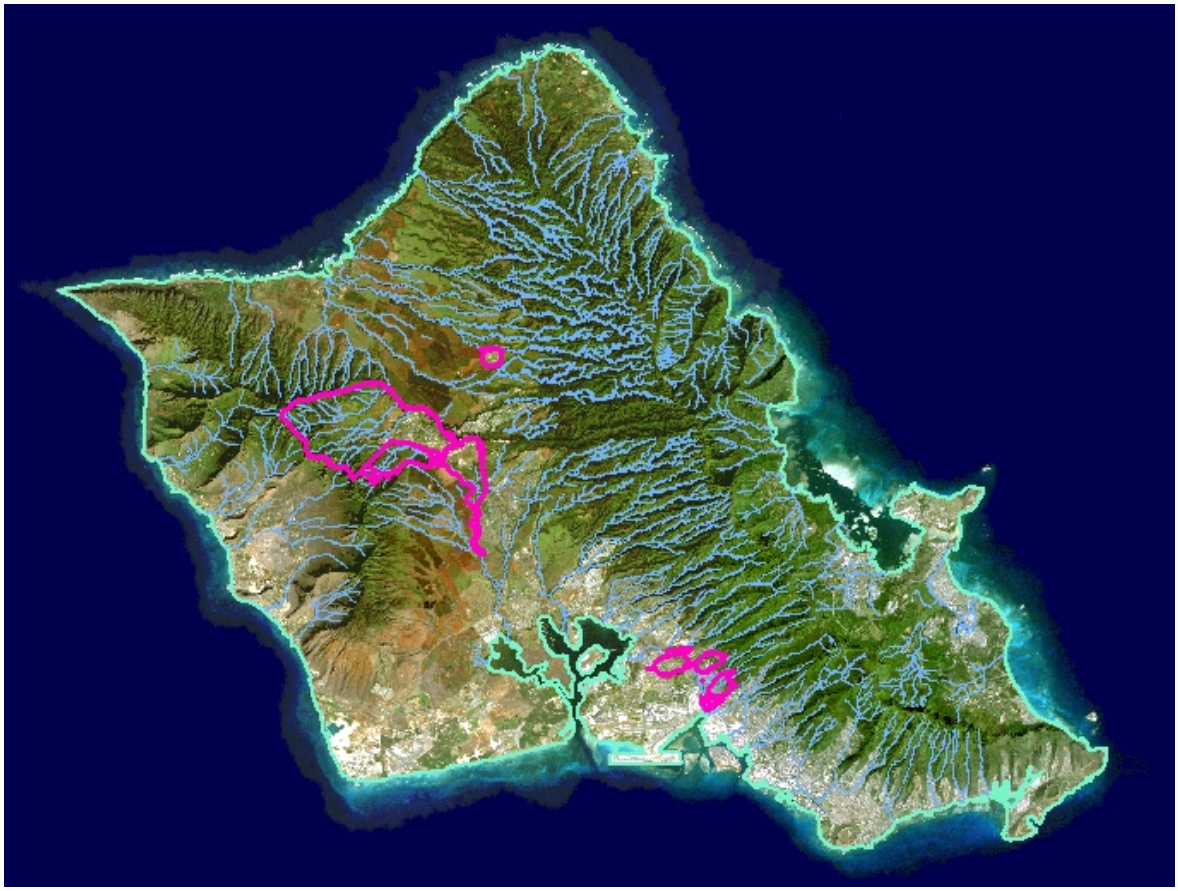
CALENDAR YEAR 2012 DRAFT ANNUAL REPORT
FOR U.S. ARMY GARRISON-HAWAII
STORM WATER MANAGEMENT PLAN
NPDES PERMIT NO. HI S000090

Schofield Barracks, Wheeler Army Airfield, Fort Shafter, Helemano Military Reservation, Aliamanu Military Reservation, Tripler Army Medical Center



Prepared By:

DPW Environmental Compliance Branch

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List of Acronyms

AHFH.....Army Hawaii Family Housing
AMR .....Aliamanu Military Reservation
BMP .....Best Management Practice
CS.....Construction Site Runoff Control
CY ..... Calendar Year
DMR ..... Discharge Monitoring Report
DoD..... Department of Defense
DPW..... Directorate of Public Works
ECATTS .....Environmental Compliance Assessment Training and Tracking System
ECO.....Environmental Compliance Officer
EPA .....Environmental Protection Agency
EQCC.....Environmental Quality Control Committee
FS ..... Fort Shafter
GIS .....Geographic Information System
HMR .....Helemano Military Reservation
HMMS ..... Hazardous Material Management System
ID…… ..... ….…Illicit Discharge Detection and Elimination
IPC ..... Island Palm Communities LLC
LID .....Low Impact Development
MS4.....Municipal Separate Storm Sewer System
MTV2.....Military Channel TV2
NEPA .....National Environmental Policy Act
NOI ..... Notice of Intent
NPDES..... National Pollution Discharge Elimination System
PC.....Post-Construction Runoff Control
PE.....Public Education and Outreach
PI ..... Public Involvement
PP .....Pollution Prevention
PSA .....Public Service Announcement
QA/QC .....Quality Assurance/Quality Control
R-1.....Disinfected Tertiary Treated Effluent
SB.....Schofield Barracks
SDOH.....State Department of Health
SPCC..... Spill Prevention Control and Countermeasure
SWMP.....Storm Water Management Plan
SWPCP .....Storm Water Pollution Control Plan
TAMC..... Tripler Army Medical Center
TMDL ..... Total Maximum Daily Load
USAG-HI…….U.S. Army Garrison-Hawaii
WAAF.....Wheeler Army Airfield

Summary

The following "Calendar Year 2012 Annual Report for "U.S. Army Garrison-Hawaii Storm Water Management Plan," Permit Number: HI S000090, fulfills the annual reporting requirements of the National Pollutant Discharge Elimination System (NPDES) Permit, issued by the Hawaii State Department of Health (SDOH). The U.S. Army Garrison-Hawaii (USAG-HI) is in compliance with its NPDES Permit and the Annual Report includes details of compliance with permit conditions; an assessment of the program goals and accomplishments that includes responsibility, schedule, reporting, and record keeping requirements for program activities to meet minimum control measures; modifications to the program's goals; a summary of storm water related activities planned for the following calendar year; major modifications made to the storm sewer system; and storm water monitoring results. For the purposes of this report, USAG-HI refers to the locations that comprise the permitted municipal separate storm sewer system (MS4): Schofield Barracks, Wheeler Army Airfield, Fort Shafter, Helemano Military Reservation, Aliamanu Military Reservation, and Tripler Army Medical Center. The Storm Water Management Plan (SWMP) was available for review and public comment from January 7, 2013 through January 27, 2013. Army personnel, their dependants, and civilian employees participated in developing, implementing, and reviewing the USAG-HI's SWMP.

1. Status of Compliance with Conditions of Permit

USAG-HI is in compliance with its NPDES Permit Number: HI S000090. This Annual Report meets the requirement of the NPDES permit. The five-year plan for 2007-2011 was submitted in February 2007 and every effort is being made to follow the requirements in that document. Discharge monitoring reports for calendar year (CY) 2012 are included as part of this submission in Tab 7.

2. Installation Information

NPDES Permit Number: HI 1121431 was issued on January 18, 2002 and expired August 31, 2006. A renewal application was submitted at that time and a NPDES Permit to discharge storm water associated with industrial activities and certain non-storm water discharges from USAG-HI's MS4 was granted February 7, 2007 (NPDES Permit Number: HI S000090). The permit expired August 31, 2011 and has since been extended until a new permit is issued by SDOH.

The USAG-HI NPDES Permit covers six locations. They are Schofield Barracks, Wheeler Army Airfield, Fort Shafter, Helemano Military Reservation, Aliamanu Military Reservation and Tripler Army Medical Center. The permit requires USAG-HI to annually submit a SWMP, also known as the Annual Report.

Geography

The total acreage within the six-installation boundaries is approximately 13,635 acres.

Schofield Barracks (SB) consists of 10,133 acres. See Figure 1. The cantonment area for SB is considerably less at 1,849 acres. All figures show the installation boundary in pink with the storm drain system (red) and streams (blue). The stream layer was obtained from the Hawaii State Geographic Information System (GIS) Program web site (http://www.hawaii.gov/dbedt/GIS/).

The majority of SB drains into Kaukonahua Stream. Kaukonahua Stream flows northward through the towns of Waialua and Haleiwa and eventually merges with Poamoho Stream. The streams turn into Kiikii Stream and drain into Waialua Bay. The southwest corner of SB and its southern property line drains into tributaries of Waikele Stream. Waikele Stream flows southward through the towns of Mililani and Waipahu and eventually drains into the West Lock of Pearl Harbor.

In 2005, approximately 1,292 acres were purchased on the southern boundary of SB. The additional land is being used for both training lands and military facilities. The Stryker Brigade Combat Team motor pool was constructed on a portion of the purchased land. The current size of land acquired on the southern boundary of SB is 1,402 acres.

Wheeler Army Airfield (WAAF) consists of 1,764 acres. See Figure 2. The majority of this installation drains into Waikele stream.

Fort Shafter (FS) consists of 577 acres. All of FS and FS Flats drain into the two tributaries of Moanalua stream, which pass through the installation. The tributaries within the FS installation are normally dry. See Figure 3.

Helemano Military Reservation (HMR) consists of approximately 282 acres. See Figure 4. The northern portion of HMR drains into tributaries of Paukauila Stream. However, the majority of the HMR area drains into a large sedimentation basin located on the southwest corner of the installation.

Aliamanu Military Reservation (AMR) consists of approximately 520 acres. See Figure 5. The majority of family housing within the crater drains into a Y-shaped storm drain channel, which connects to a tunnel through the south of the military reservation. Storm water flows through the tunnel down the slopes of Aliamanu Crater and into Salt Lake. The northeast portion of AMR is outside the crater and the area drains north towards Halawa Stream.

In 2003, approximately 69 acres under the ownership of the Coast Guard was acquired by U.S. Army. Island Palm Communities LLC (IPC), formerly Army Hawaii Family Housing (AHFH), is a public private venture between Lend Lease LLC and the U.S. Army. The U.S. Army is the minority partner in this venture. IPC is responsible to construct new family housing within the Coast Guard property. The Coast Guard is responsible to maintain the utilities and respond to spills until each utility is privatized.

Tripler Army Medical Center (TAMC) consists of approximately 359 acres. See Figure 6. The TAMC storm drains are located to the north, south and west of the installation boundaries. The western portion of TAMC eventually connects to the City and County of Honolulu storm drain system. The northern and southern portions of TAMC drain to tributaries of Moanalua Stream.

