as effective as swales and strips to be used where the entire stormwater design volume cannot be retained or treated by bioretention with underdrains (BIO1) or planter boxes (BIO2). These equally or more effective options must be allowed without triggering off-site mitigation requirements.</p>
		<p>Justifying the exclusion of highly effective BMPs on the basis that they don't fit the permit's definition of "biofiltration" is unacceptable. The permit does not define biofiltration. While the permit requires that mitigation goals be met through the use of low impact development techniques to the maximum extent practicable, this obligation is subservient to the CWA directive to reduce the discharge of pollutants to the maximum extent practicable. It would seem to be less egregious to take an expansive view of "biofiltration" than to blatantly violate the Clean Water Act.</p>
	2 and 6	<p>Swales, Strips and Proprietary Biotreatment systems are typically designed as rate based BMPs. The fact sheets for these BMPs include rate based sizing only. Yet the Permit and TGM seems to only allow volume based sizing for "biofiltration" BMPs. Sizing guidance for rate based biotreatment systems should be given, with particular attention to ensuring that the amount of runoff treated is equivalent to what would be treated using the water quality volume x 1.5 as is required for other biotreatment. Currently the rate based sizing guidance in the TGM is based on using a rainfall intensity of 0.2 inches per hour. That intensity should be increased to at least 0.3"/hr for biofiltration BMPs.</p>
	6	<p>It is also important to note that biotreatment BMPs are likely to serve small catchment areas with a time of concentration much shorter than one hour. A catchment area threshold should be given where it is allowable to use the 0.2"/hr default intensity without an actual calculation of the appropriate rainfall intensity using the actual time of concentration and local rainfall intensity distribution. To complete this analysis would require the analysis of historical rainfall records recorded at less than 60 minute intervals. It would be helpful if the TGM provided a table or graph of more appropriate design storm intensities corresponding to catchment area size or time of concentration for use in sizing small distributed rate based treatment BMPs.</p>
	6	<p>Proprietary Product Information</p> <p>CONTECH supplies a wide variety infiltration, filtration, rainwater harvest and pretreatment systems, many of which are included in the draft TGM. As you update the TGM, please note the following CONTECH products and their suggested placement within the manual:</p> <p>Please add Perforated Corrugated Metal Pipe (CMP) to the list of infiltration products in Table 6-15 in section INF-6.</p>

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		<p>Sample CMP photos are attached to this letter. Additional product information can be found at:  <a href="http://www.contech-cpi.com/Products/StormwaterManagement/SubsurfaceInfiltration/CMPDetentionandInfiltrationSystem.aspx">http://www.contech-cpi.com/Products/StormwaterManagement/SubsurfaceInfiltration/CMPDetentionandInfiltrationSystem.aspx</a></p> <p>Both the CON/SPAN and StormTrap photos on page 6-73 are detention designs with a solid floor. An infiltration design would have concrete strip footings with a gravel floor. A sample CON/SPAN photo is attached to this letter.</p> <p>Please add the Drywell StormFilter to the list of infiltration products in Table 6-15 in section INF-6 and to section INF-4. A sample drywell StormFilter photo is attached to this letter. Additional product information can be found at:  <a href="http://www.contech-cpi.com/Products/StormwaterManagement/SubsurfaceInfiltration/DryWellStormFilter.aspx">http://www.contech-cpi.com/Products/StormwaterManagement/SubsurfaceInfiltration/DryWellStormFilter.aspx</a></p> <p>Please add the UrbanGreen BioFilter by CONTECH to the list of proprietary biofilters in table 6-21.</p> <p>A sample UrbanGreen BioFilter photo is attached to this letter. Supplemental product information is available at:  <a href="http://www.contech-cpi.com/Products/StormwaterManagement/Biofiltration/UrbanGreenBioFilter.aspx">http://www.contech-cpi.com/Products/StormwaterManagement/Biofiltration/UrbanGreenBioFilter.aspx</a></p>
