



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

DEC 11 2009

Office of the Garrison Commander

CERTIFIED MAIL

Ms. Lisa A. Perrett
Georgia Environmental Protection Division
Watershed Protection Branch
NonPoint Source Program / Stormwater Unit
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

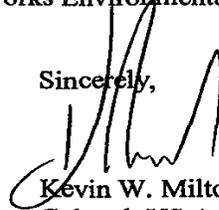
Dear Ms. Perrett:

Reference Georgia Environmental Protection Division comments dated September 11, 2009, received September 21, 2009, on the previously submitted (June 26, 2009) Fort Stewart and Hunter Army Airfield Notices of Intent for coverage under the General National Pollutant Discharge Elimination System (NPDES) Stormwater Permit No. GAG480000 (Authorization to Discharge under the NPDES; Stormwater Discharges Associated with Small Municipal Separate Storm Sewer Systems at Military Facilities). The Installation provides the enclosed Phase II Municipal Separate Storm Sewer Systems (MS4) Notices of Intent for Fort Stewart and Hunter Army Airfield revised in accordance with comments provided in your letter dated September 11, 2009.

I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

If additional information is required, please contact Ms. Tressa Rutland, Mr. Brent Rabon or Mr. Russell Moncrief, Directorate of Public Works Environmental Division, at (912) 767-2010.

Sincerely,



Kevin W. Milton
Colonel, US Army
Commanding

Enclosures



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US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
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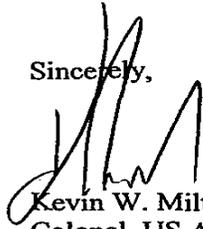
Ms. Lisa A. Perrett
Georgia Environmental Protection Division
Watershed Protection Branch
NonPoint Source Program / Stormwater Unit
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

Dear Ms. Perrett:

Reference Georgia Environmental Protection Division (GA EPD) comments dated September 11, 2009, received September 21, 2009, on the previously submitted (June 26, 2009) Fort Stewart and Hunter Army Airfield Notices of Intent for coverage under the General National Pollutant Discharge Elimination System (NPDES) Stormwater Permit No. GAG480000 (Authorization to Discharge under the NPDES; Stormwater Discharges Associated with Small Municipal Separate Storm Sewer Systems at Military Facilities). Fort Stewart / Hunter Army Airfield provides the enclosed written designation of duly authorized representative in response to General Comment No. 1 in your letter dated September 11, 2009.

If additional information is required, please contact Ms. Tressa Rutland, Mr. Brent Rabon or Mr. Russell Moncrief, Directorate of Public Works Environmental Division, at (912) 767-2010.

Sincerely,



Kevin W. Milton
Colonel, US Army
Commanding

Enclosure

DESIGNATION OF DULY AUTHORIZED REPRESENTATIVE

General National Pollutant Discharge Elimination System (NPDES) Stormwater Permit No. GAG480000 (Authorization to Discharge under the NPDES; Stormwater Discharges Associated with Small Municipal Separate Storm Sewer Systems at Military Facilities) contains Condition IV.L.1 (Signatory Requirements) as follows.

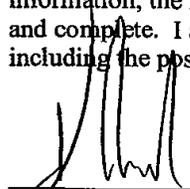
All information submitted to Georgia Environmental Protection Division (EPD), or that this permit requires the permittee to maintain, shall be signed by either a principal executive officer of the Federal Agency, a senior executive officer having responsibility for the overall operation of a unit of the Federal Agency, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by the principal executive officer or senior executive officer described above and submitted to EPD.
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the facility's Stormwater Management Plan such as the position of manager, operator, superintendent, or position of equivalent responsibility.
- c. If an authorization is no longer accurate because of a different individual or position having been authorized, then a new authorization must be submitted to EPD prior to or together with any report, information, or application signed by the authorized representative.

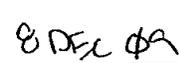
The following Fort Stewart / Hunter Army Airfield representatives are duly authorized in accordance with Condition IV.L.1 of NPDES General Permit No. GAG 480000.

- Directorate of Public Works (DPW) – Director
- DPW Environmental Division (Env. Div.) – Chief
- DPW Env. Div. Prevention and Compliance Branch – Chief

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.