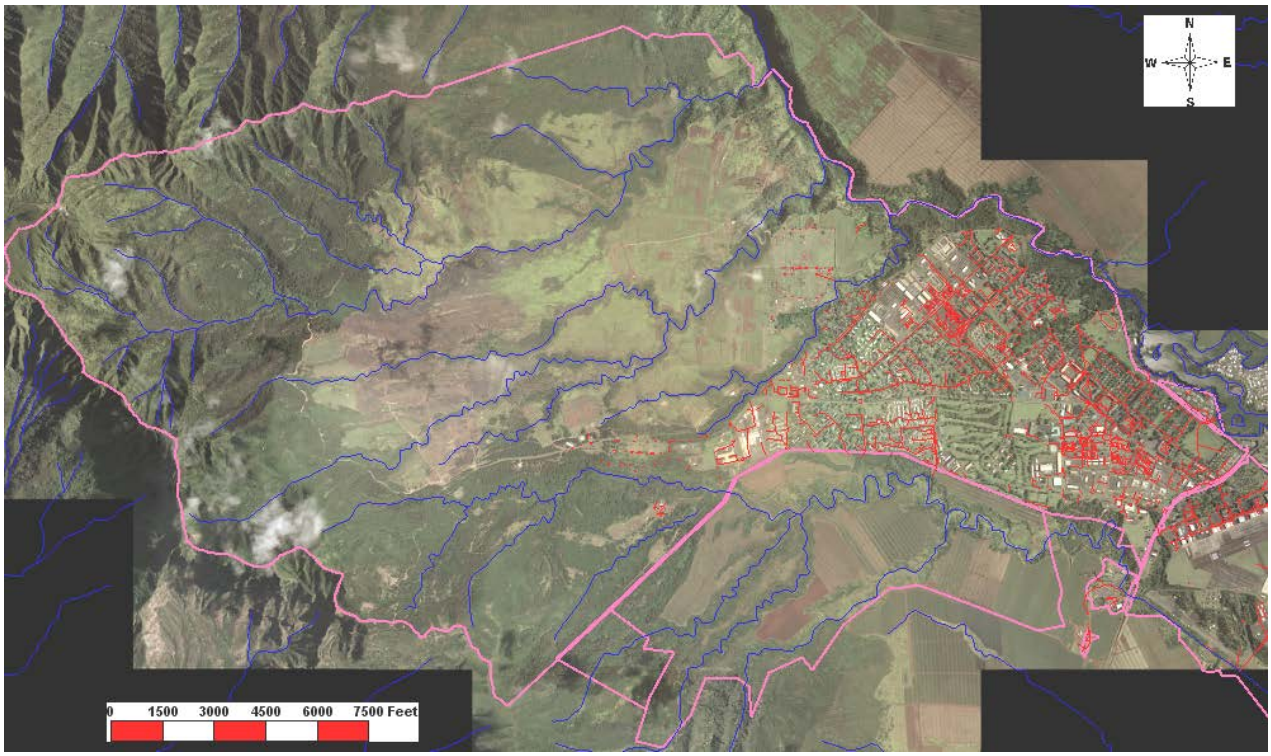

Figure 1: Schofield Barracks Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

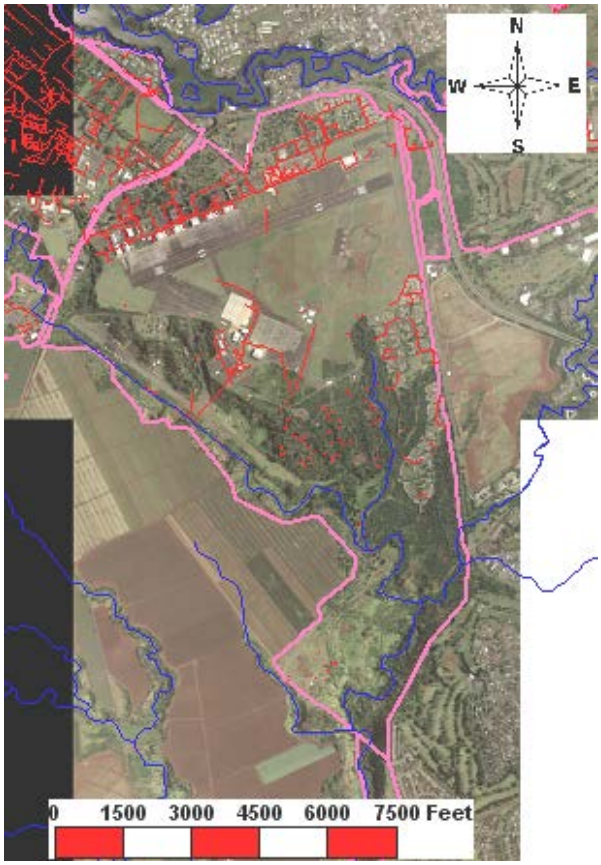

Figure 2: Wheeler Army Airfield Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

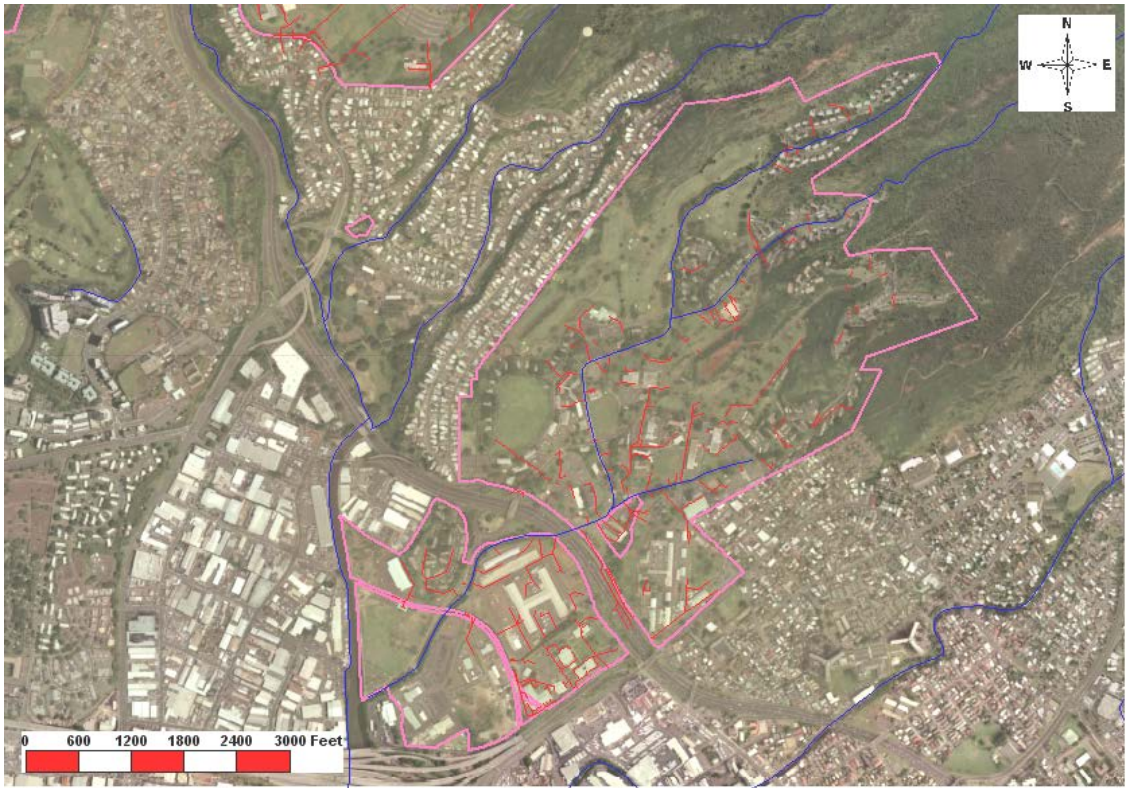

Figure 3: Fort Shafter Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

Figure 4: Helemano Military Reservation Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

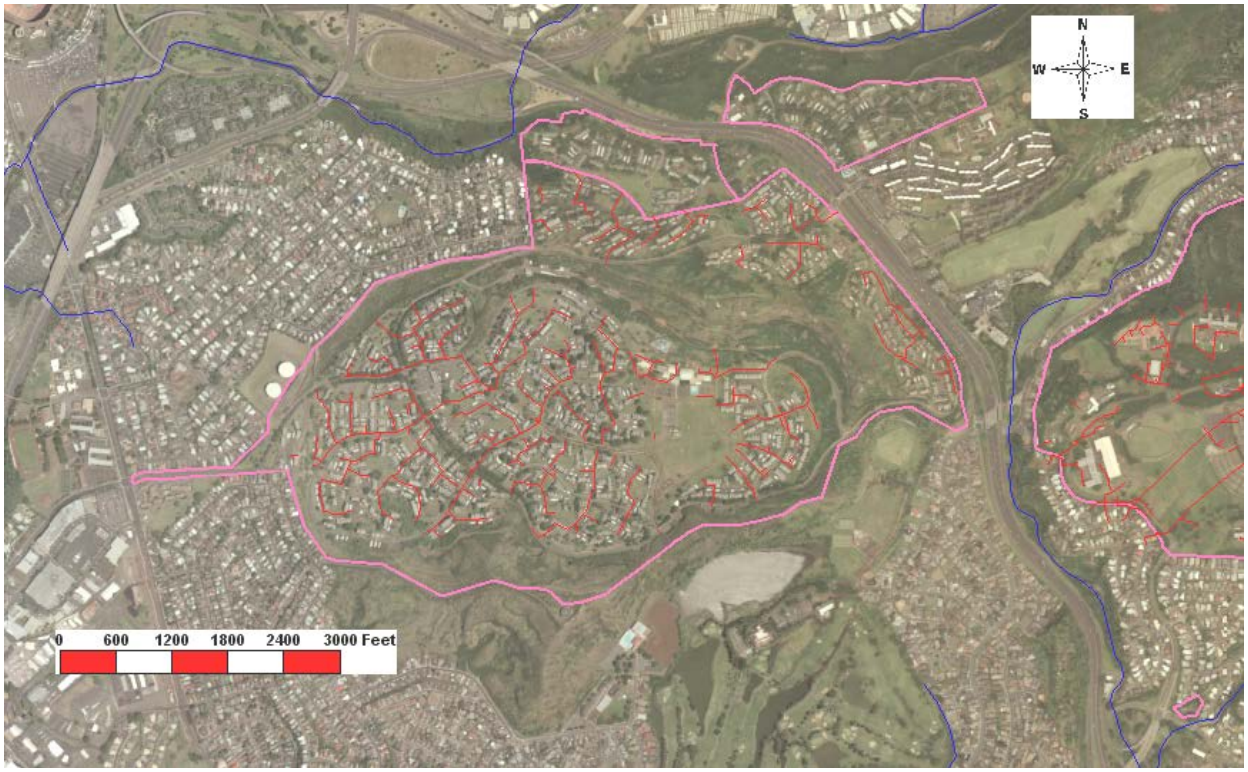

Figure 5: Aliamanu Military Reservation Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

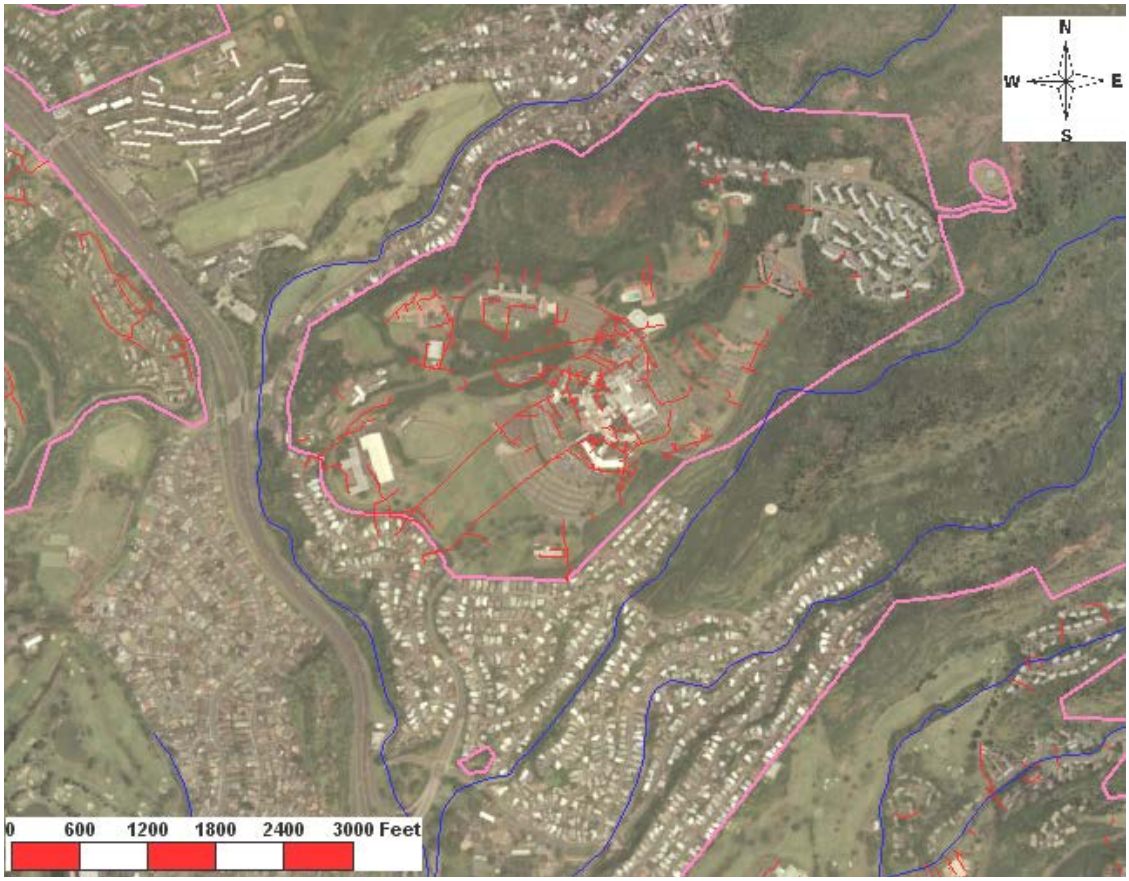

Figure 6: Tripler Army Medical Center Vicinity Map. Installation boundary (pink) with the State of Hawaii stream system (blue) and USAG-HI storm drain system (red) shown.

