

VANDENBERG AIR FORCE BASE

MUNICIPAL STORM WATER GUIDANCE DOCUMENT

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**OPR: 30 CES/CEIE
1028 Iceland Ave
Vandenberg AFB, CA 93437**

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1.0 INTRODUCTION

1.1 PURPOSE

Vandenberg Air Force Base (AFB) (30th Space Wing) has designed this guidance document to meet the minimum standards in Section F of the *Water Quality Order, No. 2013-0001-DWQ, NPDES General Permit CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)* (State Water Resources Control Board [SWRCB] 2013; Permit) for discharges from urbanized areas at Vandenberg Air Force Base (AFB). Vandenberg AFB prepared this *Guidance Document* to describe how the Permit requirements will be met. This *Guidance Document* is not legally binding. Vandenberg AFB maintains the ability to use options other than the best management practices (BMPs), Measureable Goals (MGs), and schedule of implementation described in this *Guidance Document* to meet the minimum requirements of the Permit.

The Permit requires demonstrating that reducing or ceasing implementing BMPs from the now-expired *Storm Water Management Plan* (Air Force 2012c) and prior Permit complies with the current Permit, the Maximum Extent Practicable (MEP) Standard, and will not increase pollutant discharges. The BMPs included in the expired *Storm Water Management Plan* (Air Force 2012c) that are not required by the current Permit were not tailored to address local storm water priorities, local storm water issues, or local pollutants of concern. Therefore, they are not more protective of water quality than the minimum Permit requirements and their cessation will not increase pollutant discharges to storm water. This complies with the MEP standard. The cessation of BMPs that are not required by the Permit complies with the Permit.

1.2 GUIDANCE DOCUMENT ORGANIZATION

This *Guidance Document* describes a 5-year program to reduce pollutants in storm water discharges to the MEP. The Permit specifies that a program must address the requirements of eight program elements through implementation of storm water BMPs. This *Guidance Document* is organized according to the program elements:

- Program Management Element (PM);
- Education and Outreach Program (PE);
- Public Involvement and Participation Program (PP);
- Illicit Discharge Detection and Elimination (ID);
- Construction Site Runoff Control Program (CS);
- Pollution Prevention/Good Housekeeping for Permittee Operations Program (GH);
- Post-Construction Storm Water Management Program (PC); and

- Program Effectiveness Assessment and Improvement Element (EA).

For each element, the Permit-required BMPs, implementation schedule, MGs (e.g., milestones), and responsible parties are described. The above-listed acronyms correspond to the BMP numbers. Additionally, Table 1 defines the responsible party acronyms.

**Table 1
Responsible Party Acronyms**

Responsible Party	Acronym
30th Space Wing	30 SW
30th Civil Engineer Squadron	30 CES
Programs Flight	30 CES/CEP
Program Management	30 CES/CEPM
Design	30 CES/CEPMD
Simplified Acquisition of Base Engineering Requirements (SABER)	30 CES/CEPMS
Facilities Excellence	30 CES/CEPTD
Operations Flight	30 CES/CEO
Heavy Repair Element, Pavement and Equipment	30 CES/CEOHP
Utility Systems Element	30 CES/CEOIU
Service Contracts	30 CES/CEOSS
Environmental Element	30 CES/CEIE
Capital Asset Management	30 CES/CEIH
Environmental Quality	30 CES/CEIEQ
Comprehensive Acquisition Flight Services	30 CES/CEAOP
Contracting Acquisition Flight Services	30 CONS/LGCB

1.3 REPORTING

For each program element implemented at Vandenberg AFB, the State Water Resources Control Board's (SWRCB's) online data management system (SMARTS) will be used to submit a summary of the past year's activities and certify compliance with all requirements of the program element. The summary will also address the relationship between the program element activities and the Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If Vandenberg AFB is unable to certify compliance with a requirement in this program element, it will submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. Vandenberg AFB is exempt from reporting any information that could pose as a security risk and/or compromise facility security.

1.4 VANDENBERG AFB OVERVIEW

Vandenberg AFB is located on the south-central California coast, approximately 275 miles south of San Francisco and 140 miles northwest of Los Angeles, within Santa Barbara County. The

base is located within the Central Coast Regional Water Quality Control Board's (RWQCB's) jurisdiction (i.e., Region 3). The base is home to the 30th Space Wing and is used primarily for missile testing and satellite launches. Launch operations involve a combination of civilian, military, and commercial interests.

The Vandenberg AFB MS4 is bisected by the Santa Ynez River (see Appendix A). The area north of the river contains an urbanized area known as the Main Cantonment (approximately 2,397 acres). The area south of the river also contains a small, semi-urbanized South Base Cantonment. The Cantonment areas (Vandenberg AFB MS4) comprise roughly two percent of the entire base area of 99,579 acres, which is predominately undeveloped.

Launch activities at Vandenberg AFB are currently supported by Pillar Point Air Force Station (AFS). Pillar Point AFS, which is owned and operated by the Air Force, is located on a small peninsula near Half Moon Bay, California. It is approximately 23 miles south of San Francisco, at an elevation of approximately 165 feet above sea level. The site encompasses approximately 44 acres. The station has a normal daily population of approximately 15 employees. On-site facilities include offices, antenna and radar equipment, and storage buildings. This facility is located within the San Francisco RWQCB's jurisdiction (i.e., Region 2).

1.4.1 Climate

Vandenberg AFB is located in a dry subtropical climate zone that experiences semi-wet winters, dry summers, and mild temperatures throughout the year. Vandenberg AFB experiences coastal weather including ocean winds, fog and cloudiness, and marine inversions due to the proximity to the Pacific Ocean. The climate from November through April is generally wet and cool, while May through October is often dry and warm. The annual average temperature is 57 degrees Fahrenheit, ranging from a low of 21 degrees Fahrenheit to a high of 104 degrees Fahrenheit. Most precipitation falls during the winter and is generally produced by frontal systems transiting the area. Rainfall between May and October is rare. The average annual precipitation ranges from 13 to 16 inches. Prominent prevailing winds blow from the northwest.

1.4.2 Population Demographics and Growth

Vandenberg AFB supports an approximate daytime population of 11,037 (military, civilians, family members, contractors, and civilian employees), which fluctuates with regular business hours and mission requirements. The *Vandenberg General Plan* (Air Force 2012d) describes both the potential for population growth as well as population decline, based on numerous factors. Potential population growth in the future would likely be due to new Air Force missions or continuation of growth of existing programs. Potential population decline may also occur due to reduced funding, aging of the workforce, mission change, or a decrease in building due to anti-terrorism or environmental constraints.

1.4.3 Hydrology and Land Use

No water bodies exist within the Vandenberg AFB MS4 boundary. The MS4 for the most part, discharges to land surrounding it; however, some enters Pine Canyon Lakes or intermittent surface water drainages. San Antonio Creek and Santa Ynez River are an estimated 1.1 miles

and 0.8 mile, respectively, from the Main Cantonment. The Vandenberg AFB MS4 lies within two hydrologic units (HUs): the San Antonio HU and Santa Ynez River HU. The HUs discharge to the Pacific Ocean to the west of the MS4 boundary.

1.4.3.1 San Antonio Hydrologic Unit

The primary drainages of the San Antonio HU include the Casmalia Hills stream network, Shuman Canyon, San Antonio Creek, and the Burton Mesa West drainage system. In addition to these waterways, there are two inland areas of interest: the dune wetlands, located northwest of the Main Cantonment in the San Antonio Terrace sand dunes, and Punch Bowl Lake, situated east of Military Family Housing in the Purisima Hills.

Vandenberg AFB activities in the San Antonio HU are general industrial and administrative operations in the Main Cantonment and Military Family Housing. Industrial operations in the Main Cantonment include a variety of military and civilian activities that support the administrative, operational, and launch programs on Vandenberg AFB. Two of the industrial sites covered by the *Water Quality Order (WQO) No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (Industrial Storm Water General Permit, SWRCB 1997) are in the San Antonio HU: the airfield, situated on the eastern side of Burton Mesa near the Pacific Ocean, and the 30 Logistics Readiness Squadron Vehicle Maintenance Facility (30 LRS), located in the Main Cantonment at the southern edge of the hydrologic unit. Military Family Housing, located at the southern boundary of the San Antonio HU, is composed of hundreds of single-family dwellings and straddles the topographic ridge that separates the San Antonio HU from the Santa Ynez HU; as such, storm water runoff from this residential area drains to both units.

1.4.3.2 Santa Ynez Hydrologic Unit

The primary drainages of the Santa Ynez HU are the Santa Lucia Canyon tributary network, Oak Canyon tributary, Lompoc Canyon tributary, La Salle Canyon tributary, and the Santa Ynez River. All sub-watersheds in this unit directly or indirectly drain into the Santa Ynez River. Of these, Oak Canyon and Santa Lucia Canyon tributary network drain the MS4. The Pine Canyon Lakes (Upper, Middle, and Lower) are small, manmade impoundments created for recreation. They are located south of the Military Family Housing areas and discharge to Santa Lucia Canyon. They are not located within the MS4 boundary.