Kevin W. Milton
Colonel, U.S. Army
Commanding



Date

STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

GEORGIA NOTICE OF INTENT (GaNOI)

General NPDES Permit No. GAG480000 for
Small Municipal Separate Storm Sewer Systems (MS4)
At Military Facilities

I. General Information

A. Name of small MS4: United States Army Garrison Fort Stewart

B. Ownership Status

1. Check the military branch having ownership of the MS4:

- a. Air Force
- b. Army
- c. Marine
- d. Georgia National Guard
- e. Navy

2. If the operator of the MS4 is different from the owner, please provide the name of the operator: Directorate of Public Works

C. County where MS4 is located: Liberty

D. Name of responsible official: Directorate of Public Works
Title: DPW Environmental Division, Prevention and Compliance Branch
Mailing Address: 1550 Frank Cochran Drive, Building 1137
City: Fort Stewart State: GA Zip Code: 31314-4928
Telephone Number: (912) 767-2010

E. Designated stormwater management program contact:
Name: Russell T. Moncrief
Title: Stormwater Program Manager
Mailing Address: DPW Environmental Division, Prevention and Compliance Branch, 1550 Frank Cochran Drive, Building 1137
City: Fort Stewart State: GA Zip Code: 31314-4928
Telephone Number: (912) 767-2010/0271
Email Address: Russell.Moncrief@us.army.mil

II. Sharing Responsibility

A. Has another entity agreed to implement a control measure on your behalf?
Yes No (If no, skip to Part III)

III. Base Realignment and Closure (BRAC)

- A. Is your facility scheduled for closure under the BRAC action?
Yes _____ No X (If no, skip to Part IV)
- B. If your facility is scheduled for closure, please provide the schedule, including a list of any stormwater activities that will cease prior to base closure, the date(s) for cessation of these activities, and the date by which final closure of the military facility will occur: N/A

IV. Known or Suspected Water Quality Problems

- A. The name(s) of the receiving waters to which your MS4 discharges (attach a separate list if necessary):
1. Mill Creek, Taylors Creek, ultimately to Canoochee Creek, and the Canoochee River.
 2. Goshen Swamp, Melvin Swamp, ultimately to Peacock Creek
- B. Indicate any receiving water stream segments to which your MS4 discharges, which are included on the latest 303(d) list (attach a separate list of impaired stream segments if necessary):
1. Taylor's Creek (Downstream WPCP Discharge to Drainage Canal, Fort Stewart) on 2002/303d list of streams (Dissolved Oxygen).
 2. Canoochee Creek (at Taylors Creek and the Canoochee River) on 2002/303d list of streams (Dissolved Oxygen).
 3. Canoochee River (Hwy 192 to the Ogeechee River) on 2002/303d list of streams (Dissolved Oxygen, Fecal Coliform, and Fish Consumption Advisory).
 4. Peacock Creek (Highway 144 to the North Newport River) on 2002/303d list of streams (Dissolved Oxygen and Fecal Coliform).
- C. Indicate any stream segments to which your MS4 discharges which have a finalized Total Maximum Daily Load (TMDL) (attach a separate list of the stream segments and TMDLs if necessary):
1. See attached 2009 documentation of TMDL monitoring [Appendix G].

- D. For those stream segments with a TMDL, indicate if you are participating in an approved TMDL Implementation Plan or have BMPs in place to address the pollutant(s) of concern: [see Appendix G and below]

Non-Structural BMPs:

1. Annual TMDL Sampling performed since CY2006 of receiving waters for listed TMDLs where Industrial Activities discharge; it does not appear as though stormwater discharges from the Fort Stewart MS4 contribute directly or indirectly to a 303(d) listed (impaired) water body.
2. Weekly construction site Erosion & Sedimentation Inspections performed, documenting compliance with Erosion & Sedimentation Pollution Control Plans and NPDES permitting for Construction Activities.