3. Assessment of the Storm Water Management Program

Table 1 summarizes USAG-HI's proposed Best Management Practice (BMP) activities to comply with the minimum control measures outlined in the NPDES Permit. Supporting BMP information, including BMP descriptions, measurable goals, responsible party, and implementation schedule are included in Section 3. If the BMP is highlighted in red, Directorate of Public Works (DPW) was not able to implement the BMP. If the BMP is highlighted in yellow, DPW chose not to implement the BMP and instead modified the BMP. If the BMP is highlighted in green, DPW was able to successfully implement the BMP.

Table 1. Summary of Minimum Control Measures

	CY 08	CY 09	CY 10	CY 11	CY 12
Public Education and Outreach					
PE-1: Army Personnel Storm Water Pollution Prevention Education					
PE-2: Public Service Announcements/Slides					
PE-3: DPW Staff and Other Agency Storm Water Pollution Prevention Education					
PE-4: Web-based Training for Service Contractors and Construction Contractors					Modified
Public Involvement					
PI-1: Storm Drain Stenciling or Marker					
PI-2: Education of Installation School Students			Modified		
PI-3: Public Involvement Project			Modified		
PI-4: Public Review of the SWMP			Added		
Illicit Discharge Detection and Elimination					
ID-1: Detect and Investigate Illicit Discharges					
ID-2: List of Non-Storm Water Discharges					
Construction Site Runoff Control					
CS-1: Adoption and Phase-in of City's BMP Manual for Construction Sites					
CS-2: Review of Storm Water BMP Construction Drawing and Specifications					
CS-3: Construction Site Inspections					
Post-Construction Runoff Control					
PC-1: Adoption and Phase-in of Post-Construction Storm Water Management Requirements			Modified		
PC-2: Review of Civil Design, Plans, and Specifications					
PC-3: Provide Funding for the Design & Construction of a Post-Construction Storm Water Management Demonstration Project	Removed	Removed	Modified		

Pollution Prevention					
PP-1: Develop Storm Water Database/GIS					
PP-2: Develop Street Sweeping Program					
PP-3: Develop a List of Potential Storm Water Pollutants for each Facility					
PP-4: Develop Spill Prevention and Response Procedures					
PP-5: Develop Policy for Reduction in Pesticide and Herbicide Application.					
PP-6: Develop Policy for Reduction in Fertilizer Application on Golf Courses.					
PP-7: Perform Facility Inspections					
PP-8: Develop Storm Water Monitoring Plan					
PP-9: Develop and Implement a Maintenance Program	Added				

The following BMP activities will be continued by DPW to comply with the NPDES permit requirements. As part of the annual reporting process, the BMPs will be evaluated to ensure appropriateness and effectiveness of each BMP and to seek funding within USAG-HI.

3.1. Public Education and Outreach (PE)

The NPDES permit requires USAG-HI to develop and implement a public education program to distribute materials to Army personnel and dependents emphasizing the following:

- Impact of storm water discharges on water bodies
- Hazards associated with illicit discharges
- Measures Army personnel and dependents can take to reduce pollutants in storm water runoff, including, but not limited to, minimizing fertilizer application and practicing proper storage and disposal of chemicals and wastes

In order to achieve the above objectives, the following BMPs are proposed:

- PE-1: Army Personnel Storm Water Pollution Prevention Education
- PE-2: Public Service Announcements/Slides
- PE-3: DPW Staff and Other Agency Storm Water Pollution Prevention Education
- PE-4: Web-based Training for Service Contractors and Construction Contractors

3.1.1. PE-1: Army Personnel Storm Water Pollution Prevention Education

3.1.1.1. BMP Description: DPW conducts regular "Environmental Compliance Officer" (ECO) training for military, civilian, and contract personnel that work on USAG-HI facilities. The ECO course trains selected personnel for ECO duties that include management requirements to ensure environmental protection and includes the following topics: storm water BMPs, illicit discharge prevention and proper storage and disposal of hazardous materials. The existing program conceptually is to "train the trainer," and ECO responsibilities include providing quarterly training to their co-workers on environmental compliance topics.

ECO training is required when there is a change in personnel. The ECO is required to complete a 24-hour certification course and subsequent 8-hour refresher certification course once annually. ECO training is provided from battalion level to company level personnel.

During CY 2012, the 24-hour ECO course had 191 graduates, the 8-hour ECO refresher course had 158 graduates, and the Senior Leaders course had 86 graduates. The ECO course description is provided as Tab 1-1, a selection of training material is provided as Tab 1-2, and the ECO inspection checklist section related to storm water pollution prevention BMPs is provided as Tab 1-3.

3.1.1.2. 2012 Goals. DPW proposed no change to the existing ECO training practice. As regulations change and/or final rules issued, the curriculum will be revised accordingly. Success of this BMP goal would be measured by subsequent ECO inspection results. DPW proposed to maintain the Clean Water Program webpage on the sustainability website that will be updated when regulations change and/or new permits, plans, and resources are available. DPW proposed to disseminate pollution prevention brochures and educational material at USAG-HI's 2012 Earth Day Celebration and similar events. DPW proposed to create additional education materials detailing pollution prevention BMPs related to installation activities. DPW proposed to continue to participate in EQCC meetings and the quarterly fuel handler course.

3.1.1.3. 2012 Accomplishments. ECO training course materials were updated and additional slides related to storm water management BMPs and pollution prevention along with a DVD entitled, "Stormwater Pollution Prevention: A Drop in the Bucket," produced by Excal Visual LLP, were included in training courses.

DPW maintained and updated the Clean Water Program webpage on the sustainability website (http://www.garrison.hawaii.army.mil/sustainability/CleanWater.aspx) that included pollution prevention training information, permit required policy documents, and public education resources.

The USAG-HI Clean Water Program brochure was disseminated at USAG-HI's Army families' event, "Learn and Live," held on March 13 at a community center on SB, USAG-HI's 2012 Fun Fest and Earth Day Festival, held on April 7 at a large, central field on SB, USAG-HI's 2012 Spring Fest and Earth Day Festival held on April 28 at a large, central field on FS Flats and at various meetings with Army and civilian personnel throughout the year. Additionally, a coloring activity to educate on pollution prevention and a public survey designed to assess Army personnel's general understanding of the storm sewer system; pollution issues related to storm water management, water quality, and behaviors; and how to best communicate pollution prevention messages to USAG-HI military personnel and family were disseminated at the festivals in exchange for a screen-printed T-shirt that provided a pollution prevention message, photographs provided as Tab 1-4.

USAG-HI published various articles related to storm water management and post-construction BMPs in installation publications available to Army personnel and dependents and civilian personnel. Articles included a description and photo from the public involvement event held on April 19, 2012 that engaged soldiers from the 70th Engineer Company in a clean-up, weeding, and mulch activity for a bioretention planter that treats runoff from a parking lot on SB; construction of various rainwater harvesting projects at USAG-HI; and construction of an outdoor classroom at

Shafter Elementary School, located on FS that included a rainwater harvesting and drip irrigation system, rain garden with native plants, planter benches, and a shade structure. Copies of published articles are provided as Tab 1-5.

Additionally, a permanent educational sign was designed for the rainwater harvesting project located on SB at the Oahu Army Natural Resource Program baseyard on SB, provided as Tab 1-6. The sign will be installed in early 2013.

In conjunction with the various Earth Day celebrations, students from Hale Kula Elementary School provided tours of the outdoor classroom to the local community on April 18 and April 25, see Section 3.2.2. below for more information. Through the various rainwater harvesting projects, Army personnel and tenants could learn about the importance of post-construction storm water management BMPs for preventing pollution and conserving water and energy.

DPW created a fuel operations slide presentation to describe installation fueling requirements and spill prevention and response BMPs, provided as Tab 1-7, and presented the slides at the quarterly fuel handler course on February 24, May 22, and September 11.

Lastly, DPW continued to participate in the quarterly EQCC that included Army and civilian personnel, major tenants, and the Garrison Commander to update Army personnel on storm water management related topics.

3.1.1.4. 2013 Goals. DPW proposes no change to the existing ECO training practice. As regulations change and/or final rules issued, the curriculum will be revised accordingly. Success of this BMP goal will be measured by subsequent ECO inspection results. DPW proposes to maintain the Clean Water Program webpage on the sustainability website that will be updated when regulations change and/or new permits, plans, and resources are available. DPW proposes to disseminate pollution prevention brochures and educational material at USAG-HI's 2013 Earth Day Celebration and similar events. DPW proposes to create additional education materials detailing pollution prevention BMPs related to installation activities. DPW proposes to continue to participate in EQCC meetings and the quarterly fuel handler course as requested.

3.1.1.5. Responsibility. DPW is responsible for providing ECO training with input from subject matter experts on storm water and spill prevention, control, and countermeasures. DPW shall maintain the USAG-HI sustainability website. DPW shall create and disseminate public education material related to pollution prevention BMPs. DPW shall continue to participate in EQCC meetings and the quarterly fuel handler course as requested.

3.1.1.6. Schedule. DPW will conduct monthly ECO training and shall update the curriculum as needed. DPW shall update the Clean Water Program webpage as needed. DPW shall participate in quarterly EQCC meetings and fuel handler courses.

3.1.1.7. Reporting and Record Keeping. DPW ECO Chief Inspector maintains the ECO course offering, course roster and dates of attendance. DPW Clean Water Program maintains records of public education related activities and resources.

3.1.2 PE-2: Public Service Announcements/Slides

3.1.2.1. BMP Description. DPW provides public **s**ervice announcements (PSAs) for storm water management related topics and pollution prevention on the military channel (MTV2). MTV2 reaches all USAG-HI installations. The target audience is military personnel and dependents that live and/or work on post.

3.1.2.2. 2012 Goals. DPW proposed no change in the timing to air the video "After the Storm." DPW proposed to conduct a public survey to measure whether Army personnel and dependents are aware of storm water runoff and pollution prevention related issues and how best to communicate pollution prevention awareness messages. DPW proposed to continue to participate in upcoming technical conferences on storm water related topics offered by Society of American Military Engineers, American Society of Civil Engineers, Army Corps of Engineers, International Erosion Control Association, and StormCon and to communicate lessons learned.

3.1.2.3. 2012 Accomplishments. MTV2 continued to air the video "After the Storm," co-produced by EPA and the Weather Channel daily at 0808, 1230 and 1611. The video provides an overview of storm water management pollution prevention.

DPW finalized a public survey and conducted the survey on April 7 and April 28 at the various Earth Day Festivals. Survey results were tabulated using the online resource "SurveyMonkey." The survey and a summary of the results are provided as Tab 1-8.

DPW staff attended various technical sessions and conferences including the International Erosion Control Association Conference held on February 26-29, StormCon held on August 21-24, an LID Seminar coordinated by Half Moon LLC held on January 20 to present on LID and erosion and sediment control BMPs, and the 2013 HWEA Pre-Conference Stormwater Technical Presentation/Discussion to be held on February 4 to present on the USAG-HI storm water management program, slides are provided as Tab 1-9.

3.1.2.4. 2013 Goals. There is no proposed change in the timing to air the video "After the Storm." DPW proposes to modify and conduct the public survey to continue to measure whether Army personnel and dependents are aware of storm water runoff and pollution prevention related issues and how best to communicate pollution prevention awareness messages. DPW proposes to continue to participate in upcoming technical conferences on storm water related topics offered by Society of American Military Engineers, American Society of Civil Engineers, Army Corps of Engineers, International Erosion Control Association, and StormCon and to communicate lessons learned.

3.1.2.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to conduct the public survey, determine the approximate timing and content to be aired as part of the PSAs, and to prioritize staff attendance at technical conferences.