The general categories of activities in the Santa Ynez HU are: industrial, commercial, recreational, and residential activities and solid waste collection and disposal within the Main Cantonment and launch support within the South Base Cantonment. Industry in the Main Cantonment area south of Nevada Avenue includes general administrative operations and launch vehicle preparation and fabrication by the United Launch Alliance partners Lockheed Martin and Boeing. Runoff from the main Military Family Housing area also drains via the MS4 into Pine Canyon Lakes. Operations at the two industrial sites (landfill and Defense Reutilization and Marketing Service [DRMS]/Materials Diversion Center [MDC]) on the southern portion of Burton Mesa comprise the core of solid waste collection and disposal at Vandenberg AFB. The

landfill drains to Oak Canyon and the DRMS/MDC drain indirectly to Pine Canyon Lakes. Oak Canyon is an intermittent surface water drainage connected to the Santa Ynez River. Pine Canyon Lakes have surface water discharge to Santa Lucia Canyon once they are full in wet years. Santa Lucia Canyon is an intermittent surface water drainage connected to the Santa Ynez River.

1.5 IMPAIRED WATER BODIES

The 2010 Clean Water Act (CWA) Section 303(d) *List of Water Quality Limited Segments Requiring* (Total Maximum Daily Loads) *TMDLs* (CWA 303[d] List) prepared in coordination between the SWRCB and the U.S. Environmental Protection Agency (EPA), identifies impaired water bodies that do not meet water quality standards defined within the regional *Water Quality Control Plan for the Central Coast Basin* (Central Coast RWQCB 2011), known as the Basin Plan. Determinations are made based on results of State and regional monitoring efforts and after the minimum required levels of pollution control technology have been installed at point sources of pollution. The following water bodies are included on the CWA 303(d) List for the pollutants and potential pollutant sources:

- San Antonio Creek from Rancho del las Flores Bridge at State Highway 135 to the Railroad Bridge downstream, impaired for unionized ammonia, chlorpyrifos (an organophosphate insecticide), chloride, sodium, and low dissolved oxygen potentially from agriculture and unknown sources; nitrite from unknown sources; *E. coli* and fecal coliform potentially from agriculture and natural and unknown sources; and boron potentially from natural sources; and
- Santa Ynez River from the area downstream of Lompoc through the estuary at the Pacific Ocean, impaired for chloride, sodium, and total dissolved solids potentially from agriculture, municipal point sources, natural, and other urban runoff; nitrate, low dissolved oxygen, *E. coli* and fecal coliform potentially from agriculture, grazing-related sources, municipal point sources, natural sources, and other urban runoff; nitrate and sedimentation/siltation potentially from agriculture, resource extraction, and urban runoff/storm sewers; and temperature potentially from agriculture, flow regulation/modification, grazing-related sources, municipal point sources, and other urban runoff.

Section F.5.1 and Appendix G of the Permit provides TMDL requirements. However, TMDLs are expected to be completed for these water bodies in 2021, which is outside of the Permit term. The above-described water bodies are not listed in Permit Appendix G. Vandenberg AFB will work with the RWQCB to develop a Wasteload Allocation Attainment Plan for each applicable TMDL when they are incorporated in Attachment G.

Table 2 lists potential pollutant sources of the CWA Section 303(d)-Listed water bodies that could potentially receive discharges from the MS4, as well as an indication of the existence of the activity or source within the Vandenberg AFB MS4.

Table 2
Clean Water Act Section 303(d)-Listed Potential Pollutant Sources

Listed Water Body	Clean Water Act 303(d)-Listed Potential Pollutant Sources	Source/Activity Exists within the MS4
San Antonio Creek from Rancho del las Flores Bridge at State Highway 135 to the Railroad Bridge downstream	Agriculture	N
	Unknown sources	N/A
	Natural sources	N/A
Santa Ynez River from the area downstream of Lompoc through the estuary at the Pacific Ocean	Agriculture	N
	Municipal point sources	N
	Natural sources	N/A
	Grazing-related sources	N/A
	Resource extraction	N
	Urban runoff/ storm sewers	Y
	Flow regulation/ modification	N
Other urban runoff	N	

Notes: N no
N/A not applicable
Y yes

The only potential pollutant source or activity that occurs within the Vandenberg MS4 that is related to the CWA 303(d)-Listed water body impairments is for the Santa Ynez River. The listed source is “urban runoff/storm sewers”. The potential pollutants related to this source are nitrate and sedimentation/siltation.

1.5.1 Water Quality Monitoring

Selected surface water bodies at Vandenberg AFB have been monitored monthly as part of the Vandenberg AFB Ambient Water Quality Program. Visual observations, *in situ* parameters, and grab samples were collected at monitoring locations, flow permitting, to obtain baseline water quality data and to detect deviations from normal values. At San Antonio Creek and Santa Ynez River, upstream and downstream monitoring locations relative to the base boundaries were sampled. Upper Pine Canyon Lake and Middle Pine Canyon Lake were also monitored.

The upstream and downstream monitoring data for San Antonio Creek (Entry and Exit monitoring locations) from 2006 to 2011 were compared to help determine if areas within Vandenberg AFB boundaries may be contributing to water quality impairments. A number of monitoring parameters were collected, but of the current CWA 303(d)-Listed impairments, the following were statistically analyzed: unionized ammonia, dissolved oxygen, and nitrite. There was no statistically significant difference for these parameters between the monitoring locations.

The upstream and downstream monitoring data for Santa Ynez River (Entry, Midpoint, and Exit monitoring locations) from 2006 to 2011 were also compared. Similarly, a number of monitoring parameters were collected, but of the current CWA 303(d)-Listed impairments, the following were statistically analyzed: chloride, total dissolved solids, nitrate, dissolved oxygen, temperature, and turbidity. Of the CWA 303(d)-Listed potential pollutants related to “urban runoff/storm sewers” potential pollutant sources (i.e., nitrate and sediment/siltation). The results indicate that nitrate concentrations decrease downstream and there was no statistically significant difference in turbidity between the monitoring locations.

The Basin Plan does not specify any beneficial uses for lakes in Pine Canyon (CCRWQCB 2011). However, bacterial (fecal coliform) and pH results were compared to the Non-Contact Recreation (REC-2) beneficial use standard listed in the Basin Plan. The period of record for bacteria (fecal coliform) analyses was too brief to make any lasting conclusions, but data thus far suggests that bacteria is not a pollutant of concern at the Pine Canyon Lakes. Additionally, the data appears to adequately meet the pH water quality criteria.

Storm water monitoring and non-storm water observations are performed at the industrial facility outfalls as part of the Industrial Storm Water Program. The Industrial Storm Water General Permit does not contain limits to compare sampling results; however, the Air Force may utilize monitoring results to help determine the locations of potential pollutant “hot spots”.

Storm water runoff from Pillar Point AFS discharges to the James V. Fitzgerald Area of Special Biological Significance (ASBS). These discharges are authorized, as per Permit Attachment D, and are monitored according to *Water Quality control Plan, Ocean Waters of California* (California Ocean Plan, SWRCB 2009a) and *Resolution No. 2012-0012 Approving Exceptions to the California Ocean Plan for Selected Discharges into Areas of Special Biological Significance, Including Special Protections for Beneficial Uses, and Certifying a Program Environmental Impact Report* (SWRCB 2012).

1.6 POTENTIAL POLLUTANTS OF CONCERN

Determination of potential pollutants of concern for the Vandenberg AFB MS4 was based on (1) visual observations made during Outfall Surveys and storm water monitoring, (2) known activities performed within the MS4 that may have the potential to release pollutants, and (3) historic water quality monitoring results. Pollutant groups are summarized in Table 3, along with their potential sources.

**Table 3
Potential Pollutants of Concern**

Pollutant Group	Potential Sources
Sediment	Natural erosion Dirt roads Construction and demolition sites Burrowing rodent activity Landfill operations
Nutrients (phosphorus, nitrates, etc.)	Fertilizer application on landscaped areas Discharge of wash water containing soaps from residential car washing and restaurant and building maintenance (the latter has not been observed)
Indicator Bacteria	Leaking sewage (has not been observed) Domestic or wild animal waste Human waste (has not been observed) Restaurant outdoor washing (has not been observed)
Salinity	Natural sources (air deposits)
Hydrocarbons	Automobiles and equipment (30 CES shops) Auto and equipment repair (30 LRS) Fueling stations
Metals	Automobiles and equipment Naturally occurring Building, fences (galvanization, paint) Outdoor storage of metals (DRMS, MDC, and storage areas)
Pesticides	Pesticide application on landscaped areas and buildings
Gross Pollutants	Streets and storm drain inlets Landscape maintenance practices

1.7 DISCHARGE PROHIBITIONS

Per Permit Section B, the discharge prohibitions are:

- Discharges of waste from the MS4 that are prohibited by RWQCB Basin Plans are prohibited.
- Discharges of storm water and material other than storm water from the MS4 to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code §13050 are also prohibited.

The following non-storm water discharges are not prohibited, provided any pollutant discharges are identified and appropriate control measures to minimize the impacts of such discharges, are developed and implemented under the storm water program:

- Water line flushing;
- Individual residential car washing;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration (as defined at 40 C.F.R. §35.2005[20]) to separate storm sewers;
- Uncontaminated pumped groundwater;
- Discharges from potable water sources;
- Foundation drains;
- Air conditioning condensation;
- Springs;
- Water from crawl space pumps;
- Footing drains;
- Flows from riparian habitats and wetlands;
- Dechlorinated swimming pool discharges; and
- Incidental runoff from landscaped areas (as defined and in accordance with Section B.4 of the Permit).

