Stormwater Management Plan (SWMP)

For:

Carl T. Hayden VA Medical Center
650 E. Indian School Road
Phoenix, AZ 85012
October 1, 2019

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SECTION I: INTRODUCTION

1.1 Background

The Phoenix VA Health Care System (PVAHCS) is covered by the Arizona general storm water permit number AZG2016-002 under the Arizona Administrative Code R-18-9-A902(D)(1), R I 8-9A902( D) ( 2), R-18-9-A902(E), and RI -9-A905(A)(1)(f), which incorporates 40 CFR 122.32. This permit authorizes stormwater discharges to waters of the State of Arizona resulting from a Small Municipal Separate Storm Sewer System (Small MS4). This permit became effective September 30, 2016 and shall expire on September 29, 2021. The PVAHCS filed a Notice of Intent 001) for coverage under the Arizona General Permit.

The Storm Water Management Plan (SWMP) is designed to limit the discharge of pollutants to the PVAHCS’s stormwater system to the maximum extent practicable. This plan consists of procedures PVAHCS will follow to meet permit requirements as well as best management practices (BMPs) implemented to achieve the goals outlined in the Federal Clean Water Act and State of Arizona Stormwater Regulations.

1.2 Facility Description

The PVAHCS is located at 650 E. Indian School Road, Phoenix, Arizona, 85012. The campus consists of a 38.5-acre property with approximately 22 buildings.

1.3 Outfalls

Stormwater on the PVAHCS campus is collected in storm drain inlets and conveyed through a vast network of storm drain pipes to various catchment basin throughout the campus. Stormwater is also collected in numerous drywells located throughout the campus. There are no designated outfalls on this campus. See Appendix A for mapping.

1.4 Water Quality Concerns & Priorities

Some of the biggest potential water quality concerns for these waters involve sediment loads from disturbed areas; fertilizers and pesticides from landscaping areas; and oil and grease from roadway and parking areas.

1.5 Threatened or Endangered Species and Historic Properties

Construction started in 1949 and it was determined that PVAHCS is not eligible for the historic registry and there are no endangered or threatened species within one mile of PVAHCS. However, Steele Indian School Park with some of its original historical buildings is adjacent to and upstream of the PVAHCS Campus.

1.6 Non-stormwater discharges
None of the non-stormwater discharge categories listed in section L3.2 of the facility permit, occurring within the jurisdiction of PVAHCS, have been identified by PVAHCS as significant contributors of pollutants to the MS4 and therefore do not need to be addressed in this plan.

1.7 Roles and Responsibilities:
   a. The Medical Center Director has overall responsibility for compliance with the stormwater regulations and the implementation of this Plan.
   b. Chief of Engineering Service (through the Supervisor, Projects Section) will be responsible for:
      1. Maintaining an up-to-date map of the municipal separate storm and location of all outfalls.
      2. Sampling of stormwater and performing analysis if an illicit discharge is detected.
      3. Providing input to the annual report.
      4. Communicating requirements to contractors performing work that may have an impact on storm water.
   c. GEMS (Green Environmental Management Systems) Program Manager will be responsible for:
      1. Maintaining all documentation required by the MS4 permit.
      2. Providing training required by the MS4 Permit.
      3. Performing outfall inspections.
      4. Preparing the annual report for submission to the Arizona Department of Environmental Quality (ADEQ).

SECTION 2: STORMWATER PROGRAM ENFORCEMENT

2.1 Enforcement Requirements
   a. Illicit connections and discharges originating from PVAHCS's jurisdiction are prohibited.
   b. Only stormwater is to enter the stormwater system, from now on referred to as the MS4. Dumping or disposal of materials other than storm water is prohibited.
   c. Contractors working at PVAHCS are to follow requirements of the facility's permit and to minimize discharge of pollutants to the MS4 through installation, implementation, and maintenance of storm water control measures which must be contained in their contract submission documents.
   d. Violators must cease and desist illicit discharges and spills in violation of the facility's permit and/or abate such discharges.
2.2 Enforcement Response Plan

a. The VA Police Department at PVAHCS will enforce violations of storm water pollution on PVAHCS property. First time offenders will be issued a United States District Court Violation Notice (USDCVN) under the VA Regulation I .218 (b) Schedule of Offenses and Penalties for Disorderly Conduct, which tends to impede or prevent the normal operation of a service or operation of the facility. In the event of a repeat offense, the case will be forwarded to the United States Attorney's Office, District of Arizona and the Regional Counsel for further review and guidance.

b. The stormwater enforcement plan will be amended as necessary and reviewed at least every year as part of the annual Storm Water Management Plan review prior to submitting the annual Notice of Intent (NOI).