3.1.2.6. Schedule. There are no proposed schedule changes to airing of the PSA "After the Storm." The public survey will be conducted during outreach events and festivals throughout the year. Survey results will be tabulated subsequent to conducting the survey. DPW staff will attend technical conferences as funding is available and will report lessons learned to Army personnel and dependents and civilian personnel in a timely manner thereafter.

3.1.2.7. Reporting and Record Keeping. The request to air new videos will be maintained by the DPW Clean Water Program Manager. Public survey results data will be maintained by the DPW Clean Water Program Manager as well as documentation of lessons learned from technical conferences.

3.1.3. PE-3: DPW Staff and Other Agency Storm Water Pollution Prevention Education

3.1.3.1. BMP Description: DPW Clean Water Program determined that DPW staff and construction contractors working on USAG-HI installations need to be familiar with NPDES permit requirements for storm water management and pollution prevention.

3.1.3.2. 2012 Goals. DPW proposed to continue to provide training through ECATTS, the ECO program, meetings, and conferences and to track training conducted by IPC for its construction contractors and operations and maintenance staff. DPW proposed to target additional educational resources based on CY 2011 construction inspection results and to measure success through subsequent inspections.

3.1.3.3. 2012 Accomplishments. The following training was accomplished:

- Online training was conducted with Environmental Compliance Assessment Training and Tracking System (ECATTS) for Army Corps of Engineers construction contractors. ECATTS has been transferred to the USAG-HI Sustainability and Environmental Management Website and will likely be used as a resource rather than a requirement for construction contractors since construction permits require training on the Site Specific Construction BMP plan
- ECO training that included pollution prevention education was attended by various DPW Divisions, including DPW Operations and Maintenance Division personnel
- DPW Clean Water Program attended various pre-construction and project development meetings to educate on sediment and erosion control BMPs and NPDES permit compliance
- IPC contractor training included the provision of information on construction BMPs to contractors during the Lend Lease LLC monthly Owners' Meetings, and site-specific production meetings. Also BMP training was re-enforced via toolbox talks, weekly QC inspections, and associated reports to Environmental Point of Contact. IPC Operations and Maintenance personnel training included environmental management and pollution prevention BMPs, pest management practices, spill response, yard care practices, fleet vehicle washing practices, and good housekeeping practices
- IPC contractor and subcontractor training was conducted by DPW Clean Water Program staff on April 27, April 30, and May 24 and to troop contractors of the 84th Engineer Battalion on August 2 to educate on NPDES permit requirements and erosion and sediment control BMPs, sign-in sheets and slides are provided in Tab 1-11
- IPC Operations and Maintenance personnel training included environmental management and pollution prevention, spill response, yard care practices including watering, fleet vehicle washing practices, and good housekeeping practices. This also included resident education outreach
- DPW Clean Water Program communicated CY 2011 construction inspection results and prepared to communicate CY 2012 construction inspection results
- DPW Clean Water Program coordinated a site visit for the local engineering firm, Group 70, and DPW Master Planning, Environmental, and Engineering staff on November 5 to USAG-HI constructed projects that incorporated post-construction storm water management

permanent BMPs and LID technologies. A spreadsheet of projects that include post-construction storm water management BMPs installed, under construction, planned, and designed and several project descriptions were produced for the tour, provided as Tab 1-11. Subsequent to the tour, the handout was sent to several staff of the Honolulu District of the Army Corps of Engineers

3.1.3.4. 2013 Goals. DPW proposes to continue to provide construction permit compliance, erosion and sediment control, and post-construction storm water management training as needed and to track training by IPC for construction contractors and operations and maintenance staff.

3.1.3.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to assess the type and frequency of training provided to the various DPW Divisions and contractors working on USAG-HI installations.

3.1.3.6. Schedule. DPW proposes to participate in meetings, conferences, and training events and to assess the type and frequency of training provided to various DPW Divisions and contractors working on USAG-HI installations throughout CY 2013.

3.1.3.7. Reporting and Record Keeping. Records will be maintained as training is conducted.

3.1.4. PE-4: Web-based Training for Service Contractors and Construction Contractors

3.1.4.1. BMP Description: DPW proposed to implement web-based training for environmental compliance. The initial target audiences were service contractors and construction contractors performing work on USAG-HI installations. The goal was to provide cost-free environmental compliance training to any field manager doing work on USAG-HI installations. The BMP has been removed since USAG-HI will not be funding the ECATTS contract. The training information from ECATTS has been uploaded and is available on the USAG-HI Sustainability and Environmental Management Website as a resource for construction contractors. DPW Clean Water Program staff will conduct training if requested to do so or if a need is identified and will ensure construction contractors are providing training in compliance with the projects' NPDES permit during regular, quarterly construction inspections.

3.1.4.2. 2012 Goals. USAG-HI proposed to possibly discontinue funding the ECATTS contract and to provide a similar training resource through in-house Environmental Management Systems for contractors working on USAG-HI. Construction inspection results from CY 2011 would inform the development of additional training resources and success will be measured in subsequent inspections. DPW would evaluate whether additional contractors, such as troop contractor personnel and support staff, should complete training and if so, DPW would communicate the requirement.

3.1.4.3. 2012 Accomplishments. The ECATTS contract was cancelled and the information was uploaded and made available on the USAG-HI Sustainability and Environmental Management Website. Army Corps of Engineers contractors and subcontractors, working on USAG-HI construction projects, have completed environmental training online and will subsequently be responsible to provide contractor training. Training completion was verified during DPW Clean Water Program staff's quarterly construction site inspections by requesting to view training certificates and sign-in sheets for construction contractors. Additional erosion and sediment

control BMP slides were prepared (Tab 1-10) to educate on construction site pollution prevention BMPs and permit requirements and presentations were made for IPC contractors and subcontractors (April 27, April 30, and May 4) and troop construction staff (August 2).

3.1.4.4. 2013 Goals. USAG-HI will continue to maintain training information on the USAG-HI Sustainability and Environmental Management Website as a resource for construction contractors and to conduct training as requested or as needed. Construction inspection results from CY 2012 will inform the development of additional training resources and success will be measured in subsequent inspections. DPW will ensure that contractor training in accordance with NPDES permits for construction activity is conducted through regular, quarterly construction inspections.

3.1.4.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to ensure that training in accordance with NPDES permits for construction activity is completed.

3.1.4.6. Schedule. DPW proposes to continue to provide training as requested or as needed, to provide updates as needed, and to ensure that training in accordance with NPDES permits for construction activity is completed.

3.1.4.7. Reporting and Record Keeping. The DPW Clean Water Program Manager will retain records of training through construction site inspection reports.

3.2. Public Involvement (PI)

The NPDES permit requires USAG-HI to include Army personnel and dependents in developing, implementing, and reviewing the Storm Water Management Program.

In order to achieve the above objectives, the following BMPs are proposed:

- PI-1: Storm Drain Stenciling
- PI-2: Education of Elementary and Middle School Students
- PI-3: Public Involvement Project
- PI-4: Public Review of the SWMP

3.2.1. PI-1: Storm Drain Stenciling/Marker

3.2.1.1 BMP Description. Stencil storm drain inlets or install semi-permanent storm drain markers at curb inlets on USAG-HI installations to educate on pollution prevention.

3.2.1.2. 2012 Goals. DPW proposed to continue to conduct site visits and utilize quarterly ECO inspections to identify the need for additional storm drain markers. DPW proposed to develop a storm drain marker event that could be used to educate Army personnel and dependents on pollution prevention.

3.2.1.3. 2012 Accomplishments. In CY 2012, DPW staff identified the need for storm drain markers in its industrial facilities during quarterly ECO inspections and site visits and emplaced markers. Additionally, DPW Clean Water staff provided comments on new construction projects requiring storm drain stencils. On April 18, DPW Clean Water staff conducted a storm drain marking outreach event with active-duty soldiers to emplace markers in several family housing neighborhoods located on FS, event handout is provided as Tab 2-1.

Figure 7. Semi-permanent storm drain marker located at Building 105, Wheeler Army Airfield.
Figure 8. Permanent storm drain marker located at the Kalakaua Neighborhood, Schofield Barracks.

3.2.1.4. 2013 Goals. DPW proposes to continue to conduct site visits and utilize quarterly ECO inspections to identify the need for additional storm drain markers. DPW proposes to conduct a storm drain marker event to educate Army personnel and dependents on pollution prevention.

3.2.1.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to provide supplies and assist in the installation of the storm drain marker. The DPW Clean Water Program Manager will keep records of the dates and location where the markers are installed.

3.2.1.6. Schedule. In CY 2013, as new storm drains are constructed, new curb inlets will be imprinted with the "Dump No Waste" drain markers as required in the standard construction specifications. Additionally, quarterly ECO inspections shall identify storm drains that require a marker, and the DPW Clean Water Program Manager will maintain a record of storm drains needing markers. DPW proposes to conduct a storm drain marker event to educate Army personnel and dependents on pollution prevention.

3.2.1.7. Reporting and Record Keeping. DPW Clean Water Program Manager shall maintain a record of storm drain markers required and emplaced as identified through site visits and quarterly ECO inspections.

3.2.2. PI-2: Education of Installation School Students

3.2.2.1. BMP Description. Develop an annual storm water education program with the elementary and middle schools located on FS, WAAF, and SB.

3.2.2.2. 2012 Goals. DPW proposed to present the lesson plan and rainwater harvesting worksheet to additional elementary and middle school classes. DPW proposed to develop a water quality improvement event targeted at middle school students to educate on pollution prevention and watershed management.

3.2.2.3. 2012 Accomplishments. DPW Clean Water Program staff presented the lesson plan, provided as Tab 2-2, on the topic of water and energy with a focus on sustainable storm water management and pollution prevention, and the rainwater harvesting system calculation worksheet to five fifth grade classes at Hale Kula Elementary School on SB on May 7 and May 8. DPW

Clean Water Program and Lend Lease staff participated in the Hale Kula Elementary School fifth grade garden club meeting on January 25 to educate on the outdoor classroom project.

DPW Clean Water Program staff partnered with Lend Lease staff to assist the Hale Kula Elementary School fifth grade students in conducting tours of the outdoor classroom for both the Army and local community on April 18 and April 25. Tour participants learned about the classroom's rainwater harvesting system, rain garden construction, native plants, and compost soil mix and received a handout to further describe the evolution of the project. The tour invitation, description, handout, and sign-in sheets are provided as Tab 2-3.

3.2.2.4. 2013 Goals. DPW proposes to present the lesson plan and rainwater harvesting worksheet to additional elementary and middle school classes and to assist with tours of the outdoor classroom.

3.2.2.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to provide any needed project funding and to continue to oversee classroom presentations and public involvement events for students.

3.2.2.6. Schedule. DPW proposes to contact schools in the late winter/early spring to schedule classroom presentations and help to coordinate outdoor classroom tours.

3.2.2.7. Reporting and Record Keeping. DPW Clean Water Program Manager shall maintain records of classroom presentations and outreach events.

3.2.3. PI-3: Public Involvement Project

3.2.3.1. BMP Description. Develop an annual public involvement project to involve Army personnel and dependents in storm water management and pollution prevention activities.

3.2.3.2. 2012 Goals. DPW proposed to develop and assist with funding a public involvement project in CY 2012 and had begun work with IPC and Lend Lease staff to collaborate on an outdoor classroom project to demonstrate storm water management and pollution prevention techniques through rainwater harvesting systems, LID techniques, and native plant gardens at Shafter Elementary School.

3.2.3.3. 2012 Accomplishments. The Shafter Elementary School outdoor classroom project was completed in September, project proposal, plan, and photos of construction are provided as Tab 2-4. The project, constructed by Lend Lease staff and subcontractors, allowed for public involvement in the construction of a sustainable post-construction storm water management demonstration project that will serve to continually educate school students, families, and staff on pollution prevention techniques, press release provided in Tab 1-5. An opening ceremony is planned for early 2013 to further educate the school and larger community on the project.