Discharges or flows from fire-fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

Discharges in excess of an amount deemed to be incidental runoff will be controlled. Incidental runoff is defined as unintended amounts (volume) of runoff, such as unintended, minimal over-spray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Parties responsible for controlling runoff in excess of incidental runoff will:

- Detect leaks (for example, from broken sprinkler heads) and correct the leaks within 72 hours of learning of the leak;
- Properly design and aim sprinkler heads;
- Not irrigate during precipitation events; and
- Manage ponds containing recycled water such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater, and the applicable RWQCB is notified by email no later than 24 hours after the discharge.

Non-storm water runoff discharge that is not incidental is prohibited, unless otherwise specified above.

1.8 RELATED AND SUPPORTING DOCUMENTS

Permit Section F.4 states that Permittees may utilize an equivalent or existing document, such as a Standard Operations and Procedures manual, Operation and Maintenance Plan, or Spill Response Plan, if that document includes the necessary information required to comply with Permit. Several existing plans and programs at Vandenberg AFB support storm water pollution prevention and water quality protection. The following sections summarize these plans and programs and their relationships to this Guidance Document.

- *Vandenberg Air Force Base General Plan* (Air Force 2012d). The *General Plan* is the primary comprehensive planning document for the base. It is a summary document which allows the Installation Commander to logically and thoroughly analyze a variety of factors prior to making decisions that affect the future growth and development of the base and the surrounding community. It presents a concise picture of the composition and character of the base, including its facilities, environment, and infrastructure, and how these relate to the present and future capability of the base to support and accommodate its mission. The *General Plan* accounts for site constraints to, and opportunities for, development of the base so that the most suitable areas available for new uses or reuse can be identified. Constraints addressed within the *General Plan* include wetlands, floodplains, and the coastal zone.
- *Facilities Excellence Standards* (Air Force 2012a). The *Facilities Excellence Standards* describe the minimum acceptable results for design and construction projects, demand consistency in quality and application, and mandate the use of BMPs in facility design and construction, renovations of existing facilities, interior architecture and furnishings, site development, and protection of the environment. A Sustainability/Green Building section, which addresses base-wide sustainability goals and water quality and efficiency actions, is a component of this document.

- *Integrated Natural Resources Management Plan* (INRMP; Air Force 2011). The purpose of the INRMP is to provide a 5-year planning direction and an adaptive management approach to ecosystem and natural resources management in accordance with AFI 32-7064 and the Sikes Act Improvement Amendments of 1997 (16 U.S.C. 670 (a)(1)(A)).
- *Storm Water Pollution Prevention Plan* (SWPPP; Air Force 2012c). The 30 SW SWPPP establishes base policy, assigns responsibility for storm water pollution prevention, and lists BMPs to be implemented at five industrial facilities located at Vandenberg AFB. The SWPPP was developed and is implemented in accordance with *NPDES General Permit No. CAS000001, WDRs for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (Industrial Storm Water General Permit; SWRCB 1997). The five Vandenberg AFB facilities covered by the Industrial Storm Water General Permit are:
 - Landfill;
 - Transformer Storage Facility (TSF);
 - Airfield;
 - Defense Reutilization and Marketing Service (DRMS) and the Materials Diversion Center (MDC); and
 - 30th Logistics Readiness Squadron (LRS) Vehicle Maintenance Facility.
- *Hazardous Materials Emergency Response Plan* (HMERP), 30 SW Plan 32-4002-A (Air Force 2010). The HMERP, maintained by 30 CES/ CEIE, is a procedural guide for the detection, response to, and management of releases of hazardous materials.
- *Spill Prevention, Control, and Countermeasures* (SPCC) *Plan*, 30 SW Plan 32-4002-C (Air Force 2012b). The 30 SW SPCC Plan describes the policies and procedures that will be implemented at Vandenberg AFB to prevent the discharge of harmful quantities of oil-in any kind or form-into the navigable waters of the U.S. in accordance with the provisions of 40 CFR, Part 112, *Oil Pollution Prevention*.
- *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2012009-0009-DWQ NPDES No. CAS000002* (Construction General Permit; SWRCB 2009b). The Construction General Permit covers construction sites disturbing greater than one acre of land. Construction contractors are responsible for developing site-specific construction SWPPPs, implementing on-site BMPs, maintaining BMPs, performing inspections,

sampling and analysis and submitting an annual report. The Air Force, as the landowner, reviews the SWPPP, certifies the Notice of Intent, annual report and Notice of Termination and provides oversight of construction contractors to track permit coverage and compliance. 30 CES/ CEIEQ verifies site stabilization before a Notice of Termination is submitted.

- *Draft Wastewater Management Plan* (WMP; Air Force 2009). The WMP establishes base policy and assigns responsibility for wastewater system oversight, operation, monitoring, and reporting to meet the requirements of the federal Water Pollution Control Act, Porter-Cologne Water Quality Control Act, and associated regulations, including applicable sections of the City of Lompoc Ordinance 1376(92). The WMP applies to domestic and non-domestic (e.g., municipal or industrial) wastewater treatment and pretreatment systems, including but not limited to collection systems, septic tanks, industrial wastewater treatment, and oil/water separators. The WMP provides specific guidance for disposition of accumulated waters including storm water (e.g., secondary containment, flame ducts, retention basins).

2.0 BEST MANAGEMENT PRACTICES

As per the Central Coast RWQCB letter, *Guidance Document for Implementation of the Phase II Municipal Stormwater Permit*, the RWQCB’s BMPs table template was utilized to describe existing BMPs that address Permit requirements, existing BMPs not required by the Permit, and new BMPs required by the Permit. Tables 4–23 define this and are provided for each program element in the subsections below.

2.1 PROGRAM MANAGEMENT ELEMENT

**Table 4
Program Management Element Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
ID-7 Now PM-1	Illicit Discharge Detection and Elimination (IDDE) Policy	Enforce the IDDE policy letter adopted in Year 2 and utilize enforcement statistics to assess BMP, MCM, and program effectiveness.	2014	No	Maintain and Modify	Modify goal to reflect the requirement of Permit Section F.5.a.1(ii)(a). Non-traditional MS4s are specifically exempted from performing enforcement. However, the policy letter will be maintained and procedures described in Permit Section F.5.d.3 and BMP ID-4 will be used to address illicit discharge elimination.	30 CES/CEIE	F.5.a.1(ii)(a). Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non-storm water discharges from B.3 that are considered non-significant contributors of pollutants.

**Table 5
Program Management Element Existing BMPs not Required by Permit**

Existing BMPs not Required by Permit				
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges
CS-5	Erosion and Sediment Control Standard	Track compliance with the Erosion and Sediment Control Standard adopted in Year 2. Utilize compliance statistics to assess BMP, MCM, and program effectiveness.	Cease	Non-traditional MS4s are specifically exempted from performing enforcement. Erosion and sediment control will be addressed through National Environmental Policy Act (NEPA) reviews and conditions, design reviews and conditions and through contractual provisions. Cessation will not increase pollutant discharges.

**Table 5 (Continued)
Program Management Element Existing BMPs not Required by Permit**

Existing BMPs not Required by Permit				
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges
PC-6	Post-Construction Storm Water Policy	1. Develop and adopt a Post-Construction Storm Water Policy to address post-construction runoff from new development and redevelopment projects. Distribute the policy to stakeholders within three months of adoption. 2. Enforce the Post-Construction Storm Water Policy adopted in Year 3 using an escalating enforcement strategy. Track all storm water runoff pollution prevention enforcement actions. Utilize enforcement action statistics to assess BMP, MCM, and program effectiveness.	Cease and replace with PC-3	Non-traditional MS4s are specifically exempted from performing enforcement. Once finalized, post-construction standards will be addressed through the <i>Facilities Excellence Plan</i> which establishes standards for facilities and related construction on the installation, NEPA reviews and conditions, design reviews and conditions, and contractual provisions. Cessation will not increase pollutant discharges.

**Table 6
Program Management Element New BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
PM-2	Legal Authority	Review, revise or adopt new relevant policies via base orders, installation management plans or contractual provisions to ensure the installation has the legal authority to meet the requirements in Permit Section F.5.a.	2015	Various: 30 CES/CEIE 30 CES/CEPM 30 CES/CEOSS 30 CONS/LGCB	F.5.a (ii) (summary). Within the second year of the effective date of the permit the Permittee will review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms, to the extent allowable under state or local law, to ensure it has at a minimum the legal authority to: (a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non-storm water discharges from B.3 that are considered non-significant contributors of pollutants. (b) Detect and eliminate illicit discharges and illegal connections to the MS4. (c) Respond to spills, and prohibit dumping or disposal of materials other than storm water into the MS4. (d) Require vendors, contractors and operators of commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of BMPs consistent with the CASQA <i>Best Management Practice Handbooks</i> or equivalent. (e) Ensure construction site or industrial facility operators provide a Waste Discharge Identification Number for coverage under the CGP and IGP and comply with the appropriate permit. (f) Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction). (g) Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to: 1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification; 2) Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat; 3) Perform the cleanup and abatement work and bill the responsible party, if necessary; 4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated; 5) Require a new timeframe and notify the appropriate RWQCB when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate RWQCB in writing within five business days.