SECTION 3: STORM SEWER SYSTEM MAPPING

3.1 Storm Sewer Map Narrative

a. PVAHCS has developed a comprehensive storm sewer map that is contained in Appendix A. The map is reviewed annually and updated as new information becomes available.

SECTION 4: STORMWATER MANAGEMENT PROGRAM

4.1 Required Elements:

a. The storm sewer map containing information about the storm sewer system, outfalls and receiving waters is contained in Appendix A

b. A listing of all potential discharges that may cause or contribute to the exceedance of an applicable surface water quality standard are contained in Appendix B.

c. Description of practices to achieve compliance with the stormwater permit. 6.1, 6.2, 6.3, and 6.4 are contained Appendix C, the facility-s Best Management Practices (BMPs). The BMPs designate:

1. Personnel responsible for each measure.
2. Measurable goals including milestones and timeframes, quantities and/or qualities.
3. Measure of assessment.
4. Description of practices to achieve compliance with applicable waste load allocations.

d. In the event the status of PVAHCS receiving waters changes, an analytical monitoring program will be developed to include a Sampling and Analyses Plan that includes the following minimum components: sample collection, equipment and containers, decontamination. calibration procedures: sample frequency
(based on illicit discharge characteristics), document site conditions, field notes, sample preservation, chain-of-custody tracking, and handling.

e. An annual review of the Stormwater Management Program will be done as part of the Green Environmental Management Systems (GEMS) Program review. Copies will be maintained in Appendix K of the Stormwater Management Plan.

4.2 Stormwater Management Plan Availability

The Stormwater Management Plan is available electronically on the PVAHCS facility website at W:\All_PHX_Users\Engineering Updates\Pollution Prevention Programs\Stormwater Management Plan or upon request by contacting PVAHCS's GEMS Program Office at (602) 277-5551 ext. 6335.

SECTION 5: BEST MANAGEMENT PRACTICES TO ENSURE EFFLUENT LIMITATIONS

5.1 Minimum Control Measures:

a. PVAHCS will reduce pollutant discharges to the maximum extent practicable to protect water quality by implementing Minimum Control Measures also known as Best Management Practices (BMPs) in the following six categories:

1. Public Education and Outreach.
2. Public Involvement and Participation.
3. Illicit Discharge Detection and Elimination (IDDE) Program
4. Construction Activity Storm Water Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping

b. Specific requirements for Best Management Practices in each of the six categories are detailed in Appendix D of the facility permit.

5.2 Public Education and Outreach

a. PVAHCS will implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The objective of the Best Management Practices developed is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.

b. Posters will be displayed outside of Room 1147A in the main passageway of Building #1 on the IH/GEMS/Safety bulletin board. These will be rotated at least quarterly. At least five (5) informational tri-folds will be left in five (5) different Patient Waiting Rooms on a quarterly basis. This will be tracked on the GEMS CR-AM (Compliance Requirements / Accountability Matrix) Sheet and in Appendix C.
5.3 Public Involvement and Participation

a. PVAHCS will provide opportunities for the public to participate in the review and implantation of the Storm water Management Plan on the website: https://www.phoenix.va.gov/about/environmental.asp.

b. PVAHCS also participates in the Phoenix Adopt-A-Street program. Indian School Road between 7th Street and 7th Avenue was selected. This will be tracked on the GEMS CRAM Sheet and in Appendix C.

5.4 Illicit Discharge Detection and Elimination (IDDE) Program:

c. PVAHCS will prohibit illicit discharges, including sanitary sewer overflows to and from the storm sewer system within its jurisdiction. An illicit discharge is any discharge that either is not composed entirely of stormwater unless authorized under a separate stormwater permit that authorizes the discharge or is an allowed non-stormwater discharge, by section 1.3.2 of the facility permit.

d. Through Best Management Practices and the performance of routine facility inspections by trained and qualified VA personnel, PVAHCS will ensure that illicit discharges are prohibited, and any illicit discharges discovered are eliminated, including those from properties not owned or operated by the MS4 that discharge into the MS4 system.