In CY 2010, DPW funded a rainwater harvesting project to be located at the Oahu Army Natural Resource Program facility located on SB. The project enlisted the support of a local Boy Scout troop to help fund and construct the first phase of the project completed in CY 2010: installing the irrigation system to ultimately be supplied by harvested rainwater. Through project meetings DPW staff had the opportunity to educate on storm water management: post-construction BMPs

and pollution prevention and involve Army personnel and dependents in the USAG-HI storm water management program. In CY 2012, the rainwater harvesting project was completed. The second phase of the project included sealing the storage tank, connecting the roof gutter, tank, and irrigation delivery system and equipment wash piping, installing the rain chains, solar panels, and solar-powered pump system. An educational sign has been designed and will be installed in early 2013, provided as Tab 1-6.

On April 19, DPW Clean Water Program staff enlisted the help of the 70th Engineer Company in a clean-up, weeding, and mulching project to maintain a bioretention facility treating runoff from a parking lot located on SB, article provided in Tab 1-5. The project description, sign-in, and activity photos are provided as Tab 2-5.

In October 2011, DPW, IPC, and Lend Lease staff completed the outdoor classroom project at Hale Kula Elementary School. In October 2012, DPW partnered with a local private corporation, Weston Solutions, Inc., and Hale Kula Elementary School staff to install a permeable paving project to serve as the plaza area for the existing outdoor classroom, photos of the installation are provided as Tab 2-6. Additionally, volunteers from DPW Environmental, Weston Solutions, Inc., and Hale Kula Elementary School participated in a public involvement event on October 13 that included amending the soil in the fourth grade native plant garden and installing a trellis for climbing plants nearby the outdoor classroom. During the event participants learned about the benefits of the outdoor classroom project from DPW Clean Water Program staff.

3.2.3.4. 2013 Goals. DPW proposes to develop and assist with funding a public involvement project in CY 2013 and has begun work with IPC and Lend Lease staff to collaborate on an opening ceremony for the Shafter Elementary School outdoor classroom project.

3.2.3.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to oversee and fund the public involvement project.

3.2.3.6. Schedule. The public involvement project for CY 2013 will likely occur in the early part of the New Year and in the spring, to coincide with Earth Day. Project planning meetings will be conducted regularly throughout the year leading up to the project event day and will include DPW staff, IPC staff, and elementary school staff.

3.2.3.7. Reporting and Record Keeping. DPW Clean Water Program staff will maintain a record of public involvement project meetings and activities.

PI-4: Public Review of the SWMP

3.2.4.1. BMP Description. Include Army personnel and dependents in reviewing the SWMP.

3.2.4.2. 2012 Goals. DPW proposed to continue to assess the success of utilizing the DPW Clean Water Program website for posting a draft Annual Report and comment form in including Army personnel and dependents and civilian personnel in reviewing the SWMP. DPW proposed to continue to include Army personnel and dependents and civilian personnel in reviewing the SWMP.

3.2.4.3. 2012 Accomplishments. DPW Clean Water Program staff made a draft of the Annual Report available for public review and comment by posting a link to the report and providing an

electronic comment form on the DPW Clean Water Program webpage from January 7, 2013 through January 27, 2013. In addition, outreach for the comment period was made through the USAG-HI Weekly Bulletin that is delivered to major commands, tenant and service organizations, and other federal offices for further distribution and posting within their organizations, MTV2, IPC website, and various advisory committee email announcements, as provided in Tab 2-7. Comments were collected and incorporated into this report.

3.2.4.4. 2013 Goals. DPW proposes to continue to include Army personnel and dependents and civilian personnel in reviewing the SWMP.

3.2.4.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to include Army personnel and dependents in reviewing the SWMP.

3.2.4.6. Schedule. DPW shall publish a draft Annual Report available for comment for three weeks of comment period, at a minimum. DPW shall communicate the need for Army personnel and dependents and civilian personnel to provide feedback on the SWMP throughout the year as needed.

3.2.4.7. Reporting and Record Keeping. DPW Clean Water Program Manager will maintain a record of public comments.

3.3. Illicit Discharge Detection and Elimination (ID)

The NPDES permit requires USAG-HI to develop, implement, and enforce a program to detect and eliminate illicit discharges that, at a minimum, includes the following:

- Establishment of installation-wide instructions, directive, or other regulatory mechanism, including enforcement procedures and actions, that prohibit non-storm water discharges into the USAG-HI MS4
- Procedures to detect and eliminate illicit discharges
- Compilation of a list of non-storm water discharges or flows specified in part A.3 of the NPDES permit that are considered to be significant contributors of pollutants to the MS4 and measures to be taken to prevent these discharges, or reduce the amount of pollutants in these discharges

The following BMPs are proposed to meet the objectives of the illicit discharge detection and elimination control measure:

- ID-1: Detect and investigate illicit discharges
- ID-2: Develop a list of non-storm water discharges

3.3.1. ID-1: Detect and Investigate Illicit Discharges

3.3.1.1. BMP Description. Perform dry weather outlet inspections as a method to detect illicit discharges. USAG-HI has used its existing GIS to identify the number of storm water outlets that discharge to streams. At this time, we have identified a total of 360 discharge points and/or outfalls, including both industrial and residential areas.

3.3.1.2. 2012 Goals. DPW proposed to conduct additional dry weather outfall inspections to identify illicit discharges and will fund any needed corrections.

3.3.1.3. 2012 Accomplishments. DPW funded an illicit discharge survey that was conducted between the periods 4 September – 19 September 2012 by a contractor. During the survey 229 outfalls were inspected. The survey was conducted in accordance with established references from EPA and SDOH. The purpose of the survey was to identify non-storm water discharges at high priority areas. There was a focus on wash rack oil water separators and diverter valves and all findings have been addressed and corrections are ongoing.

DPW has "Enforcement Procedures and Actions for the Illicit Discharge Detection Elimination Program" policy document, as provided in Tab 3-1, which included an overview of NPDES permit requirements and outlined the enforcement procedure, and record keeping practices related to the program.

Figure 9. Dry weather flow inspection.

3.3.1.4. 2013 Goals. DPW will complete the mitigation measures identified in the illicit discharge survey. Additional outlet inspections will be performed as part of the IDDE program. DPW proposes to update the "Enforcement Procedures and Actions for the Illicit Discharge Detection Elimination Program" policy document.

3.3.1.5. Responsibility. The DPW Clean Water Program Manager is responsible to continue to fund contractor support of this activity. It is the responsibility of the tenant to remove the illicit discharges with assistance from DPW as needed.

3.3.1.6. Schedule. Dry weather outfall inspections will be regularly conducted and documented throughout CY 2013. DPW shall correct any issues of non-compliance per the "Enforcement Procedures and Actions for the Illicit Discharge Detection Elimination Program" in a timely manner.

3.3.1.7. Reporting and Record Keeping. Dry weather outfall inspection records are maintained by the DPW Clean Water Program Manager.

3.3.2. ID-2: List of Non-Storm Water Discharges

3.3.2.1. BMP Description. The USAG-HI NPDES permit requires the permittee to develop a list of potential sources of non-storm water discharges.

3.3.2.2. 2012 Goals. DPW proposed to continue to maintain a list of potential sources of non-storm water discharges and mitigation BMPs and to develop public education materials and events to communicate required BMPs.

3.3.2.3. 2012 Accomplishments. DPW performed dry weather outfall inspections, funded an illicit discharge detection survey, and is in the process of correcting identified issues. Additionally, DPW maintained a list of non-storm water discharges and mitigation BMPs, provided as Tab 3-2.

3.3.2.4. 2013 Goals. DPW proposes to continue to maintain a list of potential sources of non-storm water discharges and mitigation BMPs and to develop public education materials and events to communicate required BMPs.

3.3.2.5. Responsibility. The DPW Clean Water Program Manager will be responsible for maintaining a list of potential sources of non-storm water discharges and mitigation BMPs and for public education materials and events.

3.3.2.6. Schedule. The annual work plan will be updated if any potential sources of non-storm water discharges due to infrastructure design and failure issues risk a violation of the permit.

3.3.2.7. Reporting and Record Keeping. The list of non-storm water discharge sources will be maintained by the DPW Clean Water Program Manager, as well as a list of annual work plan projects required to correct issues as needed and public education materials and events.

3.4. Construction Site Runoff Control (CS)

The NPDES permit requires USAG-HI to develop, implement, and enforce a program to reduce pollutants in storm water runoff from construction activities disturbing one (1) acre or more, including construction activities less than one (1) acre that are part of a larger common plan of development or sale that would disturb one (1) acre or more, that, at a minimum, includes the following:

- Establishment of installation-wide instructions, directive, or other regulatory mechanism, including enforcement procedures and actions, that require erosion and sediment controls
- Requirements for construction site operators to implement appropriate erosion and sediment control BMPs
- Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality
- Procedures for site plan review, which incorporate consideration of potential water quality impacts
- Procedures for receipt and consideration of information submitted by the public
- Procedures for site inspection and enforcement of control measures

To meet the objective of the construction site runoff control program, the following BMPs are proposed:

- CS-1: Adoption and Phase in of City's Storm Water Design Guidance
- CS-2: Review of Storm Water BMP Construction Drawings

- CS-3: Construction Site Inspections

3.4.1. CS-1: Adoption and Phase-in of City's BMP Manual for Construction Sites

3.4.1.1. BMP Description. The U.S. Army has a variety of design and construction standards and guidelines, however USAG-HI uses existing design and construction standards issued by the City and County of Honolulu for projects in Hawaii.

3.4.1.2. 2012 Goals. DPW proposed to adopt updated City and County of Honolulu standards and specifications once available. DPW proposed to continue contractor training through ECATTS, participate in planning charrettes and pre-construction meetings, conduct quarterly construction site visits, and perform project review to verify compliance.

3.4.1.3. 2012 Accomplishments. In CY 2012, DPW requested that construction contractors use the following City and County of Honolulu manuals in their design and construction and grading plans, erosion and sediment control plans and specifications:

- *Best Management Practices Manual for Construction Sites in Honolulu*, prepared by the Department of Environmental Services City and County of Honolulu, May 1999
- *Rules Relating to Soil Erosion Standards and Guidelines*, prepared by the Department of Planning and Permitting City and County of Honolulu, April 1999
- *Rules Relating to Storm Drainage Standards*, prepared by the Department of Planning and Permitting City and County of Honolulu, January 2000

DPW verified compliance through project review and quarterly construction site inspections, tracked ECATTS training, uploaded the ECATTS training information to the USAG-HI Sustainability and Environmental Management Website, and provided NPDES permit for construction site compliance and erosion and sediment control BMP training for Lend Lease and troop construction contractors, slides provided as Tab 1-10.

3.4.1.4. 2013 Goals. DPW proposes to adopt updated City and County of Honolulu standards and specifications once available. DPW proposes to update the USAG-HI "Enforcement Procedures and Actions for Construction Storm Water Management," provided as Tab 4-1, continue to maintain and update contractor training resources through the USAG-HI Sustainability and Environmental Management Website, participate in planning charrettes and pre-construction meetings, conduct quarterly construction site visits, and perform project review to verify compliance.

3.4.1.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to ensure the latest design standards are being incorporated in the approved site plans and to conduct construction site inspections and retain inspection records and documentation of any corrective measures as well as to perform project review.

3.4.1.6. Schedule. Review updated City and County of Honolulu standards and specifications once completed and communicate updates to DPW, Army Corps of Engineers, IPC engineers and contractors, and privatized utility owners. Attend planning charrettes and pre-construction meetings, conduct quarterly construction site inspections, and perform project review as needed.

3.4.1.7. Reporting and Record Keeping. Copies of the latest standards and specifications will be retained and provided on the Clean Water Program webpage and records of inspections and project review comments shall be retained by the DPW Clean Water Program Manager.

3.4.2. CS-2: Review of Storm Water BMP Construction Drawings and Specifications

3.4.2.1. BMP Description. Participate in the review process for Civil Design, Plans, and Specifications related to site drainage, storm water infrastructure, and BMPs. Modify specifications as needed.

3.4.2.2. 2012 Goals. DPW proposed to continue to review and track project comments, conduct site visits, and attend project charrettes and pre-construction meetings as needed

3.4.2.3. 2012 Accomplishments. A total of 107 projects were reviewed that included the following: environmental assessments, record of environmental considerations, annual work projects, and construction plans and specifications. The focus of these reviews was on NPDES permit compliance, erosion and sediment control BMPs, and post-construction storm water management. A project review checklist is provided in Tab 4-2. Site visits were conducted of proposed sites as needed and DPW Clean Water Program staff attended various project charrettes and pre-construction meetings to provide comments on NPDES compliance and requirements.