2.2 EDUCATION AND OUTREACH PROGRAM

Table 7
Education and Outreach Program Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
PE-1	Media Campaign	Utilize existing media sources to promote storm water education and pollution prevention, such as intranet for base employees, public website, and publications: <i>Vandenberg Base Bulletin, Consumer Confidence Report, and Twilight Times.</i>	2014	No	Maintain		30 CES/CEIE	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.
PE-2	New Employee (Newcomer) Brief	1.) Present storm water pollution prevention education at the Newcomer Brief training. 2.) Review content annually for potential enhancements and/or updates.	2014	No	Maintain		30 CES/CEIE	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.
PE-3	Residential Storm Water Education	1.) Coordinate with Balfour Beatty Communities (BBC), the base housing contractor, and the 30 CES/CEAC to annually distribute a residential-specific storm water pollution prevention brochure via BBC's Newcomer Kits. 2.) Review brochure content annually for potential enhancements and/or updates; resupply brochures when necessary.	2014	No	Maintain		30 CES/CEIE 30 CES/CEAC	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.

**Table 7 (Continued)
Education and Outreach Program Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
PE-4	Children's Educational Materials	Annually provide storm water educational materials for distribution at Crestview Elementary School and the library.	2015	No	Maintain and modify Change schedule based on participation in Santa Barbara County's outreach program and to delete library. The library could still be used to promote educational messages and distribute audience-specific storm water guides or information. This has been a challenge, as the decision as to what materials and what curriculum are used is that of the Lompoc Unified School District. In the past two permit years, the schools have not requested any materials although we offered and provided.		30 CES/CEIE	F.5.b.2(ii) (j) Materials will be provided to schools to effectively educate school children, if applicable, about storm water and how they can help to protect water quality in their local watersheds. In the case that a local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum or equivalent.
PE-6 Now PE-5	Audience-Specific Storm Water Guides	1.) Prepare one detailed storm water pollution prevention guide per year for the following target audiences, on a rotating schedule: industrial, automotive, construction, and commercial/restaurant. 2.) Distribute the storm water guides during applicable inspection programs. 3.) Review guide content annually for potential updates.	2014	No	Maintain and modify Modify to be in line with Permit by changing guides to information. Update target audiences such as including contractors who perform grounds maintenance or pressure washing activities. Information would not only be distributed during inspections but as appropriate. Include stormwater hotline on all guides.		30 CES/CEIE	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.
PP-4.2 and 4.3 Now PE-6	Earth Day Now Public Awareness Surveys	1.) Develop a storm water display board for use at local events which includes a quiz for the public to determine how effective the educational BMPs have been at imparting information about water quality and/or pollution. 2.) Document overall trends within results of quizzes within one week of the event.	2015	No	Maintain and modify Modify to change title from Earth Day to Public Awareness Surveys since Earth Day events may not be continued at Vandenberg AFB. Change quiz to survey. Modify schedule to align with permit.		30 CES/CEIE	F.5.b.2(ii) (b) Implement BMPs that gauge level of awareness in target audiences and effectiveness of education tasks.

Table 7 (Continued)
Education and Outreach Program Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
GH-4.7 Now part of PE-5	Operations and Maintenance Program	Distribute Landscaping Fact Sheets to all landscaping contractors annually.	2014	No	Maintain and modify Modify to combine with PE-5, Audience-Specific Storm Water Information		30 CES/CEIE 30 CES/CEOSS	F.5.b.2(ii) (i) Develop and convey messages specific to proper application of pesticide, herbicides and fertilizers.
ID-3 Now PE-7	Storm Water Training for Facility Managers	1.) Present materials regarding storm water program, illicit discharge detection, and pollution prevention at bimonthly facility manager training session. 2.) Track number of facility managers trained.	2014	No	Maintain		30 CES/CEIE	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.
ID-5 Now PE-8	Illicit Discharge Detection and Elimination Pocket Guide	1.) Utilize the pocket guide that was developed in 2011, which provides information and guidance for identifying and reporting illicit discharges and connections that may be encountered during field duties. 2.) Disseminate the pocket guide to all shops during training sessions and inspections, as well as to the public. 3.) Review the pocket guide annually for updates and amend as necessary.	2014	No	Maintain		30 CES/CEIE	F.5.b.2(ii) (d) Develop and disseminate education materials to target audiences. (h) Develop and convey messages specific to reducing and reporting of illicit discharges.

**Table 7 (Continued)
Education and Outreach Program Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
ID-8.1 Now part of PE-5	Storm Water Hotline	Advertise the Storm Water Hotline phone number on all storm water educational materials and during storm water training events.	2014	No	Maintain and combine with PE-5 and PE-8		30 CES/CEIE	
GH-3.1 Now PE-9	Storm Water Pollution Prevention Training for Municipal Operations	1.) Develop and implement a basic storm water pollution prevention training program and require all 30 CES/CEOHP and 30 CES/CEOIU shop personnel to attend a minimum of once triennially. 2.) Track the number of attendees and provide certificates of completion.	2015	No	Maintain and modify Modify to comply with new permit requirements in Section F.5.b.4 to make the training biennial. Certificates will not be provided.		30 CES/CEIE 30 CES/CEO	F.5.b.4 (i) Provide a biennial training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations Permit sections. (ii) The biennial training program will include the following: (a) General storm water education component, any new technologies, operations, or responsibilities that arise during the year and the permit requirements which apply to the staff being trained. Clear guidance on appropriate storm water BMPs to use at Permittee owned facilities and during typical O&M activities.
CS-3.2 Now PE-10	Construction Oversight	1.) Conduct oversight inspections twice a month during the rainy season, monthly during the dry season and prior to the Notice of Termination submittal. 2.) Verify and document that construction contractors are conducting applicable inspections before and after rain events, every 24 hours during extended rain events and during activities that have the potential for non-storm water runoff. 3.) Track all oversight inspections.	2014	No	Maintain and modify Modify to comply with new permit requirements in Permit Section F.5.b.4(d).			F.5.b.4(ii) (d) Provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices, and following standard operating procedures.

**Table 7 (Continued)
Education and Outreach Program Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Order & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
GH 2.1 Now PE-11	Service Contract Provisions	1.) Annually, prior to contract issuance by 30 CONS/LGCB, 30 CES/CEOSS and 30 CES/CEPMS will coordinate with 30 CES/CEIE to review Section 01 57 20 of the contract specifications. 2.) The 30 CES/CEIEQ Water Resources Section will review the contract for language prohibiting pollutant discharge and protecting storm water quality.	2014	No	Maintain		30 CES/CEIE 30 CES/CEOSS 30 CES/CEPMS	Per Permit Section F.5.b.ii (c), any contractors hired by the Permittee to perform operation and maintenance activities will be contractually required to implement storm water BMPs and standard operating procedures for good housekeeping practices.
GH-2.2 Now Part of PE-11	Service Contract Provisions	Audit annually, 35% of service contracts with storm water specifications to assess compliance. Perform audit while services are being performed, document findings, and correct deficiencies.	2016	No	Maintain and modify Modify to comply with new permit requirements in Permit Section F.5.b.4(d), including schedule.		30 CES/CEIE	F.5.b.4 (ii)(d) Provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

**Table 8
Education and Outreach Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
PE-7	Water Resources Logo	Incorporate the logo on all storm water educational materials.	Cease	The communication of information for public education will not be affected by a logo. Cessation will not increase pollutant discharges.	30 CES/CEIE
GH-3.3	Storm Water Pollution Prevention Training for Municipal Operations	1.) Prepare storm water updates and distribute to each shop on a quarterly basis. 2.) Shop supervisory personnel will present quarterly storm water updates.	Cease and replace with PE-9	Shop education will continue to be addressed through BMP PE-9, Storm Water Pollution Prevention Training for Municipal Operations and Staff Pollution Prevention and Good Housekeeping in Permit Section F.5.b.4. Cessation will not increase pollutant discharges.	30 CES/CEIE

**Table 8 (Continued)
Education and Outreach Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
GH-4.10 Now Part of PE-9	Operations and Maintenance Program	Develop or acquire a BMP fact sheet for road, highway, sidewalk, median, embankment, street, facility, and bridge maintenance activities and distribute to 30 CES/CEOHP.	Maintain and modify to incorporate into the shop education addressed through the existing BMP GH-3.1, Storm Water Pollution Prevention Training for Municipal Operations and Staff Pollution Prevention and Good Housekeeping in Permit Section F.5.b.4.		30 CES/CEIE

**Table 9
Education and Outreach Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
PE-12	Regional Outreach	By the first year online Annual Report, the Permittee will submit information indicating which compliance participation option it will use to comply with the public education and outreach requirements in Section F.5.b.1.	By Year 1 Annual Report date Sep 2014	30 CES/CEIE	F.5.b.1. By the first year online Annual Report, the Permittee will submit information indicating which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee will include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.
*	Public Outreach and Education	Develop and implement a comprehensive storm water pollution prevention public education and outreach program. The program will measurably increase the public's knowledge. The strategy will establish tasks based on target audiences, pollutants of concern and anticipated effectiveness. * BMPs PE-1 through PE-10 should meet this requirement.	By 30 June 2015	30 CES/CEIE	F.5.b.2 (i) and (ii)(a). The MG is a summary of the Permit requirement.
N/A	Landscaping Education	Develop and convey water efficient/ storm water friendly landscaping information, if appropriate.	2013	30 ES/CEPT - Messages are already provided in the <i>Facilities Excellence Plan</i> = existing effective program.	F.5.b.2(ii)(g). The MG is the Permit requirement.