e. Upon detection of an illicit discharge, PVAHCS will eliminate it as quickly as possible. All parties responsible for such discharge will be notified and immediately required to stop the discharge. Where elimination of an illicit discharge is not immediately possible, PVAHCS shall establish an expeditious schedule for its elimination. All reasonable and prudent measures will be taken to minimize the discharge of pollutants to the MS4.

f. Enforcement procedures are described in Section 2.2 of this Stormwater Management Plan.

g. The non-stormwater discharges identified in section 1.3.2 of the Permit No. AZG2016002 do not need to be addressed as illicit discharges unless it is determined that the source is a significant contributor of pollutants. Non-stormwater discharges that cause or contribute to a violation of a surface water quality standard where no action is taken to eliminate the discharge of pollutants is a permit violation.

h. PVAHCS Engineering Department is responsible for implementing the IDDE Program and will annually provide training to the staff and public to prevent, identify, report and mitigate illicit discharges to and from the MS4.

i. Visual monitoring during both wet and dry weather will be conducted to identify, monitor and eliminate illicit discharges to ensure compliance with the facility permit. Follow-up screening will be performed and documented within 30 days for each identified or suspected illicit discharge. Copies of all visual monitoring activities will be maintained in Appendix G of the Storm water Management Plan.

j. PVAHCS inventory of facilities and activities identified as having the potential to discharge to the MS4 are contained in Appendix F.
5.5 Construction Activity Stormwater Runoff Control

b. PVAHCS utilizes the following documents to implement and enforce their efforts to reduce pollutants in stormwater runoff from construction sites:


1. VA Master Specifications Guide, Section 01 57 19, Temporary Environmental Controls.

2. Construction specifications for activities that will disturb one or more acres of land including sites less than one acre that are a part of a common plan of development, will include a requirement for the contractor (Architect/Engineer - AE) to develop, implement, maintain, and enforce a stormwater runoff control program to minimize or eliminate pollutant discharge. Program requirements include:

3. Minimize the amount of disturbed area and protect natural resources. 2. Stabilize sites when projects are complete, or operations have temporarily ceased.

4. Protect slopes on the site of the construction activity.

5. Protect storm drain inlets and armor all newly-constructed outlets.

6. Use perimeter controls at the site.

7. Stabilize entrances and exits at the location of the construction activity to prevent off-site tracking.

8. Inspect stormwater controls at consistent intervals.

9. Control wastes, including but not limited to: discarded building materials, paints, fertilizers, concrete washout, chemicals, litter, and sanitary wastes.

f. The A/E will be responsible for preparing a Notice of Intent (NOI) that will be submitted to the regulating authority (ADEQ) for a permit when the proposed project will equal or exceed 1 acre (43,460 ft²). If less than that size, the A/E will submit the NOI for review by the GEMS Committee. The NOI is a report that contains a summary of the drainage system for the site in pre-development conditions and post developed conditions. The report will contain all the calculations for the pre- and post-developed runoff rates as well as the methodologies used to handle the attenuation and quality requirements.

g. The A/E shall analyze the project site as it exists before the project starts. The A/E shall verify with the local, state, and federal regulatory agency for the project site to ensure the correct land coverage runoff coefficient “C” value is used for the pre-development condition. The local jurisdiction's standard for "pre-developed" shall be in lieu of the EISA Section 438 requirements. The A/E
(designer) shall use an approved hydrologic modeling program to study the entire site's drainage system and the amount of flow leaving all the outlets on the project site.

h. PVAHCS contracting officer representatives (CORs) will evaluate compliance with the contractor's stormwater runoff control program as part of their routine construction site inspection program, document concerns, and ensure abatement.

i. In addition to the programs and requirements mentioned above, the GEMS Program further reviews/surveys new construction on the Campus. Section 438 of the Energy Independence and Security Act (EISA) requires the sponsor of any development or redevelopment project involving a federal facility with a footprint exceeding 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property about the rate, volume, and duration of flow. For each new project proposed on the PVAHCS campus, the design team will include a competent professional to ensure these requirements are met. Opportunities for Low Impact Design (LID) will be evaluated and encouraged.

j. The PVAHCS requires a Stormwater Pollution Prevention Plan (SWPPP) to be submitted to PVAHCS and approved prior to beginning construction as part of the contract submission documents.

k. The record of these reviews will be available for a period of five (5) years. The preconstruction review procedure will include the following:

1. Review of site design, planned operations at the construction site, planned construction BMPs, and proposed post-construction BMPs.
2. The National Environmental Protection Act (NEPA) process includes consideration of the potential water quality impacts.
3. Evaluation of low impact design and green infrastructure.
4. Identification of priority construction sites.