3.4.2.4. 2013 Goals. DPW proposes to continue to review and track project comments, conduct site visits, and attend project charrettes and pre-construction meetings as needed.

3.4.2.5. Responsibility. It is the responsibility of the DPW Clean Water Program Manager to review the design, plans, and specifications of each project and to maintain records of project review comments.

3.4.2.6. Schedule. DPW will perform reviews of construction drawings and specifications as projects are developed.

3.4.2.7. Reporting and Record Keeping. Project review comments are maintained by the DPW Clean Water Program Manager, and the date that comments are submitted to the project designers is maintained by the DPW NEPA Coordinator.

3.4.3. CS-3: Construction Site Inspections

3.4.3.1. BMP Description. Establish procedures for construction site inspections and correction of issues of non-compliance and conduct quarterly inspections.

3.4.3.2. 2012 Goals. DPW proposed to continue quarterly construction site inspections to ensure compliance with NPDES permit requirements, preventing sediment-laden runoff from leaving construction sites. DPW proposed to communicate and educate on the most frequent findings of deficiency and to measure success through subsequent inspections.

3.4.3.3. 2012 Accomplishments. During CY 2012, 56 construction site inspections were conducted in total and were scheduled per construction site on a quarterly basis and tracked through a spreadsheet, provided as Tab 4-3. Deficiencies were recorded in the DPW construction

inspection report checklist as well as communicated to the contractor on-site upon completion of the inspection. Following the inspection, the inspection report was emailed to the contractors and contractors were allowed two weeks to provide documentation of corrective action for any findings of non-compliance. DPW analyzed the CY 2011 construction inspection reports in order to communicate and educate on the most frequent findings of deficiency.

3.4.3.4. 2013 Goals. DPW proposes to continue quarterly construction site inspections to ensure compliance with NPDES permit requirements, preventing sediment-laden runoff from leaving construction sites. DPW proposes to communicate and educate on the most frequent findings of deficiency and to measure success through subsequent inspections.

3.4.3.5. Responsibility. DPW Clean Water Program Manager is responsible for conducting construction site inspections and following up on any issues of non-compliance.

3.4.3.6. Schedule. Quarterly construction site inspections will be conducted by DPW Clean Water Program staff.

3.4.3.7. Reporting and Record Keeping. DPW Clean Water Program Manager will maintain records of inspection dates, reports, and corrective actions.

3.5. Post-Construction Runoff Control (PC)

Develop, implement, and enforce a program to reduce pollutants in storm water runoff from new development and redevelopment projects that disturb one (1) acre or more, including construction activities less than one (1) acre that are part of a larger common plan of development or sale that would disturb one (1) acre or more, that, at a minimum, includes the following:

- Establishment of installation-wide instructions, directive, or other regulatory mechanism, including enforcement procedures and actions that address post-construction runoff from new development and redevelopment projects
- Structural and/or non-structural BMPs appropriate for each installation to minimize water quality impacts and attempt to maintain pre-development runoff conditions
- Procedures for long-term operations and maintenance of BMPs

To meet the objective for the post-construction runoff control measure, the following BMPs are proposed:

- PC-1: Adoption and Phase-in of Post-Construction Storm Water Management Requirements
- PC-2: Review of Civil Design Plans and Specifications
- PC-3: Provide Funding for the Design & Construction of a Post-Construction Storm Water Management Demonstration Project

3.5.1. PC-1: Adoption and Phase-in of Post-Construction Storm Water Management Requirements

3.5.1.1. BMP Description. USAG-HI will adopt federal, state, and local post-construction storm water management requirements (whichever is most stringent) in order to minimize water quality

impacts and attempt to maintain pre-development runoff conditions for new construction and redevelopment projects.

3.5.1.2. 2012 Goals. DPW proposed to continue to work with in-house DPW Engineering, Construction, Operations and Maintenance, and Master Planning Divisions, Army Corps of Engineers, IPC, and privatized utility owners on incorporating federal post-construction storm water management requirements into project request for proposals and specifications.

DPW shall maintain records of all post-construction BMPs installed and maintained and perform inspections during installation.

3.5.1.3. 2012 Accomplishments. DPW Clean Water Program conducted an LID project tour for DPW staff and Group 70 staff to educate on federal post-construction storm water management requirements, USAG-HI requirements, and locally installed LID projects, handout provided as Tab 1-11. DPW Clean Water Program staff participated in meetings with the Army Corps of Engineers to discuss post-construction storm water management requirements as well as various project-specific meetings to discuss requirements. DPW Clean Water Program staff attended planning charrettes and provided guidance on implementing federal post-construction storm water management requirements.

DPW maintained the "Enforcement Procedures and Actions for Post-Construction Storm Water Management in New Development and Redevelopment," as provided in Tab 5-1, which included an overview of NPDES permit and federal storm water management requirements and outlined implementation procedures, responsibility, reporting, inspections, enforcement procedures, and record keeping practices related to the program.

DPW developed a work plan for an LID BMP calculator tool and an LID Retrofit Analysis Study for FS to identify retrofit opportunities for future annual work plan projects to be considered for funding in future fiscal years.

DPW maintained a library of resources on post-construction storm water management and LID techniques that are available to project designers and engineers.

3.5.1.4. 2013 Goals. DPW proposes to continue to work with in-house DPW Engineering, Construction, Operations and Maintenance, and Master Planning Divisions, Army Corps of Engineers, IPC, and privatized utility owners on incorporating federal post-construction storm water management requirements into project request for proposals and specifications.

DPW shall maintain records of all post-construction BMPs installed and maintained and perform inspections during installation.

DPW shall oversee the execution of the contract for the LID BMP calculator tool and an LID Retrofit Analysis Study for FS.

3.5.1.5. Responsibility. DPW Clean Water Program Manager is responsible to provide guidance to the various agencies on implementing NPDES permit and federal post-construction storm water management requirements. DPW Clean Water Program Manager is responsible for developing and funding any post-construction storm water management studies and demonstration projects. DPW Clean Water Program staff is responsible for inspecting the

installation of post-construction BMPs, maintaining a database of all post-construction storm water BMPs, and assisting to ensure that operations and maintenance plans and specifications are followed.

3.5.1.6. Schedule. DPW will participate in regular meetings with the various agencies, inspect the installation of post-construction BMPs, and maintain a database of BMPs and operations and maintenance records as needed.

3.5.1.7. Reporting and Record Keeping. DPW Clean Water Program Manager is responsible for maintaining records related to post-construction storm water management. This information will be included in the annual report.

3.5.2. PC-2: Review of Civil Design Plans and Specifications

3.5.2.1. BMP Description. Participate in the review process for Civil Design, Plans, and Specifications to provide comments on post-construction storm water management requirements, BMP design, and operations and maintenance specifications.

3.5.2.2. 2012 Goals. DPW proposed to continue to review civil design plans and specifications to ensure compliance with post-construction storm water management requirements.

3.5.2.3. 2012 Accomplishments. DPW reviewed 32 civil design plans and specifications and provided comments related to post-construction storm water management requirements.

3.5.2.4. 2013 Goals. DPW proposes to continue to review civil design plans and specifications to ensure compliance with post-construction storm water management requirements.

3.5.2.5. Responsibility. DPW Clean Water Program Manager is responsible for reviewing civil design plans and specifications and providing comments on post-construction storm water management requirements.

3.5.2.6. Schedule. Civil design plans and specifications shall be reviewed in a timely manner.

3.5.2.7. Reporting and Record Keeping. Project review comments are maintained by the DPW Clean Water Program Manager, and the date that comments are submitted to the project designers is maintained by the DPW NEPA Coordinator.

3.5.3. PC-3: Provide Funding for the Design & Construction of a Post-Construction Storm Water Management Demonstration Project

3.5.3.1. BMP Description. Develop a project to demonstrate post-construction storm water management techniques to achieve water quality benefits and to provide an opportunity for public education.

3.5.3.2. 2012 Goals. DPW proposed to develop and assist with funding a post-construction demonstration and public involvement project in CY 2012 and worked with IPC and Lend Lease to collaborate on an outdoor classroom project to demonstrate storm water management and pollution prevention techniques through a rainwater harvesting system and native plant garden at USAG-HI elementary schools.

3.5.3.3. 2012 Accomplishments. DPW, IPC, and Lend Lease completed an outdoor classroom project at Shafter Elementary School, located on FS, (Tab 1-5 and Tab 2-4), DPW funded the completion of the rainwater harvesting project at the Oahu Army Natural Resource Program's baseyard, located on SB (Tab 1-6), and DPW partnered with Weston Solutions, Inc. and Hale Kula Elementary School staff to install a permeable paving plaza in the outdoor classroom (Tab 2-6).

3.5.3.4. 2013 Goals. DPW proposes to develop and assist with funding a post-construction demonstration and public involvement project in CY 2013 and has begun work with IPC and lend lease to collaborate on an opening ceremony for the Shafter Elementary School outdoor classroom project.

DPW proposes to fund additional public display signage and/or publish project description reports to be posted on the Clean Water Program webpage for new construction projects that include innovative post-construction storm water management techniques.

DPW proposes to identify areas in need of erosion control BMPs and to generate retrofit projects to be included in the annual work plan.

3.5.3.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to oversee and fund the post-construction storm water management demonstration project and identify areas that need erosion control BMPs and to generate retrofit projects to be included in the annual work plan.

3.5.3.6. Schedule. The public involvement project for CY 2013 will likely occur in the early part of the New Year. Project planning meetings will be conducted regularly throughout the year leading up to the project event day and will include DPW staff, IPC staff, and elementary school staff. The erosion and retrofit project study will be conducted throughout the year.

3.5.3.7. Reporting and Record Keeping. DPW Clean Water Program Manager will retain records of funded projects and associated project meetings, areas identified in the erosion control BMP study, and retrofit projects submitted for inclusion in the annual work plan.

3.6. Pollution Prevention (PP)

The NPDES permit requires USAG-HI to develop, implement, and enforce a Storm Water Pollution Control Plan (SWPCP) that has the ultimate goal of preventing or reducing pollutant runoff and, at a minimum, includes the following:

- Establishment of installation-wide instructions, directive, or other regulatory mechanism, including enforcement procedures and actions that require activities to comply with the SWPCP and prevent the discharge of pollutants into the Permittee's small MS4
- Storm water system map, showing the location of all outfalls and names and location of all State waters that receive discharges from those outfalls
- List of all industrial activities, as defined in 40 CFR Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(i) including their Standard Industrial Classification (SIC) Codes
- Potential storm water pollutants and their sources for each type of facility/activity

- Site-specific BMPs, good housekeeping procedures, and pollutant control procedures for the operations and maintenance of each type of facility/activity whose storm water discharges into the Permittee's separate storm sewer system and/or directly enters receiving State waters
- Spill prevention and response procedures
- Pesticide, herbicide, and fertilizer application procedures
- Procedures to conduct inspections of industrial facilities at least once per calendar year.
- Training for military personnel, civilian workers, contractors, and other individuals associated with the facility to ensure familiarity with the operations and maintenance program

The permit also requires the development and implementation of a storm water monitoring plan that, at a minimum, includes the following:

- Description of sampling locations, including justification for site selection
- Sampling location map
- Monitoring parameters
- Preservation techniques
- Sample holding time
- Testing method and method detection limit for each parameter
- Quality Assurance/Quality Control (QA/QC) measures
- Procedures for measuring rainfall depth, duration, location, and storm event return time
- Format for reporting monitoring results

Lastly, the permit requires the development and implementation of a storm sewer infrastructure maintenance program that, at a minimum, includes the following:

- Annual inspections of debris basins performed October 1st of each year
- Annual inspections of storm drainage lines, inlets, catch basins, and flood control structures at least once per calendar year
- Maintenance and clearing of debris basins, storm drainage lines, inlets, catch basins, and flood control structures as necessary
- Documentation of inspections and maintenance

To meet the objective for the pollution prevention and good housekeeping measures the following BMPs are proposed:

- PP-1: Develop Storm Water Database/GIS
- PP-2: Develop Street Sweeping Program
- PP-3: Develop a List of Potential Storm Water Pollutants for Each Facility
- PP-4: Develop a Spill Prevention and Response Procedures
- PP-5: Develop Policy for Reduction in Pesticide and Herbicide Application
- PP-6: Develop Policy for Reduction in Fertilizer Application
- PP-7: Perform Facility Inspections
- PP-8: Develop Storm Water Monitoring Plan
- PP-9: Develop and Implement a Maintenance Program

3.6.1. PP-1: Develop Storm Water Database/GIS

3.6.1.1. BMP Description. Develop storm water database/GIS to keep track of the BMPs described in the Annual Report.

3.6.1.2. 2012 Goals. DPW proposed to continue to provide as-built plans to the DPW GIS office to ensure updated storm sewer infrastructure information is available and to maintain a database to track BMP completion status. Additionally, DPW Clean Water Program will track the location, type, year constructed, function, size, material type, and maintenance (date, activity, and personnel responsible) of all permanent post-construction BMPs.