Craig K. Beam	1	<p>Page 1-8, Effective Date. Item 5, An Approved or Deemed complete application of a TENTATIVE MAP should be under the old permit and exempt from the 2010 TGM provision of the revisions of the map ‘substantially conform’ to the original map design no matter who suggest the initiates the change... The owner/applicant should be provided the same rights as the permitting agency or other public agency.” This comment is appropriate in light of the regulatory processes set forth in the Subdivision Map Act.</p> <p>As I am sure you are aware, the County’s and various cities’ authority and discretion to review and approve parcel and tract maps is expressed by an agency at the time of the tentative map’s approval and subject to the agency’s policies and requirements. Prior to the agency’s approval of a “final map” it may allow minor modifications to the tentative map without formally amending the tentative map prior to approval of the final map. This concept should be included in the Effective Dates’ Section 5. As a result, any approved tentative map, or application for a tentative map which has been deemed by the local mapping agency as “complete” would not lose its “grandfathered status” merely because a minor modification reflected in either the completed application for a tentative map or approved tentative map is confirmed in a subsequent final map where authorized by the Map Act. Such minor changes are authorized so long as the “final map” is in “substantial conformance” with the tentative map.</p> <p>Gov’t Code §66474.1 specifically provides, “a legislative body shall not deny a final map or parcel map if it has previously approved a tentative map for the proposed subdivision after it finds that the final or parcel is in substantial compliance with the previously approved tentative map.” This Section was added to the Map Act in 1982 and reflects long-standing policies of local cities and the County.</p>

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		To treat such minor modifications would otherwise inappropriately negate the objectives of the Technical Guidance Manual's Effective Date language.
Marilyn K. Miller Director, Harbor Planning & Redevelopment Channel Islands Harbor	1	Under the section titled "Effective Date," this section appears to exempt any project that is in a Specific Plan that has been approved or deemed complete. Is that correct? This would mean, for example, that any project in downtown Ventura would be exempt because it is within the Downtown Specific Plan Area, or in the City of Oxnard, any project within the Riverpark Specific Plan, the Northeast area, or any of the industrial area specific plans as well. Also, any project for which there has already been a tentative map approved is exempt, no matter how long ago the map was adopted? The way I read this section, a great deal of the County could be exempt from these permit requirements and I'm not sure that was the intention.
	2	Page 2-11. The box insert with the definition is very helpful. Also, after the workshop the other day, it is unclear to me whether the project area includes gross area or net. Are streets included?
	2	Page 2-16. I appreciate the glossary in the back, however, some of the terms are not defined and can be interpreted in many ways, i.e., "walkable neighborhoods," "compact building design," "transit center." It would be helpful to have further definitions of some of these terms.
	3	Page 3-30 and throughout. I am wondering about enforcing the maintenance requirements and who pays for this. Does the local jurisdiction have the authority to charge back the developer for these costs?
	3	Page 3-35. I have concern about the use of the term "Environmentally Sensitive Area." Does this come from the County General Plan? Is the map included in the appendix from the County General Plan. ESA differs from ESHA, which is a term of art that has a definite meaning under different state regulatory agencies. It would be helpful to make that distinction in the department, identify the source of the ESA identification, and to provide a map that is at a smaller scale that shows the designated areas.
