

**Response to Water Board Staff Comments, 27 October 2009 on
Vandenberg AFB Draft SWMP, August 2009**

Item No.	SWMP Section	Subject	Problem	Required Revisions	VAFB Response
a	All	SWMP Specificity	<p>The AFB's SWMP lacks detail and specificity for some of the Best Management Practices (BMPs).</p> <p>The Draft SWMP does not adequately define proposed BMPs and measurable goals (MGs).</p>	<p>The SWMP must include descriptions of who, what, where, why, and how for each program element that will be implemented... Each MG must quantitatively define the scope and magnitude of BMP implementation. Please see the draft Table of Required Revisions below for examples.</p>	Concur. SWMP has been revised accordingly.
b	All	Measurable Goals and Effectiveness Measures	Several of the measurable goals contained in the SWMP must be made more specific, concrete, and quantifiable...	<p>Please ensure that each BMP includes specific numeric measurable goals for each activity. For measurable goals guidance please see: http://cfpub1.epa.gov/npdes/stormwater/measurablegoals/index.cfm.</p>	Concur. SWMP has been revised accordingly.
c	All	Primary Pollutants of Concern	Many of the MCMs do not include BMPs that particularly target primary pollutants of concern (POCs). Water Board staff has identified nutrients, metals, salinity, sediment, pathogens (indicator bacteria), and trash as primary POCs in water bodies of the San Antonio and Santa Ynez Hydrologic Units, including San Antonio Creek and the Santa Ynez River.	Water Board staff acknowledges that the AFB has developed a POCs/BMP cross reference table as part of the SWMP. However, BMPs must be developed and implemented to specifically focus on controlling the sources of these primary POCs within the AFB's jurisdiction. The AFB must include BMPs currently that target the primary POCs for the SWMP to be approved.	Concur. SWMP has been revised accordingly.
1	General Program	Effectiveness Assessment	The SWMP does not include a strategy to assess the effectiveness of the program at	Include a BMP to develop, by the end of year one, a detailed effectiveness assessment strategy	Concur. A BMP (GH-9) to develop an effectiveness assessment strategy for evaluating SWMP performance has

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			<p>reducing pollutants in stormwater to the MEP and protecting water quality. The AFB must continually assess and modify its program to incorporate improvements in control measures and BMPs to achieve the MEP standard and water quality protection.</p>	<p>for evaluating SWMP performance, incorporating the following components:</p> <ul style="list-style-type: none"> • Assessment of program effectiveness at complying with permit requirements and achieving measurable goals; • Assessment of program effectiveness at protecting and restoring water quality and beneficial uses; • Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions; • Emphasis on assessment of BMPs specifically targeting primary pollutants of concern; • Incorporation of an effectiveness assessment process comparable to that outlined in the California Stormwater Quality Association's (CASQA) <i>Municipal Stormwater Program Effectiveness Assessment Guide</i>; • Identification of a range of quantifiable effectiveness measures, appropriate to each BMP, that assess effectiveness at achieving regulatory compliance, meeting measurable goals, changing awareness, changing behavior, and reducing pollutant loads, to be used during annual effectiveness assessments. The <i>Municipal Stormwater Program Effectiveness Assessment Guide</i> includes useful examples and guidance for assessing effectiveness using these parameters; • Identification of quantifiable effectiveness measurements that collectively assess effectiveness in terms of runoff and receiving water quality, to be used during long-term effectiveness assessments (e.g., every three to five years). The <i>Municipal Stormwater Program Effectiveness</i> 	<p>been added.</p>