Structural BMPs:

1. Automatic Stormwater Samplers collect samples from major receiving Channels of the collection system for each rain event, recording rainfall and stream levels. Samples are visually analyzed for color, odor, turbidity, floating solids, settled solids suspended solids, foam and oil sheen. Then photo documentation of these samples and analysis are placed in the Installation Master Stormwater Pollution Prevention Plan.
2. The Georgia Stormwater Manual & Coastal Stormwater Supplement are utilized for Construction Designs/Projects. Project sites are required to install structural BMPs that is applicable for each site, such as retention/detention basins, bio-retention cells, infiltration ditches, vegetated swales, etc...for compliance with the Pre/Post NPDES permitting requirements.
3. Implementation of Low Impact Development Pilot Projects which demonstrate LID techniques that can be utilized for meeting NPDES Permitting requirements of water quality for stormwater runoff.

V. Industrial Activities

- A. Are any industrial activities requiring coverage under the Georgia NPDES General Permit No. GAR000000 for Storm Water Discharges Associated with Industrial Activities located within your facility?
Yes No (If No, Skip to Part VI)
- B. If yes, please list the industrial activities requiring coverage and the corresponding SIC Code: 0811, 0851, 1541, 1542, 2411, 2711, 4011,

4013, 4119, 4214, 4581, 5093, 5171, 4941, 4952, 4853, 4939, 4959,
7623, 7692, and 7699.

VI. Minimum Control Measures

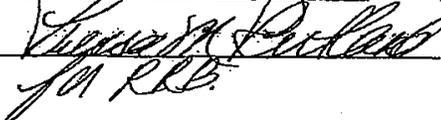
The NOI must include at least two BMPs for each of the six minimum control measures:

- A. Public Education and Outreach
- B. Public Involvement/Participation
- C. Illicit Discharge Detection and Elimination
- D. Construction Site Stormwater Runoff Control
- E. Post-Construction Stormwater Management in New Development and Redevelopment
- F. Pollution Prevention/Good Housekeeping

VII. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Robert R. Baumgardt Title: Director, Public Works

Signature: 

Date: 12/17/09

Version 11/08

Version 11/08

Appendix A

Public Education and Outreach on Stormwater Impacts

NPDES Permit Part IV.B.1 Requirement: You must implement a public education program to distribute educational materials to the base community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the base community can take to reduce pollutants in storm water runoff.

A. Best Management Practice (BMP) #1

1. Target audience*: Soldiers, Tenant Organizations, and Civilian working community.
2. Description of BMP: Fort Stewart has implemented an Environmental Compliance Officer/Environmental Compliance Non-Commissioned Officer (ECO/ECNCO) training course for educating Military Soldiers and Civilian Employees at motorpools and other activity areas. The training is a collaborative effort among the Resource Conservation and recovery Act (RCRA), Stormwater, and Water and Wastewater Programs of EPCB. Training is provided onsite by the EPCB RCRA team and makes use of the train-the-trainer concept. Courses are scheduled 5 times per year and cover the following subjects: good housekeeping BMPs, stormwater compliance, hazardous material/waste handling and storage, and erosion/sedimentation control.
3. Measurable Goal(s): Provide ECO/ECNCO course minimum twice per year. Maintain copies of the ECO/ECNCO training attendance rosters. Provide total number of attendees annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Course scheduled 5 times a year; total number of attendees provided in annual report
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch-RCRA Section Leader-instructors, Stormwater Program Manager, and site personnel.

* For a military facility, the target audience shall be considered to be both the resident population and employee population within the fence line of the facility.

B. BMP #2

1. Target audience: Soldiers, Family Members, Tenant Organizations, Civilian working community, and surrounding local communities.
2. Description of BMP: All Fort Stewart Environmental Divisions Programs and Branches are involved with outreach to students and other individuals in the community during Earth Day, and other local events. Approximately 541 students at schools and 900 individuals at Earth Day Events are impacted on an annual basis. EPCB participates in the surrounding communities Earth Day celebrations, where school age children and the public are educated on stormwater and environmental practices. At these events, EPCB sets up a booth, where environmental-oriented book stickers, refrigerator magnets, posters, brochures, and flyers related to stormwater and illicit discharges are handed out to school children, and storm drain model displays and portable samplers are demonstrated. All Fort Stewart Environmental Divisions Programs and Branches are involved with outreach to students and others in the community during Earth Day, and other local events.
3. Measurable Goal(s): Participate in one (1) local community event each year.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): At least once annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, Stormwater and Public Relations personnel.