	4	Page 4-6. Under design criteria, what does "Delineate and flag" mean?
NRDC and Heal the Bay	2	<p>The Ventura County MS4 Permit (Los Angeles Regional Water Quality Control Board Order No. R4-2010-0108, adopted July 8, 2010) states that, where onsite retention of the design storm volume is technically infeasible, an on-site biofiltration system may be used to satisfy the EIA limitation. Where discharge of any volume of the design storm will occur, the biofiltration system is required to be designed such that it "shall achieve 1.5 times the amount of stormwater volume and pollutant load reduction as would have been achieved by on-site retention . . ." (Permit, at 4.E.III.1.(b).) While the Draft Manual requires that "Biofiltration BMPs must be sized to treat 1.5 times the volume not retained using Retention BMPs," (Draft Manual, at 2-14), this language fails to adequately implement the full requirements of the MS4 Permit.</p> <p>Notably, the implementation language for the Draft Manual fails to address Permit requirements that biofiltration BMPs achieve equivalent stormwater volume reduction and pollutant load reduction as would be achieved by onsite retention of</p>

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		<p>stormwater. In this regard, and in addition to the requirement that biofiltration BMPs be sized to treat 1.5 times the design storm volume described in Permit section 4.E.III.1.(c), to comply with the explicit terms of the Permit the Draft Manual must require that biofiltration BMPs demonstrate that they will actually achieve an equivalent pollutant load reduction to onsite retention practices. This provision is at the core of the Permit’s allowance for biofiltration practices, which, while often preferable to conventional stormwater controls, otherwise may still result in the discharge of significant pollutant loads to surface waters. The Draft Manual must also address the Permit’s requirement that biofiltration BMPs achieve equivalent stormwater volume reduction.</p>
	2	<p>Existing Urban Centers</p> <p>The New Development and Redevelopment Performance Criteria section of the Permit describes the limited opportunity for alternative compliance in cases of technical infeasibility. The overarching criterion for any project to be further evaluated for infeasibility is that it is located in an “existing urban center.”</p> <p>To encourage smart growth and infill development of existing urban centers where on-site compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.III.1, above, comply with this permit through the alternative compliance measures described in subpart 4.E.III.2.(c), below.</p> <p>(Permit, at 4.E.III.2.(a), emphasis added.) The genesis of the “off-ramp” for technical infeasibility took place during the NGO and Permittee negotiations over the permit language. The Permittees were concerned that developers would be discouraged from pursuing infill development and redevelopment without an infeasibility off-ramp. As a result the parties agreed that projects within an existing urban center could be screened for technical infeasibility. This intent is reflected in Permit section 4.E.III.2.(a). Thus the Technical Feasibility Screening section of the Draft Manual (section 3.2) and the accompanying flow charts must specify that the technical infeasibility screening is only applicable to projects in existing urban centers.</p> <p>Problematically, there is no definition of “existing urban center” in the Manual’s Glossary. The maps in Appendix B use the term “existing urban area;” however, these mapped areas too broadly define an “existing urban center” by including all areas within city boundaries. Cities within Ventura County typically include a dense urban center surrounded by less densely developed or undeveloped areas. During discussions, the downtown Ventura area was often given as an example of an area that should be considered for technical infeasibility. As a result, only the dense urban center, and not outlying sparsely or undeveloped areas, is to be included under the permit provision in section 4.E.III.2.(a). As currently written, the Draft Manual would potentially allow for development in low density, single family residential areas or greenfield development well outside the urban center to make a finding of infeasibility and participate in the Permit’s alternative compliance program. The Draft Manual and its accompanying maps should be revised to limit the application of its technical infeasibility screening to “existing urban centers” by properly defining those areas based on unit housing density</p>

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		<p>or other relevant criteria.<sup>1</sup></p> <p><sup>1</sup> For example, the West Virginia Statewide General NPDES Water Pollution Control Permit for small MS4s (West Virginia Department of Environmental Protection, Permit No. WV0116025, adopted June 22, 2009), uses a Floor to Area Ratio (FAR) of &gt;2 or housing density of &gt;18 units per acre as one possible criteria in determining incentive standards for certain types of development. (See West Virginia Permit, at C.b.5.a.ii.A.3)</p>