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				<p><i>Assessment Guide</i> includes useful examples and guidance for assessing effectiveness using these parameters; and</p> <ul style="list-style-type: none"> • Identification of the steps the AFB will take to revise the SWMP and optimize BMP effectiveness, when effectiveness assessments identify BMPs or program sub-areas that are ineffective or need improvement. 	
2	Public Education	BMP Development	<p>This section does not demonstrate how BMP development and implementation and education content target several common urban runoff issues.</p> <p>BMPs in this section also do not identify the audiences the AFB will target with quantifiable measurable goals.</p>	<p>Revise BMPs PE-1 through PE-4 and PE-6 to demonstrate how education and outreach materials and efforts and their content target the following common urban runoff issues: proper handling of trash (especially plastic debris) and hazardous materials, pet waste management, riparian vegetation protection, proper fertilizer and chemical use, hydromodification, automotive activities, proper restaurant activities, etc.</p> <p>Revise BMPs PE-1 through PE-4 and PE-6 to identify the target audience, content of outreach, and estimates of the number of people AFB will reach (e.g., 70% of residential population in year 1, 90 % of employees by year 2, etc).</p>	<p>BMPs PE-1 through PE-4 and PE-6 have been revised to address inclusion of content into education and outreach materials which target common urban runoff issues including proper handling of trash and hazardous materials, pet waste management, riparian vegetation protection and proper fertilizer and chemical use.</p> <p>PE-1a describes the target audience as the public. The public is currently described in Section h(1)(a) of the Plan. PE-2 describes the target audience as new employees. PE-3 describes the target audience as residents. PE-4 describes the target audience as children. PE-6 describes the target audience to be employees of industrial, automotive, construction, landscape maintenance and restaurant activities. The BMP descriptions have been revised to identify the number of people Vandenberg AFB estimates it will reach.</p>

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				Revise BMPs to state all outreach efforts will reference website and hotline information.	An item has been added under each BMP to state that they will reference website and hotline information.
3	Public Education	BMP Selection Community-based Social Marketing	<p>The Public Education and Outreach BMPs rely heavily on information campaigns that utilize education and advertising to encourage behavior change. While these efforts can be effective in creating public awareness and in changing attitudes, numerous studies show that behavior change rarely occurs as a result of simply providing information.</p> <p>One particularly promising approach to public education is community-based social marketing. Community-based social marketing is based upon research in the social sciences that demonstrates that behavior change is most effectively achieved through initiatives delivered at the community level which focus on removing barriers to an activity while simultaneously enhancing the activities benefits. More information on community-based social marketing is available at: http://www.cbsm.com/. The techniques of community-based social marketing must be considered when developing and implementing your public education and outreach program.</p>	Include a BMP that commits to assessing community-based social marketing strategies, and incorporating them into your program where appropriate.	Concur. PE-1, PE-3, and PE-6 have been revised accordingly.
4	Public Participation	BMP Development	The SWMP does not provide for diverse public involvement in reviewing and commenting on draft SWMP revisions and ordinances.	Add a BMP equivalent to the following: The AFB will solicit public (including base employees, residents, and military personnel) comments on draft SWMP revisions and ordinances provide sufficient time for the public to comment, and respond	Concur- PP-5, Storm Water Management Plan Public Review and Comment, has been added to the SWMP.

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				to comments by incorporating revisions into the draft SWMP and ordinances as appropriate. The AFB will seek participation from a diverse cross-section of people.	
5	IDDE ID-1	Facility Inspections and Investigations	The BMP does not contain follow-up inspection and enforcement procedures.	Revise the BMP and MGs to include follow-up inspections for all detected discharges and proper enforcement procedures to eliminate illicit discharges. Procedures must include an escalating enforcement strategy.	Concur. BMP ID-1 and MGs have been revised accordingly.
6	3.0 IDDE	BMP Development	This section does not identify the link between BMP development/implementation and primary POCs.	Revise the existing BMPs or add new BMPs to ensure the control of primary POCs (e.g., pathogens, nutrients, metals, trash, and sediment).	Concur. Where applicable, existing ID BMPs have been revised to address the control of primary POCs.
7	IDDE ID-3	Discharge Response and Reporting	<p>The BMP lacks detail about incident tracking and follow-up procedures.</p> <p>The BMP does not include response procedures for emergency discharges during off hours and weekends.</p> <p>The BMP is not clear in its enforcement strategies and procedures.</p>	<p>Revise the BMP to provide more detail regarding response procedures. State, "tracking documentation will include nature, time, and place of discharge, responsible party, inspection, resolution, and follow-up." Include re-inspection of key abated discharges to eliminate reoccurrence.</p> <p>Include response procedures for off hour and weekend calls.</p> <p>Provide clarity for an escalating enforcement strategy (e.g., 1st offence - provide education and written notice to discharger with cleanup and abatement deadlines.</p>	<p>Concur. BMP ID-4 has been revised accordingly.</p> <p>Concur. The BMP has been revised accordingly.</p> <p>Concur. Additional clarification is provided for ID-1 and is subsequently referenced for ID-4.</p>