l. After the project is underway, the responsible PVAHCS Project Manager will verify the provisions of the SWPPP are implemented, followed, and maintained. To fully complete this task, the PVAHCS Project Manager will follow existing contract provisions for the inspection and enforcement of SWPPPs at construction sites. The inspection procedure will include the following:

1. Monthly or bi-weekly inspections (as determined by the Construction Safety Committee) conducted on all sites requiring a SWPPP as defined above and be documented utilizing the forms in Appendix G.
2. Inspections will be conducted during all phases of construction: before land disturbance during construction activities and following active construction.
3. Based on inspection findings, all follow up actions will be performed (e.g. reinspection, enforcement action) and documented in the project record.


m. If a swale or retention basin is installed as part of the project, Engineering Projects Section is responsible for updating the as-built plans (Appendix A). The GEMS Program Manager will be responsible for updating the database (Appendix D).

5.6 Post-Construction Stormwater Management in New Development and Redevelopment

a. After construction activities are complete, PVAHCS will ensure that new development and redevelopment sites that disturbed one or more acres of land, including sites less than one acre that are a part of a common plan of development design, install, and maintain post-construction stormwater controls that reduce or eliminate the discharge of pollutants front the site, i.e. swale or retention basin.

b. An inventory of all post-construction structural storm water control measures installed and implemented at new development and redevelopment sites will be maintained in Appendix E of the Storm water Management Plan.

c. Master Specifications Guide, Section 01 57 19, Temporal Environmental Controls, also requires that upon completion of the project and after removal of all debris, rubbish, and temporary construction materials, the Contractor shall leave the construction area is a clean condition satisfactory to the VA. Cleaning shall include off the station disposal of all items and materials not required to be salvaged, as well as all debris and rubbish resulting from demolition and new work operations. Authorization of the Final Payment is dependent on this item.

d. Due to the finite footprint of this Campus, the Architectural/Engineering(A/E) design phase of future projects will be building in engineering methodology to enhance attainment of the 100 year 2-hr rain event.

5.7 Pollution Prevention and Good Housekeeping

a. An inventory of PVAHCS facilities and activities that may discharge to the MS4 is contained in Appendix D.

b. Inspections of operations that might impact the MS4 are performed and resulting documentation is maintained in Attachment F. Inspection frequency for the facilities and activities that may discharge to the MS4 is based on their risk to discharge pollutants such as floatables, trash and other pollutants. The inspection schedule may be modified based on inspection findings.

c. Storm water controls are developed and implemented for PVAHCS facilities and activities to reduce or eliminate discharges to the MS4 such as floatables, trash and other pollutants.
d. Pollution prevention and good housekeeping training is provided to affected staff annual using a variety of media.

SECTION 6: PROGRAM ASSESSMENT, RECORDKEEPING AND REPORTING

6.1 Program Assessment, Recordkeeping and Reporting

a. An annual stormwater management program evaluation will be performed and documented. Copies are maintained in Appendix K of the Stormwater Management Plan. As part of the program evaluation, BMPs will be evaluated to assess the progress towards achieving the measurable goals and objectives set for each control measure.

b. Records will be kept for a minimum of three years.

c. A stormwater report (NOI) will be submitted to ADEQ each year for the reporting period from July 1st through June 30th. The annual report is due September 30th each year for the reporting period. The annual report will contain:

1. The status of compliance with permit terms and conditions.
2. Updates regarding mapping requirements, including percent complete.
3. An evaluation of the appropriateness and efficacy of the selected BMPs.
4. An assessment of the progress towards achieving the measurable goals and objectives of each BMP control measure, including description of the targeted messages for each audience; method of distribution and dates of distribution, the methods used to evaluate the program and any changes to the program.
5. A description of the activities used to promote public participation.
6. A description of the activities related to implementation of the IDDE program including status and results of illicit discharge potential protocols.
7. Outfall screening and monitoring data collected during the reporting period and cumulative for the permit term.
8. The status of any plans or activities required due to a discharge entering a receiving water on either the impaired or non-attainment water fist.
9. Status of construction runoff management including number of project plans reviewed, number of inspections, and number of enforcement actions.
11. Status of the operation and maintenance programs.
12. Description of any changes in identified BMPs or measurable goals.
13. Any additional reporting requirements specified in the facility's permit.
14. Description of activities to be conducted during the next reporting cycle.
APPROVED:

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