	2	<p>The Permit provides five examples of situations where technical infeasibility may occur within the existing urban center and allows for the Draft Manual to describe other potential technical “implementation constraints.” (4.E.III.2.(b).) Section 3.2 of the Manual includes the five examples from the Permit and other possible conditions resulting in infeasibility. Several of these criteria as implemented by the Draft Manual either require additional clarification or serve to highlight the concerns regarding the definition of “existing urban centers” raised above.</p> <p>Specifically, subsection 12 (Draft Manual, at 3-37) allows for “Redevelopment, infill, and Smart Growth projects,” where “the density and/or nature of the project would create significant difficulty for compliance” with onsite retention standards, to establish a condition of technical infeasibility. Yet this type of development and its use as a criterion should by definition be limited only to dense, urban city-centers, demonstrating the need for the maps of existing urban centers to be properly constrained. Further, categories of development such as low income housing, while representing a laudable and necessary goal, are no more likely to encounter technical infeasibility than any other type of project. Where low income housing is a) located within a properly defined existing urban center, and is b) subject to one of the numerous identified conditions in subsection 12, including development as a smart growth or urban infill project, it will qualify for a finding of technical infeasibility regardless of its status as a low income housing project. This category should be removed from subsection 12. Likewise, projects defined as “Transit Oriented development (within ½ mile of a transit center)” do not in themselves provide any basis for a finding of technical infeasibility. Where such a project is spatially limited as infill, or subject to one of the other provisions such as presence of shallow groundwater or being characterized by geotechnical hazards, it may present technical infeasibility for onsite retention. However, simply being located within ½ mile of a “transit center” (a term not defined in the Draft Manual), provides no justification for demonstrating infeasibility, and should be removed as a category under subsection 12.</p> <p>Additionally, the inability to provide sufficient demand for harvested stormwater is not in-and-of itself a reason for a determination of technical infeasibility (subsection 10). All infiltration, evaporation, and capture and use BMP options, not just harvesting practices, must be exhausted before an infeasibility determination can be made. The Manual should make this clarification.</p> <p>Finally, the Draft Manual states that “[i]nfiltration rates of 0.5 in/hr or greater are considered feasible for infiltration” and “BMPs should not be designed for sites...with infiltration rates less than 0.5 in/hr.” (Pg 3-31). This proposed minimum infiltration rate is too conservative, as it fails to take into account the potential for use of amended soils to augment</p>

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		infiltration or the potential for installation of overlying vegetated canopy layers to intercept rainfall. Further, a soil being classified as Soil Numbers 1-3 does not necessarily mean that infiltration BMPs cannot be used (nor that there are no opportunities for capture and use or evaporation BMPs). A site-specific analysis is necessary to determine whether infiltration is feasible at a given site. Thus, this condition should be eliminated to prevent confusion.
	3	<p>One of the most progressive parts of the Permit is the inclusion of BMP performance criteria. Specifically, the permit requires that treatment control BMPs be selected based on at least the median pollutant removal performance for effluent quality in the ASCE/USEPA International database. These requirements were developed during many months of permit language negotiations between the NGOs and Permittees. The parties agreed that flow based design criteria would not ensure that water quality standards are consistently met and therefore that BMP performance criteria were appropriate. There was general consensus that the ASCE/USEPA database provided the best performance data available and it was appropriate to use for this purpose. The NGO community proposed a 75th performance standard; however, the parties ultimately agreed upon the median performance standard. The Regional Board agreed with the proposal, as they voted on two separate occasions to adopt the Permit with the BMP performance criteria provisions.</p> <p>A major short-coming of the Draft Manual is the lack of guidance on BMP performance criteria. In fact, section 3.4 and Appendix D provide little to no guidance and will likely further confuse developers. Although section 3.4 outlines several of the BMP performance criteria provisions, fails to provide guidance for selecting BMPs that will meet the performance criteria requirements. Appendix D primarily focuses on tearing apart the entire concept of BMP performance criteria instead of proposing means of implementing the important Permit Provisions. In this light, Appendix D serves no purpose and should be eliminated from the Draft Manual. The BMP performance requirements are in place in the adopted Permit, and the Permittees are tasked with making this concept, which was vetted in detail, work in the field. In sum, the Manual must provide guidance to developers and others involved in site design on the selection and implementation of appropriate treatment control BMPs.</p>
	2	Section 4.E.III.3 of the Permit discusses Hydromodification Control Criteria to prevent accelerated downstream erosion. This is achieved by maintain stormwater runoff flow rates and durations. The Permit outlines the calculation of the Erosion Potential to meet the Permit requirements. Section 2.9 of the Manual discusses Hydromodification Requirements but fails to provide sufficient guidance on complying with the Permit requirements. For instance, there is no discussion on calculating the Erosion Potential and designing a site to meet this standard. The Manual should provide more detail on this element.
Donald Jenson	1, 2, 3 and 6	Scanned comments – technical comments mostly on design requirements in Section 6.
Paul Crabtree/City of Ventura	General	Scanned document – case studies provided.