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				2 nd offence – NOV with minimum daily penalties. 3 rd offence – administrative civil liability penalties [fines] etc).	
8	IDDE ID-7	IDDE Policy	The general scope of the policy is not described. Procedures for enforcement must be summarized in the SWMP.	The BMP must include current regulations applicable to illicit discharges and the general scope of restrictions identified. The BMP must indicate that pet waste restrictions are included in the policy. Include a general description of enforcement procedures to be included in the policy for use as part of an escalating enforcement strategy.	Concur. Further clarification has been added. Concur. ID-7 has been revised accordingly.
9	IDDE ID-8	Stormwater Hotline	The BMP lacks detail and specificity.	Revise the BMP and MGs to include tracking of calls including the location, nature, and time of day of incidents reported. Include follow-through procedures, including response time.	Concur. ID-8 has been revised accordingly.
10	IDDE	Program Coordination	The MCM does not include coordination with hazardous waste and recycling programs to prevent illicit discharges.	Include a BMP with MGs that incorporate coordination between the IDDE program and the hazardous waste and recycling programs (as outlined in BMP GH-8) to eliminate illicit discharges.	Concur. BMP PP-2 and ID-4 have been revised to clarify existing coordination efforts.
11	IDDE	Exempt Non-Storm Water Discharges	This section does not provide adequate detail (no BMPs or MGs included) for the AFB's proposed evaluation of exempt non-storm water discharges to determine if they have the	Add BMPs and MGs, including a schedule, for the evaluation of non-stormwater discharges identified as exempt under the General Permit to determine their potential to be significant sources of pollutants. For	Concur. BMP ID-1 has been revised to address the regular evaluation of non-storm water discharges identified as exempt under the Small MS4 General Permit to determine their potential to be significant sources of pollutants.

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			potential to be significant sources of pollutants.	those non-stormwater discharges identified as having the potential to be significant sources of pollutants, confirm that the AFB will prohibit such non-stormwater discharges from entering the MS4, or describe the BMPs the AFB will require in order to control the pollutants in the non-stormwater discharges.	
12	CS-3	Construction Oversight	The BMP lacks the appropriate level of oversight and enforcement procedures.	<p>Revise the BMP to include oversight inspections at a minimum of twice a month during the rainy season and once a month during the dry season.</p> <p>Include a MG to develop a stormwater inspection checklist to assist inspectors in the field.</p> <p>Revise the BMP to include specific enforcement procedures that incorporate an escalating enforcement strategy to guarantee compliance.</p>	<p>Concur. CS-3 has been revised accordingly.</p> <p>Concur. CS-3 has been revised accordingly.</p> <p>Concur. CS-3 has been revised accordingly.</p>
13	CS-4	Pollution Prevention Training	The BMP lacks the proper training assurance.	Revise the BMP to require appropriate AFB staff and construction contractors to attend training.	Concur. CS-4 has been revised accordingly.
14	CS-5	Erosion and Sediment Control Standard.	The BMP description lacks clarity on enforcement and inspection procedures.	Revise the BMP with MGs that include increased inspection frequency due to non-compliance and a summary of escalating enforcement strategy steps.	Concur. CS-5 has been revised accordingly.
15	CS	Public	The MCM does not discuss	Revise the MCM to include a BMP	Concur. CS-3 has been modified to

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		Complaints	procedures for the receipt and consideration of information submitted by the public, including reference to the phone hotline.	that discusses procedures for receiving public inquires, including a hotline number. The MCM may reference other sections of the SWMP that provide this information. The AFB should consider posting signs at construction site that identify permit requirements and provide hotline information for public inquiries.	include a reference to ID-8.
16	Post Construction	Long-term Watershed Protection	The SWMP does not include a specific BMP to collectively enact long-term watershed protection.	<p>Include a BMP stating how and when the AFB will:</p> <ul style="list-style-type: none"> • Develop where feasible quantifiable measures that indicate how the AFB's watershed protection efforts relative to stormwater management achieve desired watershed conditions; • Evaluate existing watershed protection planning efforts, including: land use policies, plans, ordinances, guidance manuals, development project review procedures, and BMPs; and • Adapt or change the existing efforts if warranted. 	Concur. A new BMP, PC-7 has been added which generally describes the Air Force's proposed approach to long-term watershed protection.
17	PC-2	Interim Hydromodification Criteria	While the AFB discusses the development and implementation of Tasks 1 through 5 of the HMP workplan to develop interim hydromodification criteria, there is uncertainty in the final outcome and implementation	<p>Modify the SWMP to include the development of interim hydromodification criteria by the end of year one using one of the options listed below:</p> <p>Option 1: The proposed criteria may include</p>	Concur. The SWMP has been revised to reflect Option 3.