**Table 9 (Continued)
Education and Outreach Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
*	School Storm Water Education	<p>Within the Permittees jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school children, if applicable, about storm water and how they can help to protect water quality in their local watersheds. In the case that a local program does not exist, the Permittee may use California’s Education and Environment Initiative Curriculum or equivalent.</p> <p>* BMP PE-4 may meet this requirement.</p>	2015	30 CES/CEIE with Santa Barbara County and Lompoc Unified School District	F.5.b.2(ii)(j). The MG is a summary of the Permit requirement.
Part of PE-5	Pressure Washing Education	Develop (or coordinate with existing effective programs) and convey messages specific to reducing discharges from pressure washing operations and landscape irrigation.	2015	30 CES/CEIE with Santa Barbara County	F.5.b.2(ii)(k). The MG is the Permit requirement.
N/A	Car Wash Education	If applicable, utilize storm water-friendly education for organized car wash participants.	N/A	Not applicable to Vandenberg AFB. Car washes are only authorized at locations that discharge to grade.	F.5.b.2(ii)(l). The MG is a summary of the Permit requirement.
N/A	IDDE Education	Conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).	N/A	Not applicable to Vandenberg AFB. There are no areas of recurring illicit discharges; therefore, no flow areas.	F.5.b.2(ii)(m). The MG is the Permit requirement.
PE-13	Staff and Site Operator Training and Education: Illicit Discharge Detection and Elimination Training	<p>Per Permit Section F.5.b.3(ii), develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.</p> <p>The training program will include at a minimum:</p> <ul style="list-style-type: none"> (a) Identification of an illicit discharge or illegal connection; (b) Proper procedures for reporting and responding to the illicit discharge or illegal connection; (c) Follow-up training provided as needed to address changes in procedures, techniques, or staffing; (d) Annual assessment of their trained staff’s knowledge of illicit discharge response and will provide refresher training as needed; (e) Training of new Permittee staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection; (f) Contact information, including the procedure for reporting an illicit discharge, will be included in each of the Permittee’s fleet vehicles that are used by field staff. 	2016	30 CES/CEIE	F.5.b.3(i) and (ii). The MG is the Permit requirement.

**Table 9 (Continued)
Education and Outreach Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
Part of PE-9	Staff Pollution Prevention and Good Housekeeping	Per Permit Section F.5.b.ii(b), assess trained staff's knowledge of pollution prevention and good housekeeping and revise the training as needed. Sections F.5.b.4(ii)(a) and (d) are existing BMPs (New IDs PE-9 and PE-11).	2016	30 CES/CEIE	F.5.b.4i. Biennially (every 2 years), provide a training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the <i>Pollution Prevention/Good Housekeeping for Permittee Operations</i> sections of the Permit. Determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee pollution prevention/good housekeeping knowledge.

2.3 PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

**Table 10
Public Involvement and Participation Program Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
PE-5 Now PP-1	Storm Drain Labels	Inspect and replace missing or damaged storm water awareness labels that have been affixed to storm drains throughout the Main and South Cantonments every other year.	2014	No	Maintain		30 CES/CEIE	F.5.c(ii)(a). Ensure that high priority storm drain inlets include a labeled, stenciled or other effective method (e.g., clearly visible sign strategically placed in area of high pedestrian activity) of communicating a storm water awareness message such as 'drains to creek' or 'only rain in the drain'.
Part of PE-1	Media Campaign	Integrate storm water awareness messages and information on a publicly accessible website.	2014	No	Maintain		30 CES/CEIE	F.5.c(ii)(b). Integrate storm water awareness messages and information on a publicly accessible website.

**Table 11
Public Involvement and Participation Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
PP-1	Environmental Awareness Working Group (EAWG)	Develop a storm water presentation and applicable handouts for an environmental professional target audience and present the information to the EAWG once annually.	Cease	The EAWG is an informal group that may or may not be continued. 30 CES/CEIE will share storm water educational materials with this audience as appropriate. Meetings attended will be reported. Cessation will not increase pollutant discharges.	30 CES/CEIE
PP-2	Storm Water Working Group	Conduct Storm Water Working Group meetings at least quarterly. Retain agenda, meeting notes, and sign-in sheets.	Cease	Meetings will be held with responsible implementing parties as needed. Cessation will not increase pollutant discharges.	30 CES/CEIE
PP-3	Participation in the Santa Barbara County Association of MS4 Managers (SBCAMM) Meetings	Attend and participate in 100% of quarterly SBCAMM meetings annually and retain a copy of each meeting's agenda.	Cease	Meetings will be attended as staff time permits. Meetings attended will be reported. Cessation will not increase pollutant discharges.	30 CES/CEIE
PP-5	Storm Water Management Plan Public Review and Comment	Provide an adequate opportunity for the public to comment on all future draft Storm Water Management Plan revisions and policies. Allow 30 days for public comment. Utilize a minimum of 3 media outlets for the purpose of notifying the public.	Cease	A <i>Storm Water Management Plan</i> is no longer required. The public will be provided an opportunity to comment on this <i>Guidance Document</i> by the RWQCB.	30 CES/CEIE
PP-4.1 Now PP-2	Earth Day	Participate in an Earth Day event annually. Distribute educational materials and document the number of attendees at the event.	Maintain, unless the Earth Day event is not held.		30 CES/CEIE

There are no new BMPs to comply with the Permit.

2.4 ILLICIT DISCHARGE DETECTION AND ELIMINATION

The ID-4 Measurable Goal is the Permit requirement:

F.5.d.3(ii) At a minimum, the Permittee will conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee will identify the actions being taken to identify and locate the source of the suspected illicit discharge. The Permittee will prioritize investigations of suspected sanitary sewage and/or significant contributors over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(a) Report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to local Health Department.

(b) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this permit, or authorized under another NPDES permit, no further action is required.

(c) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee will immediately notify the responsible party of the problem.

(d) Report immediately to the owners/operators of the downstream MS4 a non-storm water discharge suspected of being sanitary sewage and/or significantly contaminated. (This is not applicable to Vandenberg AFB).

Table 12
Illicit Discharge Detection Elimination Program Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
ID-1.2 Now ID-1	Outfall Mapping and Inventory	1.) Conduct dry weather inspections of all high priority outfalls annually and all low priority outfalls biennially. 2.) Document outfalls in need of cleaning and process a Base Civil Engineer Work Request prior to scheduling necessary cleaning.	2014	No	Maintain Map will be updated to meet new Permit requirements. Only outfalls that have a potential for discharge to a surface waters or Waters of the U.S. will be included.		30 CES/CEIE	F.5.d.1 (i) and (ii). Create and maintain an accurate outfall map including a visual inventory of each outfall. The map will at a minimum show the drainage areas contributing to the outfalls that directly discharge to a receiving water and the location of all water bodies receiving direct discharges. Photos will be taken or a database used to provide baseline info and track operation and maintenance needs over time.
ID-2	Municipal Separate Storm Sewer System Map	1.) Develop a storm sewer system map showing the location of all outfalls and the names and locations of Waters of the U.S. that receive discharges from those outfalls. 2.) Review the map annually and update as needed with data collected during the illicit discharge investigation process.	2014	No	Maintain and combine with ID-1		30 CES/CEIE	F.5.d.1. Same as above.
ID-4 Now ID-3	Illicit Discharge Incident Response and Reporting Now: Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions	1.) Ensure all identified illicit discharges are eliminated to the maximum extent practicable. 2.) Track all reported incidents and retain a copy of all Illicit Discharge Incident Tracking Sheets. 3.) Utilize illicit discharge incident statistics to evaluate public education and outreach. 4.) Revise applicable BMPs and MGs as necessary to reduce illicit discharges.	2014	No	Maintain and revise to conform to Permit Section F.5.d.3 including title and the goals in Section F.5.d.3 (ii) (see text below) and incorporate Storm Water Hotline.		30 CES/CEIE	F.5.d.3.(i) Develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures will be included as part of the Illicit Discharge Detection and Elimination program.