C. BMP #3

1. Target audience: Soldiers, Family Members, Tenant Organizations, Civilian working community, and surrounding local communities.
2. Description of BMP: Dissemination of informational posters, literature, and brochures. Informational posters and brochures have been created regarding stormwater and illicit discharges, which are posted in strategic locations for visibility by EPCB to educate and outreach to community areas such as motorpools, recreational areas, the library, the Army and Air Force Exchange Service (AAFES) - Post Exchange (PX), Auto Care Center, and other shopping areas. Poster topics include recycling, accepted pet waste disposal methods, "fat-free" sewers, and the proper disposal of wastes from maintenance and shop rags.
3. Measurable Goal(s): Strategically place 10 stormwater posters and photo document with date/time stamp annually in aforementioned appropriate areas. Distribute 200 ea brochures and literature of stormwater/illicit discharge information in public forums annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): one time annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and stormwater personnel.

D. BMP #4

1. Target audience: Soldiers, Tenant Organizations, and Civilian working community, and Regional Stakeholders.
2. Description of BMP: An Environmental Library is maintained at the EPCB office in Building 1137. The Environmental Library contains relative documents (permits, plans, policies, technical guidance, project summary reports, stormwater maps, and sampling data) regarding all aspects of the Stormwater Program at Fort Stewart. EPCB personnel are responsible for keeping the library materials up-to-date with the most current documentation. The Environmental Library serves as a central environmental repository to educate the community on all aspects of the Stormwater Program and projects at Fort Stewart.
3. Measurable Goal(s): Review and update stormwater materials in the Environmental Library annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): On-going review update at least once annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager

E. BMP #5

1. Target audience: Regional community and other environmental policy groups
2. Description of BMP: EPCB personnel also participate in the Metropolitan Planning Commission and other regional stakeholder meetings on a regular basis as part of outreach and coordination with the local community. These meetings enable EPCB to work with local water-quality professionals and other stakeholders in looking at regional water concerns and watershed planning.
3. Measurable Goal(s): Participate in one (1) County Metropolitan Planning Commission Meeting and/or other local/regional public education and outreach stakeholder meetings annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Once annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager

F. BMP #6

1. Target audience: Installation and surrounding community
2. Description of BMP: Pertinent environmental information will be shared with on/off-base residents and employees via advertisements and public service announcements on the Rock of the Marne television station and the Frontline Installation Newspaper. EPCB will increase their usage of the “Rock of the Marne” television and the “Frontline” Installation Newspaper for publicizing upcoming events and changes or updates to important policies and procedures.
3. Measurable Goal(s): Submit one article per year to run in the Installation Frontline Newspaper.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Submit one article per year for the Installation Frontline Newspaper
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and Public Relations personnel, and Installation Public Affairs Office.

G. BMP #7

1. Target audience: Soldiers and Family Members (Residents Housing)
2. Description of BMP: Residential town hall and owners meetings. Residents participate in Government Military Housing (GMH)/DPW Housing Division [GMH] town hall and owners meetings, where environmental issues may be reported and/or discussed, including stormwater management, illicit discharges, fat-free sewers, and pet waste disposal, among others. The meetings give the residential community a voice and a stake in environmental stewardship at the Installation.
3. Measurable Goal(s): Disseminate 200 stormwater informational literature and brochures at Installation residential "town hall" owners meetings twice annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): November 2009
 - c. Frequency of actions (if applicable): twice annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, Stormwater, Public Relations, DPW Housing Division and GMH personnel.

Appendix B

Public Involvement / Participation

NPDES Part IV.B.2 Requirement: You must, at a minimum, encourage all sectors of the base community to participate in the implementation of a public involvement/participation program.

A. Best Management Practice (BMP) #1

1. Target audience: Garrison, Military Units, Directorates, Tenant Organizations
2. Description of BMP: Forum meetings are utilized to key in on areas where additional involvement and/or participation from the Military Units, Tenant Organizations, and other Directorates, (such as Housing Division & Residents, Morale Welfare and Recreation, and Services Division) are needed to assist with all aspects of environmental compliance.
3. Measurable Goal(s): Attend and participate in two (2) Environmental Quality Control Committee (EQCC) forum meetings with Garrison Commander and other sectors of the Installation community annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): 2 times a year
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Garrison, Directorate of Public Works, and DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and Public Relations personnel.