3.6.1.3. 2012 Accomplishments. DPW provided as-built plans to the DPW GIS office. DPW utilized a storm water management database on a program-shared drive to track BMP completion status. DPW Clean Water Program staff began building a GIS database to track permit compliance activities.

3.6.1.4. 2013 Goals. DPW proposes to continue to provide as-built plans to the DPW GIS office to ensure updated storm sewer infrastructure information is available and to maintain a database to track BMP completion status. Additionally, DPW Clean Water Program will track the location, type, year constructed, function, size, material type, and maintenance (date, activity, and personnel responsible) of all permanent post-construction BMPs and continue building the GIS database to track permit compliance activities.

3.6.1.5. Responsibility. It is the responsibility of the DPW Clean Water Program Manager to input BMP data into the storm water database.

3.6.1.6. Schedule. Updates to the storm sewer mapping and GIS system are being supported by the DPW Systems Engineering Branch as needed. BMP status data shall be recorded throughout the year.

3.6.1.7. Reporting and Record Keeping. Data will be stored with the DPW Systems Engineering Branch and in the storm water database, which is accessible by the DPW Clean Water Program staff.

3.6.2. PP-2: Develop a Street Sweeping Program

3.6.2.1. BMP Description. The existing street sweeping program is accomplished by DPW Operations and Maintenance Division staff. The street sweeping personnel includes one full-time employee stationed at SB and one part-time employee stationed at FS.
3.6.2.2. 2012 Goals. DPW proposed no change to the previous goal for the BMP, recommending to continue the existing frequency and location of street sweeping activities. See Figures 10 and 11 for a diagram of the street sweeping program at SB, WAAF, and FS.

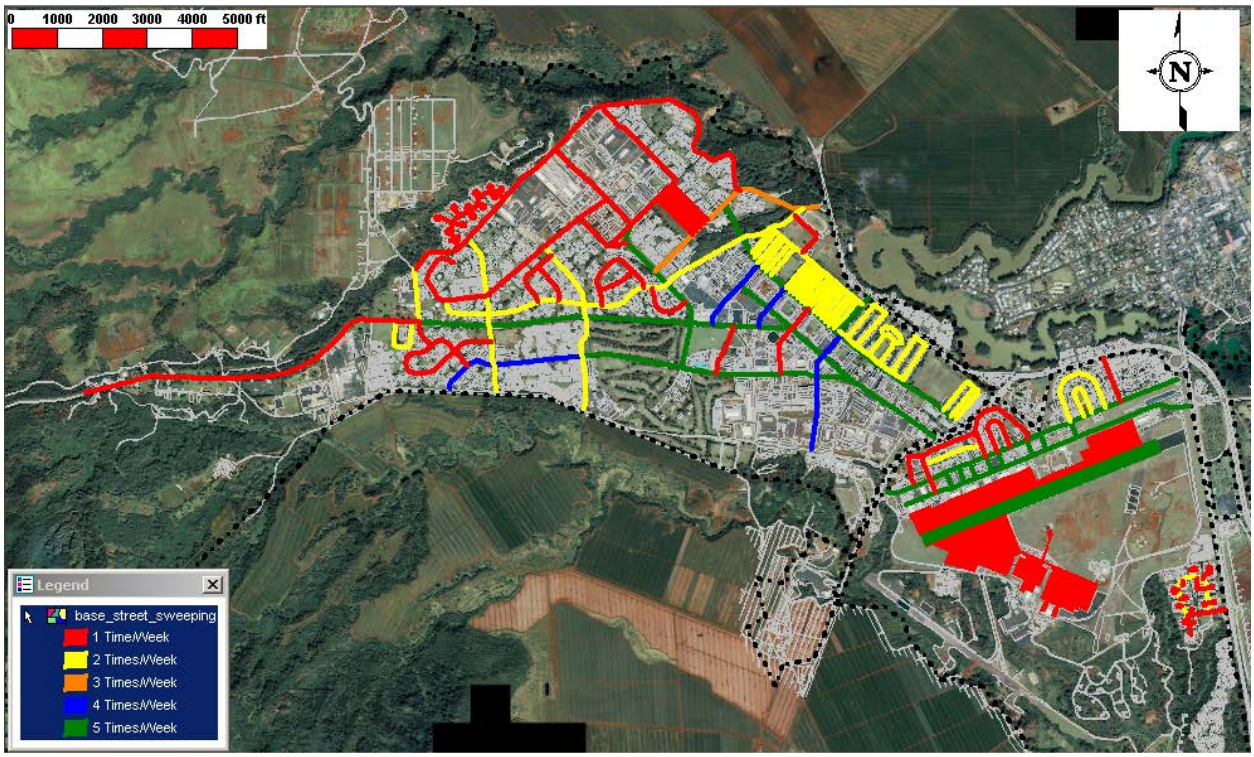

Figure 10. Map of street cleaning frequency per week for Schofield Barracks and Wheeler Army Airfield.

Figure 11. Map of street cleaning frequency per week for Fort Shafter.

3.6.2.3. 2012 Accomplishments. Street sweeping was performed by DPW Operations and Maintenance Division staff.

3.6.2.4. 2013 Goals. There are no proposed changes for this BMP.

3.6.2.5. Responsibility. It will be the responsibility of the DPW Clean Water Program Manager to keep track of the street cleaning information and any program changes. The information concerning street sweeping is located in the DPW Operations and Maintenance Division.

3.6.2.6. Schedule. Weekly cleaning frequency varies from once per week to five times per week. The frequency is primarily due to the amount of trees, the maturity of trees, and the amount of debris generated. The airfield is cleaned five times per week. The intent is to remove foreign objects from the airfield.

3.6.2.7. Reporting and Record Keeping. Currently, the DPW Operations and Maintenance Division keeps track of what streets are cleaned and at what frequency.

3.6.3. PP-3: Develop a List of Potential Storm Water Pollutants for Each Facility

3.6.3.1. BMP Description. Develop a material list, per facility, that could potentially harm the environment if introduced into the storm sewer system. USAG-HI previously received a Notice of Violation regarding its storage of hazardous materials. In 1996, USAG-HI implemented the Hazardous Substance Management System for the purpose of tracking hazardous material usage from cradle to grave.

USAG-HI has prepared a SWPCP that includes site-specific facility plans with a description of potential storm water pollutants, site-specific BMPs, good housekeeping procedures, and pollutant control procedures for operations and maintenance.

3.6.3.2. 2012 Goals. DPW proposed no changes for CY 2012. DPW proposed to continue performing quarterly inspections of its industrial facilities to determine those products which are stored in each facility and to update the material inventory list.

3.6.3.3. 2012 Accomplishments. DPW performed quarterly inspections of industrial facilities. DPW utilized the Hazardous Material Management System (HMMS), a web-based hazardous material tracking tool, to track hazardous material storage, use, and disposal. The products are tracked using a bar code system, which improves accountability. DPW prepared additional SWPCP facility plans for dining facilities.

DPW executed an update of the USAG-HI SWPCP that will be complete in early 2013.

3.6.3.4. 2013 Goals. DPW proposes to conduct quarterly inspections of industrial facilities to track potential storm water pollutants for each facility.

3.6.3.5. Responsibility. It is the responsibility of the DPW Environmental Hazardous Waste Program Manager and DPW Clean Water Program Manager to oversee quarterly inspections of industrial facilities to determine what products are being stored, updating HMMS as needed.

3.6.3.6. Schedule. DPW Environmental Hazardous Waste and Clean Water Program staff will perform quarterly inspections of industrial facilities and update HMMS as needed. DPW Clean Water Program shall update the SWPCP as needed.

3.6.3.7. Reporting and Record Keeping. The information stored in HMMS is used for the annual Emergency Planning and Community Right-to-Know Act reporting. Records are retained by the DPW Environmental Office and USAG-HI, Directorate of Logistics. DPW Clean Water Program Manager has access to facility inspection reports. DPW Clean Water Program Manager retains a record of updates to the SWPCP.

3.6.4. PP-4: Develop Spill Prevention and Response Procedures

3.6.4.1. BMP Description. USAG-HI shall implement its Spill Prevention, Control, and Countermeasure (SPCC) Plan and comply with federal SPCC regulations and update the SPCC Plan as needed.

USAG-HI has prepared a SPCC Plan. The plan describes responsibilities, spill prevention procedures, spill control and response procedures, and notification and training requirements. Currently, contract personnel are available to assist with spill response on USAG-HI installations. Additionally, USAG-HI's goal is to significantly reduce (to zero) the number of reportable spills.

3.6.4.2. 2012 Goals. DPW proposed to conduct a spill training exercise in CY 2012 to continue to train and prepare key personnel in SPCC Plan requirements and spill response. DPW proposed to continue to implement the SPCC Plan and update the SPCC Plan as needed. DPW proposed to continue to track and fund corrective actions as needed.

3.6.4.3. 2012 Accomplishments. DPW conducted a spill training exercise in August 2012. A report of the spill training exercise was prepared and provided as Tab 6-1.

The SPCC Plan was updated in 2012 and the Plan will be complete and certified in early 2013.

3.6.4.4. 2013 Goals. DPW proposes to conduct a spill training exercise in CY 2013 for DPW Environmental staff and to participate in the annual USAG-HI disaster preparedness event to continue to train and prepare key personnel in SPCC Plan requirements and spill response. DPW proposes to continue to implement the SPCC Plan and update the SPCC Plan as needed. DPW proposes to continue to track and fund corrective actions as needed.

3.6.4.5. Responsibility. It will be the responsibility of the DPW SPCC Program Manager to implement and update the SPCC Plan.

3.6.4.6. Schedule. The SPCC Plan shall be implemented and updated as necessary.

3.6.4.7. Reporting and Record Keeping. The DPW SPCC Program Manager maintains a record of SPCC Plan documents, updates, and corrective actions. The DPW Clean Water Program Manager will retain a record of SPCC Plan documents, updates, and corrective actions.

3.6.5. PP-5: Develop Policy for Reduction in Pesticide and Herbicide Application

3.6.5.1. BMP Description. The Department of Defense (DoD) defines pesticides to include insecticides, fungicides, and herbicides. The DoD Measures of Merit is to decrease use of pesticides from fiscal year 1993 levels by 50%. USAG-HI accomplished this reduction by fiscal year 2000.

From September 2005, the DoD Measures of Merit were revised to achieve usage based upon the average of fiscal year 2002 and fiscal year 2003 pesticide usage (45 percent of the original 1993 baseline – a 55 percent reduction).

3.6.5.2. 2012 Goals. DPW proposed to continue to monitor pesticide and herbicide usage on USAG-HI installations.

3.6.5.3. 2012 Accomplishments. USAG-HI measured and reduced pesticide and herbicide usage in 2012. DPW employed an entomologist to track the use of pesticide and to achieve the DoD Measures of Merit. Table 2 shows the total pounds of active ingredients of pesticides applied each fiscal year. The pesticide data for fiscal year 2012 combines the quantity applied for both indoor (6,927.0 million square feet) and outdoor treatment (7371.9 million square feet).