**Table 13
Illicit Discharge Detection Elimination Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
ID-1.3	Facility Inspections and Discharge Investigations	Perform comprehensive analysis of outfall survey data collected every other year; utilize information to support assessment of BMP, MCM, and program effectiveness.	Replaced by ID-1	This is not an effective goal. Data is qualitative not quantitative. Vandenberg AFB will review the outfall inventory results to document outfalls in need of cleaning as part of the inventory effort required by Permit Section F.5.d.1 and BMP ID-1. Additionally, the storm drain system survey required by Permit Section F.5.f.6 will further serve to protect water quality.	30 CES/CEIE
ID-1.4	Facility Inspections and Discharge Investigations	Prioritize facilities on base for potential to discharge pollutants. Enhance the wastewater surveys to include annual inspection of all food service establishments and high priority industrial facilities. Distribute educational materials during inspections.	Replaced by GH-8	This is part of the Wastewater Discharge Survey. No facilities were prioritized for storm water pollutant discharges as a result of this survey. This will be replaced by the facility assessment required by Permit Section F.5.f.3. Cessation will not increase pollutant discharges to storm water.	30 CES/CEIE
ID-1.5	Facility Inspections and Discharge Investigations	Evaluate non-storm water discharges exempt under the Small MS4 General Permit for their potential as a significant source of pollutants to the MS4. Prohibit permit exempt non-storm water discharge(s) identified as a significant source of pollutants.	Replaced by PM-1 and ID-3	This MG was performed in Years 1 – 3 with no non-stormwater discharges identified as being significant sources of pollutants. Vandenberg AFB will continue to conduct Illicit Discharge Detection and Elimination Source Investigations via ID-3 and prohibit non-stormwater discharges containing pollutants via BMP PM-1, IDDE Policy and Permit Section F.5.a.1(ii)(a). Cessation will not increase pollutant discharges.	30 CES/CEIE
ID-6	Fundraiser Car Wash Protocol	Review the standard conditions that 30 CES uses during coordination on car wash fundraiser requests and revise as necessary.	Cease	The standard conditions do not require further revision. Fundraiser car washes are held in a location that discharges to grade. Cessation will not increase pollutant discharges.	30 CES/CEIE
ID-8.2	Storm Water Hotline	Respond to all incidents of illicit discharge within 24 hours and implement proper response and reporting procedures.	Replaced by ID-3	This will be incorporated into BMP ID-4. Per Permit Section F.5.d.3(ii), Vandenberg AFB will conduct an investigation to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. Cessation will not increase pollutant discharges.	30 CES/CEIE

**Table 14
Illicit Discharge Detection Elimination Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
ID-4	Field Sampling to Detect Illicit Discharges	Per Permit Section F.5.d.2 (ii) If an outfall is flowing or ponding and it has been more than 72 hours since the last rain event: 1. Conduct monitoring for the following indicator parameters identified in Permit Table 1, <i>Field Sampling Indicator Parameters</i> . 2. Verify that indicator parameters with the following action level concentrations specified in Permit Table 2, <i>Action Level Concentrations for Indicator Parameters</i> are not exceeded. Alternatively, the Permittee may tailor Permit Table 2 to align with parameters based on local knowledge of pollutants of concern. 3. Conduct follow-up investigation per Permit Section F.5.d.3 if the action levels are exceeded.	2015 (Summer 2014)	30 CES/CEIE	F.5.d.2 (i). Within the second year of the effective date of the permit, the Permittee will conduct field sampling to detect potential illicit discharges while conducting the outfall inventory specified in Section F.5.d. F.5.d.2 (ii).

2.5 CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

**Table 15
Construction Site Runoff Control Program Existing Required BMPs**

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
CS-1	Construction Contract Specifications	Review and update model construction contract specifications to reflect requirements of the Construction Storm Water General Permit, Small MS4 General Permit, and this SWMP (see BMP PC-1).	2014	No	Maintain		30 CES/CEIE	F.5.e (i) and (ii). Develop and implement contract language ensuring all outside contractors comply with the Construction General Permit and implement appropriate BMPs. Contract language will apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

Table 16
Construction Site Runoff Control Program Existing BMPs not Required

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
CS-3.1	Construction Site Oversight	Review all construction SWPPPs prior to contractor breaking ground.	Cease	Review of construction SWPPPs is covered under the Vandenberg AFB Construction Storm Water Program (see Section 1.8 above of this document). Cessation will not increase pollutant discharges.	30 CES/CEIE
CS-3.3	Construction Site Oversight	Document and track construction site details for all Vandenberg AFB sites that disturb one acre or more.	Cease	Tracking of construction site details is covered under the Vandenberg AFB Construction Storm Water Program (see Section 1.8 above of this document). Cessation will not increase pollutant discharges.	30 CES/CEIE
CS-4	Construction Storm Water Pollution Prevention Training	1.) Perform biannual construction training events. Retain sign-in sheets and document attendance. Review presentation content and update as necessary. 2.) Project managers and construction inspectors will attend one storm water training event for Construction General Permit compliance and proper BMP implementation during each five year plan period.	Cease	This training may be offered under the Vandenberg AFB Construction General Permit program, although it has been determined to be ineffective in that Project Managers do not require this level of training, there are no remaining personnel to train and there is no longer any funding for this. Cessation will not increase pollutant discharges.	

There are no new BMPs to comply with the Permit.

2.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

Table 17
Pollution Prevention/Good Housekeeping for Permittee Operations Program Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
GH-4.2 Now GH-1 and GH-2	Operations and Maintenance Program (Storm Drain System Maintenance)	An annual meeting attended by 30 CES/CEOHP and 30 CES/CEIE will be held to identify priority drainage features to be cleaned. Clean priority drainage features annually prior to the wet season. Use IWIMS to track annual cleaning efforts.	2014 (GH-1) and 2015 (GH-2)	No	Maintain and modify to conform to permit. The MS4 program has been focused on outfalls and has yet to prioritize catch basins. Catch basins are inspected cleaned on a regular basis. Modify to replace with two BMPs including the requirements of Permit Section F.5.f.6(i) and (ii) and F.5.f.7(i) and (ii) except move schedule up to be within the first and second permit years rather than the second and third. See new BMPs section below for MG details.		30 CES/CEOHP 30 CES/CEIE	F.5.f.6(i). Develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving water bodies within the urbanized area and detention basins. F.5.f.7(i). Begin maintenance of all high priority storm drain systems at least annually prior to the rainy season.
GH-5 Now GH-3	Pest Management Program Now Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management	1.) Track annual volume of pesticides applied and application details. 2.) Document the training and accreditations of applicators. –NOTE: Past and present usage of pesticides/herbicides and determine if additional goals for annual reduction are necessary was accomplished in Year 2.	2014 (One year earlier than Permit)	No	Maintain and modify to incorporate new BMP for compliance with Permit Section F.5.f.9 (ii). See new BMP section below.		30 CES/CEIE	F.5.f.9(i). Implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee operations and activities. The Permittee will implement the landscape design and maintenance on new or decorative landscapes.

NOTE: GH-3.1, GH 3.3, GH-2.2 and GH-4.7 are addressed under the Education and Outreach Program.

**Table 18
Pollution Prevention/Good Housekeeping for Permittee Operations Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
GH-1	BCE Work Request Review Process	1.) Review applicable work request for impacts to storm water quality and condition accordingly. 2.) Track the number of completed BCE Work Requests and Work Clearance Requests associated with municipal operations. 3.) Prepare and implement a standard set of guidelines for reviewing BCE Work Requests and Work Clearance Requests. Review annually and revise as necessary.	Cease	This BMP will be replaced by assessment of municipal operations and maintenance activities for potential to discharge pollutants to storm water and the development of a set of BMPs that will reduce the discharge of pollutants in storm water during operations and maintenance activities to align with the new Permit Section F.5.f.8. 30 CES/CEIE will continue to review and condition the small number of BCE Work Requests and Work Clearance Requests associated with municipal operations. However, this BMP has proven to be ineffective since municipal operations and maintenance activities are not adequately captured by the work request review process. The majority of activities are recurring work that does not require work requests. Cessation will not increase pollutant discharges.	30 CES/CEIE
GH-4.3 and GH-4.4 Now GH-4	Operations and Maintenance Program (Street Sweeping)	1.) Maintain monthly street sweeping of parking lots and daily street sweeping of roadways. 2.) Record the number of miles swept and weight of material disposed of at the landfill.	Maintain		30 CES/CEOHP
GH-4.5	Operations and Maintenance Program (Dechlorination)	Dechlorinate 100% of swimming pool water and other chlorinated discharges that pose a significant source of pollutants to the MS4 prior to discharge to the MS4.	Cease	There are no known recurring chlorinated discharges from the MS4 that pose a significant source of pollutants. Vandenberg AFB will follow <i>Resolution No. R3-2008-0010</i> for any water supply, fire sprinkler, or swimming pool discharges that may reach the storm drain system. Fire sprinkler discharges that do not meet discharge to grade criteria will be contained for proper disposal. Cessation will not increase pollutant discharges.	30 CES/CEO
GH-4.8 Now Part of GH-10	Operations and Maintenance Program (Facility Inspections and Oil Water Separator Inspections and Maintenance)	1.) Inventory all vehicle and equipment fueling, maintenance, and cleaning locations and inspect for adequate storm water pollution prevention control; continue to inspect all OWSs regularly and sample discharge as needed. 2.) Repair an OWS or revise OWS operations if it is deemed an OWS presents a threat to storm water quality.	Maintain and modify to incorporate into new BMP for compliance with Permit Section F.5.f.5(ii). See new BMP section below.		30 CES/CEIE

**Table 18 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
GH-4.9 Now Part of GH-10	Operations and Maintenance Program (Hazardous Materials Storage Areas)	1.) Maintain an inventory of regulated hazardous material storage areas and inspect according to applicable regulations. 2.) Document and track the number and type of inspection findings and assure all deficiencies are rectified.	Maintain and modify to incorporate into new BMP for compliance with Permit Section F.5.f.5(ii). See new BMP section below.		30 CES/CEIE
GH-6	Waste Disposal and Recycling	Track the volume of used oil generated and recycled.	Cease	The volume of used oil recycled will continue to be tracked under the hazardous waste program, but has no value as a goal for the MS4 permit. Cessation will not increase pollutant discharges.	30 CES/CEIE
GH-7	Industrial Storm Water General Permit Compliance	Annually inspect applicable 30 SW industrial facilities to determine the effectiveness of implemented BMPs and verify that all BMPs listed in the Vandenberg AFB SWPPP (Air Force 2012c) are implemented/installed.	Cease	Activity is covered under the Industrial Storm Water Program (see Section 1.8 above of this document). Cessation will not increase pollutant discharges.	30 CES/CEIE
GH-8 Now GH-5	ESOH CAMP	1.) Participate in all annual and triennial HQ-led ESOHCAMP audits. 2.) Document all storm water deficiencies/findings, work towards a remedy, and track findings status. 3.) Attempt to close all open storm water findings.	Maintain		30 CES/CEIE

**Table 19
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
GH-6	Inventory of Permittee-Owned or Operated Facilities	Per Section F.5.f.1(ii), develop and maintain an inventory of Permittee-owned or operated facilities that are a threat to water quality and are not covered by another storm water General Permit.	2015	30 CES/CEIE	F.5.f.1 (i) and (ii). Within the second year of the effective date of the permit, develop and maintain an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, and are not covered by another storm water General Permit.