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			<p>of the interim criteria as developed from the Hydromodification Management Plan work plan. We provide three options for the development of the interim criteria, one of which must be included in the AFB's SWMP.</p>	<p>the following types of requirements which provide a high degree of assurance of effective hydromodification control without regard to the nuances of individual watersheds:</p> <ol style="list-style-type: none"> 1. For new and re-development projects, Effective Impervious Area¹ shall be maintained at less than five percent (5%) of total project area. 2. For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent (1%) the pre-development² runoff hydrographs, for a range of events with return periods from 1-year to 10-years. 3. For projects whose disturbed project area exceeds two acres, preserve the pre-development drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream³ or larger, and ensure that post-project time of concentration is equal or greater than pre-project time 	

¹ Effective Impervious Area is that portion of the impervious area that drains directly to a receiving surface waterbody via a hardened storm drain conveyance without first draining to a pervious area. In other words, impervious surfaces tributary to pervious areas are not considered Effective Impervious Area.

² Pre-development condition is defined as the native vegetation and soil conditions that exist prior to human influence (e.g., urbanization, agriculture, grazing, timber harvest).

³ A first order stream is defined as a stream with no tributaries.

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				<p>of concentration.</p> <p>Other acceptable approaches to develop interim criteria that are as effective as Option 1 include:</p> <p>Option 2: Adopt and implement hydromodification criteria developed by another local municipality and approved by the Water Board, such as the criteria the Water Board adopted for the City of Salinas, as interim criteria.</p> <p>OR</p> <p>Option 3: The AFB shall use the following methodology to develop interim flow control and infiltration criteria:</p> <ol style="list-style-type: none"> 1. Identify a range of runoff flow rates for which post-project runoff flow rates and durations shall not exceed pre-project runoff rates and durations, where the increased discharge rates and durations will result in off-site erosion or other significant adverse impacts to beneficial uses. Pre-project refers to the condition immediately prior to the proposed project. The condition includes, but is not limited to, soil type, vegetation, and amount of impervious 	

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				<p>surface.</p> <ol style="list-style-type: none"> <li>2. Establish numeric criteria for development projects to maximize infiltration on-site and approximate natural infiltration levels to the maximum extent practicable and to effectively implement applicable low-impact development strategies. <li>3. Identify the projects, including project type, size and location, to which the AFB will apply the interim criteria. The projects to which the AFB will apply the interim criteria will include all those projects that will cause off-site erosion or other significant adverse impacts to beneficial uses. <li>4. Identify methods to be used by project proponents to demonstrate compliance with the interim discharge rate and duration criteria, including continuous simulation of the entire rainfall record. <li>5. Identify methods to be used by project proponents to demonstrate compliance with the interim infiltration criteria, including analysis of site imperviousness. 	
18	PC-4	Training	MG [2] is vague in its	Revise the MG to state who is	Concur. BMP has been revised