Table 2. Pesticide Use by Fiscal Year

FISCAL YEAR	TOTAL PESTICIDE USE [total lb - active ingredient]	PERCENTAGE REDUCTION [%]
1993	11,687	0%
1994	8,156	30%
1995	8,927	24%
1996	6,625	43%
1997	6,003	49%
1998	4,001	66%
1999	3,984	66%
2000	4,417	62%
2001	4,253	64%
2002	5,225	55%
2003	8,078	31%
2004	11,480	2%
2005	10,596	9%
2006	9,756	17%
2007	8,626	26%
2008	7,619	35%
2009	6,247	47%
2010	5,922	49%
2011	8,634	26%
2012	4,684	60%

The high use of pesticide in fiscal year's 2003, 2004, and 2005 was primarily due to the herbicide application for unexploded ordnance clearance. Herbicide application was required to dry out the vegetation in order to clear the training area by burning the vegetation. Clearing of the existing vegetation was required to provide a visible and open area for ordinance clearing.

3.6.5.4. 2013 Goals. DPW will continue to monitor pesticide and herbicide usage on USAG-HI installations.

3.6.5.5. Responsibility. The DPW staff entomologist tracks pesticide application and achievement towards DoD Measures of Merit.

3.6.5.6. Schedule. The DPW staff entomologist tracks pesticide application throughout the year and supplies annual reporting data for the Annual Report.

3.6.5.7. Reporting and Record Keeping. The DPW Clean Water Program Manager will record pesticide use data provided by the DPW staff entomologist in a spreadsheet.

3.6.6. PP-6: Develop Policy for Reduction in Fertilizer Application

3.6.6.1. BMP Description. Develop a policy for the tracking and application of fertilizers. The majority of fertilizer usage occurs on USAG-HI golf courses.

3.6.6.2. 2012 Goals. DPW proposed no change to the BMP and no additional plans to further reduce fertilizer use since we are below published norms.

3.6.6.3. 2012 Accomplishments. DPW tracked fertilizer usage, as provided in Table 3. Total fertilizer use was down from previous levels. Kalakaua Golf Course was converted to family housing, and only Leilehua and Nagorski (FS) Golf Courses remain.

Table 3. Fertilizer Use by Calendar Year

Calendar Year	Total Acreage (acres)	Total N Applied (lbs)	Application Rate (lbs N per 1000 sf)
2003	310	49,260	3.7
2004	310	20,052	1.5
2005	200	18,625	2.2
2006	200	17,746	2.1
2007	200	11,420	1.3
2008	200	10,472	1.2
2009	200	12,330	1.4
2010	200	8,601	1.0
2011	206	13,004	1.4
2012			

3.6.6.4. 2013 Goals. DPW proposes no change to the BMP and no additional plans to further reduce fertilizer use since we are below published norms.

USAG-HI has submitted the necessary documents to the SDOH Wastewater Branch to use R-1 treated effluent at SB, scheduled to be constructed in CY 2012-CY 2013.

3.6.6.5. Responsibility. The DPW staff entomologist tracks fertilizer application on USAG-HI installations.

3.6.6.6. Schedule. The DPW staff entomologist tracks fertilizer application throughout the year and supplies annual reporting data for the Annual Report.

3.6.6.7. Reporting and Record Keeping. The DPW Clean Water Program Manager will record fertilizer use data provided by the DPW staff entomologist in a spreadsheet.

3.6.7. PP-7: Perform Facility Inspections

3.6.7.1. BMP Description. Facilities are inspected once per quarter by DPW Hazardous Waste Program staff inspectors. The inspection evaluates the facility on its industrial activities: hazardous material handling and storage, pollution prevention, good housekeeping practices, and storm water-specific pollution prevention BMPs. The inspection checklist section related to storm water pollution prevention BMPs is provided as Tab 1-3.

Each facility inspection is scored and evaluated for deficiencies. Inspection results are presented at the quarterly EQCC meeting, which includes the Garrison Commander and his staff. Because of this visibility, the facility operators are encouraged to pass inspections. There are several "starred" checklist items that must be passed or the facility operators fail the entire inspection.

3.6.7.2. 2012 Goals. DPW proposed to continue to reduce the number of deficiencies identified during industrial facility inspections. This will be accomplished through tracking inspection results and modifying the ECO training course material as needed. DPW proposed to finalize the inspection checklist for facilities not currently inspected by the DPW Hazardous Waste Program staff and to schedule and conduct routine inspections of those facilities.

3.6.7.3. 2012 Accomplishments. DPW Hazardous Waste Program staff inspectors uploaded inspection reports to a database for tracking inspections and corrective actions. DPW Hazardous Waste Program staff inspectors presented inspection results to the Garrison Commander at the quarterly EQCC meeting.

Inspections were conducted quarterly on the fiscal year calendar and results for all USAG-HI industrial facilities by quarter were presented at quarterly EQCC meetings and saved on the DPW Environmental public share drive.

USAG-HI industrial facilities demonstrated outstanding compliance by implementing required BMPs as shown in the inspection results. This is likely due to the constantly updated and improved ECO training curriculum, and the fact that facility operators and assigned facility ECOs have a low turnover rate. Military unit industrial facilities had less consistent performance rates likely due to the high turnover rate of ECOs and unit tenants.

DPW analyzed the results of the inspections in order to provide additional educational materials for the ECO training course.

DPW executed an update of the USAG-HI SWPCP that will be complete in early 2013.

DPW prepared additional facility plans with BMPs for dining facilities and developed an inspection checklist, provided as Tab 6-2, and schedule to conduct regular inspections of those facilities.

3.6.7.4. 2013 Goals. The intent is to continue to reduce the number of deficiencies identified during industrial facility inspections. This will be accomplished through tracking inspection results and modifying the ECO training course material as needed. DPW Clean Water Program staff shall regularly inspect facilities not currently inspected by the DPW Hazardous Waste Program staff.

3.6.7.5. Responsibility. DPW Hazardous Waste Program staff inspectors perform facility inspections and report their results to the Garrison Commander on a quarterly basis. DPW Hazardous Waste Program staff provides regular ECO training. DPW Clean Water Program Manager shall analyze inspection reports and ECO training material and provide BMP and pollution prevention educational material as needed and inspect facilities not currently inspected by the DPW Hazardous Waste Program staff.

3.6.7.6. Schedule. Inspections are performed on a quarterly basis by DPW Hazardous Waste Program staff. Review of inspection reports shall be conducted on a quarterly basis and any additional ECO training material shall be provided as needed.

3.6.7.7. Reporting and Record Keeping. DPW Clean Water Program Manager has access to records of inspections in the inspection database.

3.6.8. PP-8: Develop Storm Water Monitoring Plan

3.6.8.1. BMP Description. If required, modify the existing storm water monitoring plan to account for current conditions. Modify the test type, if necessary, to account for pollutants associated with industrial activities.

3.6.8.2. 2012 Goals. DPW proposed to continue to implement the storm water monitoring plan and to continue to fund the collection of water quality sampling data as required.

3.6.8.3. 2012 Accomplishments. Storm water monitoring was performed by Element Environmental, LLC under a service contract. Water quality samples for CY 2012 were obtained from four sites (SB, WAAF, FS, and AMR. HMR outfall point is currently disconnected due to construction) as shown in the "Storm Water Monitoring Plan." DPW updated the "Storm Water Monitoring Plan," as provided in Tab 6-3, to document the adjustment of two sampling locations: at HMR, due to the demolition of the previous outfall monitoring point during the construction of a new motor pool and at FS, due to the requirement to isolate the installation's drainage from the Department of Transportation, Highway Division, drainage. The Discharge Monitoring Reports (DMR) are provided in Tab 7. There was no discharge from the Rock Quarry and a zero discharge DMR for the quarry will be submitted with the Annual Report.

3.6.8.4. 2013 Goals. DPW proposes to continue to implement the storm water monitoring plan and to continue to fund the collection of water quality sampling data as required.

3.6.8.5. Responsibility. It is the responsibility of the DPW Clean Water Program Manager to determine if water quality limits are exceeded, to locate possible sources, and to make corrections as needed.

3.6.8.6. Schedule. Storm water monitoring shall be accomplished according to the storm water monitoring plan.

3.6.8.7. Reporting and Record Keeping. DMRs are submitted to SDOH in the Annual Report.

3.6.9. PP-9: Develop and Implement a Maintenance Program

3.6.9.1. BMP Description. Develop and implement a maintenance program that includes annual inspections of debris basins, annual inspections of storm sewer system, maintenance and clearing of debris, and documentation of inspections and maintenance.

3.6.9.2. 2012 Goals. DPW proposed to conduct inspections prior to October 1st of each year. DPW proposed to perform maintenance and clearing of the storm sewer debris basins, storm drainage lines, inlets, catch basins, and flood control structures as necessary.

3.6.9.3. 2012 Accomplishments. Standard operating orders were issued to in-house DPW Operations and Maintenance Division personnel to inspect and maintain the storm drainage system in an operational status and in accordance with the NPDES permit. Annual inspections were performed prior to the rainy season in October. All damages and disrepairs were identified and work requests were submitted.

3.6.9.4. 2013 Goals. DPW proposes to continue to fund this important task.

3.6.9.5. Responsibility. It is the responsibility of the DPW Clean Water Program Manager to ensure inspections and maintenance are performed in accordance with the maintenance program document and performance work statement.

3.6.9.6. Schedule. Perform inspections, cleaning, and maintenance of the storm drainage system by October 1st of each year.

3.6.9.7. Reporting and Record Keeping. Annual inspection reports and maintenance records are maintained by DPW Operations and Maintenance Division.

4. Modifications Made to the SWMP in CY 2012

4.1. In CY 2012, DPW discontinued funding of the ECATTS program and so PE-4: Web-based Training for Service Contractors and Construction Contractors was removed and educational material from the ECATTS program was made available as a resource on the USAG-HI Sustainability and Environmental Management Website. DPW Clean Water Program staff developed and conducted a construction BMP presentation for Lend Lease staff, contractors, and subcontractors and troop construction contractors (Tab 1-10).

5. Storm Water Monitoring Results

5.1. See Tab 7 for DMRs.

6. Summary of Storm Water Activities Planned for CY 2013

6.1. Table 4 describes the various DPW Clean Water Program planned activities to be undertaken in CY 2013.

Table 4. Planned Activities for CY 13

Activity	Date/Location	Cost/ Funding Programmed
Earth Day 2013	April/SB and FS	Low cost/Yes
Survey to Measure Success of PSA	April/SB and FS	Low cost/Yes
Presentation to Installation Schools	Variable/SB, WAAF and FS	Low cost/Yes
Public Involvement/Post-Construction Storm Water Management Demonstration Project	Variable/SB and FS	Low cost/Yes
Public Review of SWMP	January/All USAG-HI installations	Low cost/Yes
Dry Weather Outfall Inspections	Variable/All USAG-HI installations	Low cost/Yes
Illicit Discharge Detection Survey	Variable /All USAG-HI installations	Low cost/Yes
Implement SPCC recommendations	Variable/All USAG-HI installations	As needed/Yes
Update/Implement SWPCP recommendations	Variable/All USAG-HI installations	As needed/Yes
Update ECO Training	Variable/DPW Env	As needed/Yes
Update Storm Water Database	Variable/All USAG-HI	Low cost/Yes

7. Major Modifications Made to the Storm Sewer System

7.1 The major modifications that were made to the storm sewer system were primarily from new construction of housing units and projects associated with training facilities as shown in Tab 1-11 and 4-3. The U.S. Army is improving quality of life for its soldiers by privatizing housing units under its Residential Communities Initiative.

As part of the construction site runoff control program, USAG-HI has authorized the following contractors to discharge storm water through USAG-HI's small MS4.

8. Summary

USAG-HI is committed to being a good steward of the environment. USAG-HI will continue to balance its core functions while prioritizing environmental protection and sustainable land management practices.

During CY 2012, USAG-HI focused on improving water quality through achieving SWMP BMP goals and implementing additional public education, public involvement, and post-construction storm water management BMPs.

USAG-HI remains committed to public education and public involvement to increase storm water pollution prevention awareness. As military units deploy and reset, ECO training is provided and is paramount.

Quarterly construction site inspections will continue to ensure compliance with approved site plans and erosion and sediment controls. The intent is to reduce sediment-laden runoff from leaving USAG-HI construction sites.

Recommendations from the illicit discharge survey have been implemented and associated projects are either completed or planned.

USAG-HI will continue to collaborate with SDOH and the City and County of Honolulu Department of Environmental Services as well as all other stakeholders on TMDL discussions, prioritizing compliance with water quality standards.