Table 19 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
GH-7	Map of Permittee-Owned or Operated Facilities	Per Section F.5.f.2(ii), complete and have available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map will also show the facility and the manager of each facility, including contact information.	2015	30 CES/CEIE	F.5.f.2 (i). Within the second year of the effective date of the permit, prepare and submit a map of the urban area covered by the MS4 permit and identify where the Permittee-owned or operated facilities are located. F.5.2 (ii).
GH-8	Facility Assessment	Per Section F.5.f.3(ii), the assessment will include the following: (a) Identify as pollutant hotspots those facilities that have a high potential to generate storm water and non-storm water pollutants. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots will include, at a minimum, the Permittee’s maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water, which are not covered under another permit. (b) Document assessment procedures and results used for conducting the assessment along with a copy of any site evaluation checklists used to conduct the assessment.	2016	30 CES/CEIE	F.5.f.3 (i). Within the third year of the effective date of the permit, conduct an inspection and assessment of pollutant discharge potential and pollutant hotspots. NOTE: Per Permit Section F.5.f.1(i), these are facilities that are not covered by another storm water General Permit. F.5.f.3(ii).
GH-9	Storm Water Pollution Prevention Plans (SWPPPs)	Per Section F.5.f.4(ii), within the fourth permit year, implement the following: (a) Develop and implement a site-specific SWPPP that identifies a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water. (b) The SWPPP(s) will be kept on-site at each of the Permittee-owned or operated facilities’ offices for which it was completed. Update the SWPPP as necessary. (c) Ensure the SWPPP will address the following: <ul style="list-style-type: none"> • Facility specific information (location, owner, address, etc.); • Purpose of the document; • Key staff/contacts at the facility; • Site map with drainage identified; • Identification of significant materials that are handled and stored at the facility that may be exposed to storm water; • Description of potential pollutant sources • BMPs employed at facility; and • Spill control and cleanup – response to spills. 	2017	30 CES/CEIE	F.5.f.4(i). Develop and implement SWPPPs for pollutant hotspots at high priority sites. If a Permittee has an existing or equivalent document such as Hazardous Materials Business Plan or Spill Prevention Plan, the Permittee is not required to develop a SWPPP if that document includes the necessary information required within a SWPPP. F.5.f.4(ii).

**Table 19 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
GH-10	Inspections, Visual Monitoring and Remedial Action	<p>Per Section F.5.f.5(ii), conduct inspections as follows:</p> <p>(a) Quarterly hotspot visual inspections – Perform quarterly visual inspections in accordance with the developed standing operating procedures of all hotspot Permittee-owned or operated facilities to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge, and to ensure implementation of BMPs. The Permittee will look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections will be tracked in a log for every facility, and records kept with the SWPPP. The inspection report will also include any identified deficiencies and the corrective actions taken to correct the deficiencies.</p> <p>(b) Quarterly hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water BMPs, will be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results will be documented and records kept with the SWPPP. This inspection will be performed in accordance with the developed standard operating procedures. The inspection report will also include any identified deficiencies and the corrective actions taken to correct deficiencies.</p> <p>(c) Quarterly hotspot visual observation of storm water and non-storm water discharges – At least once per quarter, visually observe discharge location from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs will be remedied within seven days or before the next storm event, whichever is sooner. Visual observations will be documented, and records kept with the SWPPP. This inspection will be done in accordance with the developed standard operating procedures. The inspection report will also include any identified deficiencies and the corrective actions taken to correct the deficiencies.</p> <p>(d) Non-hotspot inspections – At a minimum, inspect each inventoried facility that is not a hotspot, once per permit term. The inspection will investigate and assess each of the items identified above.</p>	2018	30 CES/CEIE	<p>F.5.f.5(i). Within the fifth year of the effective date of the permit, the Permittee will conduct regular inspections of Permittee-owned and operated facilities not covered by another storm water General Permit. The Permittee may incorporate storm water inspections into existing, routine facility inspections.</p> <p>F.5.f.5(ii).</p>
Part of GH-1	Storm Drain System Assessment and Prioritization	<p>Per Section F.5.f.6(ii), assess/prioritize storm drain system facilities for cleanout. Assign a priority to all storm drain system facilities within the MS4, based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basins meeting the following criteria:</p> <ul style="list-style-type: none"> • Catch basins known to accumulate a significant amount of sediment, trash, and/or debris; • Catch basins collecting large volumes of runoff; • Catch basin collecting runoff from area that do not receive regular street sweeping; • Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and • Catch basins that receive citizen complaints/reports. 	2014 (One year earlier than Permit)	30 CES/CEOHP 30 CES/CEIE	<p>F.5.f.6(i). Develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving water bodies within the urbanized area and detention basins.</p> <p>F.5.f.6(ii).</p>

Table 19 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
Part of GH-2	Maintenance of Storm Drain System	Per Section F.5.f.7(ii), conduct a maintenance program of high priority storm drain systems that, at a minimum includes: (a) Storm drain systems inspection – Based on the priorities assigned in BMP <i>Storm Drain System Assessment and Prioritization</i> , develop a strategy to inspect storm drain systems. At a minimum, inspect all high priority catch basins annually, prior to the rainy season. (b) Storm drain cleaning – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies will be based on priority areas, with higher priority areas receiving more frequent maintenance. (c) Maintenance of surface drainage structures –Visually monitor all open channels, detention basins, and other drainage structures for debris at least once per year and identify and prioritize problem areas. At a minimum, remove trash and debris from open channels and other drainage structures will occur annually. (d) Disposal of waste materials - Develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure will ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.	2015 (One year earlier than Permit)	30 CES/CEOHP 30 CES/CEIE	F.5.f.7(i). Begin maintenance of all high priority storm drain systems at least annually prior to the rainy season. F.5.f.7(ii).
TBD GH-11	Permittee Operations and Maintenance Activities (O&M)	Per Section F.5.f.8(ii). Within the third year of the effective date of the permit: (a) Develop and implement O&M activity assessment. The O&M activities assessment will include, but not be limited to, the potential to discharge pollutants in storm water. (b) Identify all materials that could be discharged from each of these O&M activities. (c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce the discharge of pollutants in storm water. Use the CASQA <i>Municipal BMP Handbook</i> (CASQA 2010) or equivalent. (d) Evaluate annually all BMPs implemented during O&M activities.	2016	30 CES/CEIE	F.5.f.8(i). Assess the Permittee O&M activities for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis. F.5.f.8(ii).

**Table 19 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
GH-5 Now Part of PE-5	Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management	Per Section F.5.f.9(ii). Within the second year of the effective date of the permit, implement the following: (a) Evaluate pesticides, herbicides and fertilizers used and application activities performed to identify pollution prevention and source control opportunities. (b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee will: 1) Educate applicators and distributors of storm water issues. 2) Implement integrated pest management measures that rely on non-chemical solutions, including: <ul style="list-style-type: none"> • Using native and climate appropriate plants (reduces water usage and fertilization) for decorative landscape applications; • Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling; • Preventing application of pesticides and fertilizers when two or more consecutive days with greater than 50% chance of rainfall are predicted by the National Oceanic and Atmospheric Administration; • Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal); • Limiting or eliminating the use of fertilizers, including prohibiting application within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body; • Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety; 3) Collecting and properly disposing of unused pesticide, herbicides, and fertilizers; and 4) Minimize irrigation run-off.	2015	30 CES/CEIE	F.5.f.9(i). Implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee operations and activities. The Permittee will implement the landscape design and maintenance on new or decorative landscapes. NOTE: There is some overlap with Permit Section F.5.b.2(ii)(i), Develop and convey messages specific to proper application of pesticide, herbicides and fertilizers and BMP GH 4-7. F.5.f.9(ii).