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			discussion of who will be required to attend post-construction/LID training and the quantifiable target for attendance.	required to attend training and what the quantifiable target is for attendance.	accordingly.
19	PC-5	Riparian and Wetland Protection	The MGs lack proper evaluation of existing conditions.	Include a MG that states the AFB will evaluate local conditions to determine if more substantial buffer zones are needed.	Concur. A MG has been added accordingly.
20	PC-6	Post-construction Storm Water Policy	The BMP lacks identification of the proper scope of development and a summary discussion of escalating enforcement procedures.	<p>Revise MG [1] to state that the post-construction storm water policy will be developed as a result of findings within the HMP.</p> <p>Revise MG [2] to include a summary description of escalating enforcement procedures.</p>	<p>Concur. MG[1] has been revised accordingly.</p> <p>Concur. MG[2] has been revised accordingly.</p>
21	Post-construction	General Permit Attachment 4 Design Standards	The AFB does not address Attachment 4 provisions in the SWMP. The Central Coast Water Board requires that all MS4s implement Attachment 4 provisions to achieve the maximum extent practicable standard.	Include BMPs and MGs to implement Attachment 4 Design Standards as outlined in the General Permit.	Concur. BMP PC-8 has been included and addresses implementation of Attachment 4 Design Standards as outlined in the General Permit.
22	Pollution Prevention/ General House-keeping	Inadequate MCM Details	The Pollution Prevention and Good Housekeeping for Municipal Operations control measure lacks adequate detail and specificity. (See the City of Santa Barbara and Santa Maria SWMPs for examples of adequate content that applies to the AFB).	Revise the SWMP to provide more detailed discussion of program elements. The discussion must include who, what, where, why, how, and when statements.	Concur. BMP and MCM details have been revised to provide greater detail.

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23	GH-1	Work Request Review	The BMP lacks proper implementation guidelines to prevent storm water impacts.	Include a MG to develop a conditional use guidance document to assist review staff by year 2.	Concur. The BMP has been revised accordingly.
24	GH-2	Service Contract Provisions	The BMP is inadequate in its prevention of stormwater pollution. It is the AFB's responsibility to make sure service contacts implement appropriate stormwater pollution prevention.	<p>Revise the BMP to state that service contracts will be revised to conform with the post-construction stormwater policy as well as the IDDE policy (BMP ID-7).</p> <p>Revise MG 2 to include a greater percentage of audits on service contracts with storm water specifications. Include a summary of enforcement procedures.</p>	<p>Concur. The BMP has been revised accordingly.</p> <p>Concur. MG 2 has been revised accordingly.</p>
25	GH-3	Environmental Compliance Training	The BMPs lack detail on the scope of training.	<p>Revise the BMP to specifically explain who is required to attend training, what percentage of the AFB staff will be required to attend training, and how often the AFB will provide training.</p> <p>Revise the BMP to include the scope of training the AFB will conduct. Training topics should include proper vehicle washing and maintenance, park and open space maintenance, fleet and building maintenance, new construction and land disturbance activities, stormwater system maintenance, hydromodification and LID requirements, etc.</p>	<p>Concur. BMP GH-3 and GH-4 have been consolidated and revised to be more applicable and effective.</p> <p>Concur. BMP GH-3 has been revised accordingly.</p>

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26	GH-4	Tailgate Briefs	The BMP scope does not adequately address pollution prevention and general housekeeping measures.	Revise the BMP and MG [2] to include tailgate meetings not just in the rainy season. Operations must be addressed to prevent both non-stormwater discharges and stormwater discharges.	Concur. The BMP has been revised accordingly.
27	GH-7	Pest Management	The BMP lacks a proper quantifiable MG to reduce pesticide use.	Include a MG to reduce pesticide use by a particular percentage on an annual basis.	GH-5 (formerly GH-7) has been revised to include an assessment for determining whether additional goals for reduction are necessary beyond the previously defined goals established by the Armed Forces Pest Management Board.
28	GH	MS4 Maintenance Operations	The MCM lacks a description of the maintenance activities and procedures the AFB will implement to control pollutant discharges to the MS4.	<p>Include a BMP to develop a schedule for maintenance of AFB facilities (e.g., public roads, bridges, sidewalks, and building facades) to control pollutant discharges to the MS4 (e.g. paving and painting materials, street and sidewalk washwater, dredge spoil, accumulated sediments, floatables, debris, etc). Identify procedures for proper removal of collected waste.</p> <p>Include a BMP to implement pollution prevention procedures for hazardous material storage and spill prevention, municipal landscaping and lawn care, and proper disposal of chlorinated and/or brominated water.</p>	<p>Additional clarification has been provided throughout the GH MCM to address schedule. General procedures for proper removal of waste from MS4 maintenance operations have been added.</p> <p>The MCM has been revised accordingly.</p>
29	GH	Corporation and Maintenance Yard Pollution Prevention	The MCM does not discuss proper pollution prevention measures for corporation and maintenance yards.	Include a BMP that includes proper designated areas for all vehicle and equipment maintenance and cleaning, and proper storage of materials, wastes, and vehicles.	Concur. The MCM has been revised accordingly.

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