2.7

POST-CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

Table 20
Post-Construction Storm Water Management Program Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
PC-2	Hydromodification Management Plan (HMP)	Develop a watershed-based HMP to describe an economically and scientifically viable and practicable hydromodification management strategy. The final HMP was scheduled for Year 4 of the last permit cycle.	2014	No	Maintain		30 CES/CEIE	F.5.g.1 (i). Require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that are not part of a larger plan of development. F.5.g.2 (i). Implement standards to effectively reduce runoff and pollutants associated with runoff from development projects.
PC-3	Inventory, Maintenance, and Inspection of Structural Storm Water BMPs	1.) Coordinate, develop, and maintain an inventory of structural controls and update annually. 2.) Integrate the inventory into the Vandenberg AFB MS4 map and update annually. 3.) Prepare a protocol for conducting post-construction storm water control inspections. 4.) Establish and implement a recurring maintenance schedule for every structural BMP in the Main and South Cantonment areas. 5.) Provide training for maintenance personnel.	2014 (Two years earlier than Permit)		Maintain and modify to follow applicable requirements of Permit Section F.5.g.4. See new BMP section below.		30 CES/CEIE	F.5.g.4. Implement an O&M Verification Program for new development projects regulated under this Order.

**Table 21
Pollution Prevention/Good Housekeeping for Permittee Operations Program Existing BMPs not Required**

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
PC-1.1 Now PC-1	Project Planning, Programming, Design, and Approval Process (Planning)	Coordinate all construction and redevelopment BCE Work Requests, AF Form 813s, EAs and designs with the 30 CES/CEIEQ Water Resources Section for review and application of post-construction storm water requirements and controls.	Maintain		30 CES/CEAOP 30 CES/CEPMD 30 CES/CEPTD 30 CES/CEIE
PC-1.2 Now PC-3	Project Planning, Programming, Design, and Approval Process (Design)	Include appropriate post-construction storm water controls into conceptual and final designs produced by 30 CES/CEP and or contractors; ensure applicable <i>Facilities Excellence Standards</i> and hydromodification control criteria (interim and final) are adhered to for applicable projects.	Maintain		30 CES/CEAOP 30 CES/CEPMD 30 CES/CEPTD
PC-1.3 Now PC-4	Project Planning, Programming, Design, and Approval Process (Tracking)	Revise the project tracking system to include basic site information. Ensure the checklist documents the inclusion of post-construction storm water controls during all phases of project planning, design, and approval.	Cease	This MG has proven to be infeasible. The goal was intended to change the Automated Civil Engineer System (ACES) to include post-construction storm water information; however, Vandenberg AFB has no authority to change ACES. Cessation will not increase pollutant discharges.	30 CES/CEPMD 30 CES/CEPTD 30 CES/CEIE
PC-1.4 Now PC-5	Project Planning, Programming, Design, and Approval Process (Tracking)	Maintain records of all projects and the post-construction storm water controls implemented.	Maintain		30 CES/CEPMD 30 CES/CEPTD 30 CES/CEIE
PC-1.5 Now PC-3	Project Planning, Programming, Design, and Approval Process (Design)	Revise applicable design checklists and processes to include reference to the applicable hydromodification exemptions, applicability criteria, performance criteria, and thresholds established in the <i>Vandenberg AFB Hydromodification Management Plan</i> .	Maintain		30 CES/CEPMD 30 CES/CEPTD 30 CES/CEIE
PC-4	Design Professionals Training	All design staff will attend one post-construction storm water management training session every other year and document attendance.	Cease	There are no designers on staff, but project managers who oversee designs by others. Additionally, there is no funding for this training. Cessation will not increase pollutant discharges.	30 CES/CEPMD 30 CES/CEPTD
PC-5 Now PC-6	Riparian Area and Wetland Protection	Incorporate a minimum 30-foot buffer zone for riparian areas and wetlands into project designs and include the 30-foot buffer zone requirements in the design review checklist.	Maintain		30 CES/CEP

Table 21 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program Existing BMPs not Required

Existing BMPs not Required by Permit					
BMP ID	BMP Description	MG(s)	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party
PC-7.4 and PC-7.5	Long-term Watershed Protection	1.) Identify quantifiable measures that will indicate whether Air Force long-term watershed protection efforts relative to storm water management are achieving desired watershed conditions. 2.) Utilize the identified quantifiable measures to evaluate Air Force watershed protection efforts. If results yield negative results, revise applicable strategies, BMPs, and plans accordingly.	Cease	In 2012, the 30 CES/CEIE determined using GIS that the current percent impervious area for the San Antonio Hydrologic Unit on Vandenberg AFB is 2.18 percent. The current percent impervious area for the Santa Ynez Hydrologic Unit on the base is 2.78 percent. This meets the 3% - 10% percent impervious area watershed goal identified by the CCRWQCB. Cessation will not increase pollutant discharges.	30 CES/CEIE

Table 22
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
Part of PC-2	Site Design Measures	Per Section F.5.g.2(ii), projects will implement one or more of the following site design measures to reduce project site runoff: <ul style="list-style-type: none"> Stream Setbacks and Buffers – a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area; Soil Quality Improvement and Maintenance - improvement and maintenance soil through soil amendments and creation of microbial community; Tree planting and preservation – planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable; Rooftop and Impervious Area Disconnection - rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer; Porous Pavement - pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants; Green Roofs – a vegetative layer grown on a roof (rooftop garden); Vegetated Swales - a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff; Rain Barrels and Cisterns - system that collects and stores storm water runoff from a roof or other impervious surface. <p>Use the SMARTS <i>Post-Construction Calculator</i> or equivalent to quantify the runoff reduction resulting from implementation of site design measures.</p>	2014 (One year earlier than Permit)	30 CES/CEIE 30 CES/CEP	F.5.g.1 (i). Require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that are not part of a larger plan of development. F.5.g.2(ii).

**Table 22 (Continued)
Pollution Prevention/Good Housekeeping for Permittee Operations Program New Required BMPs**

New BMPs to Comply with Permit					
BMP ID	BMP Description	MG(s)	Year	Responsible Party	Permit Section Complied With
Part of PC-2	Low Impact Development (LID) Design Standards	Per Section F.5.g.2(ii), the Permittee will regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). Vandenberg AFB will require Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in the Permit, unless an alternative strategy that is equally protective of receiving water quality is developed, (i.e., <i>Hydromodification Management Plan</i> with post-construction storm water standards approved by the Central Coast RWQCB Executive Officer).	2014 (One year earlier than Permit)	30 CES/CEIE 30 CES/CEP	F.5.g.2 (i). Implement standards to effectively reduce runoff and pollutants associated with runoff from development projects. F.5.g.2(ii).
PC-5	Operation and Maintenance (O&M) of Post-Construction Storm Water Management Measures	Per Section F.5.g.4(ii), at a minimum, the O&M Verification Program will include the following elements: (a) A database or equivalent tabular format of all projects that have installed treatment systems. This database or equivalent tabular format will include the following information for each project: (1) Name and address of the project; (2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any); (3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed; (4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed; (5) Responsible operator(s) of each treatment system and hydromodification control (if any); (6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any); and (7) Any problems and corrective or enforcement actions taken. (b) Maintenance Approvals: Ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate State and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee will be deemed to be in compliance with this Provision.	2014 (Two years earlier than Permit)	30 CES/CEP 30 CES/CEO 30 CES/CEIE	F.5.g.4. Implement an O&M Verification Program for new development projects regulated under this Order. F.5.g.4(ii).

NOTE: The following O&M Verification Program elements are not applicable to Vandenberg AFB:

- Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity.
- Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.
- Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate RWQCB.

2.8 PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

Table 23
Program Effectiveness Assessment and Improvement Existing Required BMPs

Existing BMPs that Address Permit Requirements								
BMP ID	BMP Description	MG(s)	Year	Meets Minimum Requirement?	Maintain, Reduce, or Cease?	Demonstration Reduction or Cessation Complies with Permit & MEP & Will Not Increase Pollutant Discharges	Responsible Party	Permit Section Complied With
GH-9 Now EA-1	Effectiveness Assessment	Utilize the strategy to conduct effectiveness assessments and include results within the Annual Reports. -NOTE: the Effectiveness Strategy developed in Year 1 was modeled from the <i>CASQA Municipal Storm Water Program Effectiveness Assessment Guidance</i> . It will be updated as needed. BMPs will be prioritized based on pollutants of concern or common pollutants if no pollutants of concern are identified.	2014	No	Maintain		30 CES/CEIE	<p>F.5.h.1.(i). Develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term progress of the storm water program....The Program Effectiveness Assessment and Improvement Plan will identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common pollutants of concern (i.e., sediment, bacteria, trash, nutrients). The effectiveness assessments will build upon each other from one year to the next and will identify modifications to the program the Permittee must undertake to improve effectiveness.</p> <p>F.5.h(ii). The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) <i>Municipal Storm Water Program Effectiveness Assessment Guidance</i> (California Stormwater Quality Association [CASQA], May 2007) or equivalent. The Program Effectiveness Assessment and Improvement Plan will include the following minimum elements: (1) Implementation of storm water program elements (2) Identification and targeting of Target Audience(s).</p>

There are no existing BMPs not required by the Permit or new BMPs to comply with the Permit.

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3.0 REFERENCES

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2012b *Spill Prevention, Control, and Countermeasures (SPCC) Plan, 30 SW Plan 32-4002-C.*

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2012c *Storm Water Pollution Prevention Plan.*

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2012d *Vandenberg Air Force Base General Plan.*