B. BMP #2

1. Target audience: Soldiers, Family Members, Residents, Tenant Organizations, and Civilian working community.
2. Description of BMP: A Command Policy Letter has been established for Installation wide participation in the recycling program. The recycling program currently processes paper, plastics, aluminum, glass, POL, and batteries. There are designated drop off locations, curbside pick up for residents, and at each facility (not residential-except for Single Soldiers Barracks) a blue recycling dumpster is placed along side the brown waste dumpster, which are picked up weekly and taken to the Installation recycling center for processing. At each EQCC meeting an award of monetary value is presented to Active Units which have excelled with the program.
3. Measurable Goal(s): Awarded two (2) Military Units annually for successful implementation of the program. Maintain number of weekly curbside pickups of recyclable materials. Track total amount of material recycled.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Award two (2) Military Units awarded annually and total amount of material recycled.
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Recycling Program and Stormwater Program Manager.

C. BMP #3

1. Target audience: Soldiers, Residents, Tenant Organizations, and Civilian working community.
2. Description of BMP: Community concerns and complaints (e.g., illegal dumping, polluting activities, etc.) are registered through the GMH, DPW Housing & Services Division's, and/or the EPCB phone lines. Promotional items distributed at various community events are printed with the EPCB phone number.
3. Measurable Goal(s): Respond to 100% of complaints within 24 hrs. Track and report annually the number of complaints received.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Ongoing-document-total number of complaints/time efficiency responses annual totals.
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: GMH, DPW, RCI and DPW Services and Environmental Prevention & Compliance Branches/Stormwater Program Manager.

D. BMP #4

1. Target audience: Director, Public Works, DPW Engineering, Services, Residential Housing and Environmental Division's, Tenant Organizations, Soldiers, Industrial Activities.
2. Description of BMP: Implementation of storm drain identification program. Presently the Phase I Industrial Activities are identifying storm drains with either an fish stencils painted in yellow or painting areas surrounding inlets with yellow paint to prevent the dumping of illicit substances into the stormwater collection systems. EPCB will implement a storm drain identification program with the assistance of Installation Tenant organizations, other divisions, and Military Units by stenciling with identifying markings such as fish stencils, yellow paint, or medallions noting drain discharges to a fresh water stream in administrative areas, parking lots and residential areas.
3. Measurable Goal(s): Identify and mark twenty-five (25) Phase II MS4 storm drains per year in residential housing areas, parking lots, and administrative areas. Once all storm drains have been identified and marked will refurbish as needed.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately-Phase I Industrial Activities presently identified by stenciling or yellow paint
 - b. Implementation Date (if applicable): June 2010
 - c. Frequency of actions (if applicable): annually
 - d. Month/Year of each action (if applicable): on-going
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, stormwater personnel, Military Units and Installation Tenant Organizations.

* For a military facility, the target audience shall be considered to be both the resident population and employee population within the fence line of the facility.

Note: The MS4 is not limited to implementing only 2 BMPs for each minimum control measure. If additional BMPs are chosen, then you should attach additional sheets as needed.

Appendix C

Illicit Discharge Detection and Elimination

NPDES Permit Part IV.B.3 Requirement: You must develop, implement and enforce a program to detect and eliminate illicit discharges into your small MS4. You must:

- A) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the State that receive discharges from those outfalls*;
- B) Effectively prohibit, through a regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;
- C) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and
- D) Inform the base community of hazards associated with illegal discharges and improper disposal of waste.

A. Storm Sewer Map

1. Does the MS4 have a completed storm sewer map showing the location of all outfalls and the names and location of all waters of the State that receive discharges from those outfalls? Yes X No

**Preliminary mapping has been completed by FY09; however, additional work and updating of existing mapping is needed.

2. If the storm sewer system map must be developed, provide a schedule for completion (e.g. 30% of system to be mapped each year): 20% of the MS4 outfalls will be mapped per year

Final completion date/ date for submittal to EPD (No later than two years from the issuance date of the Permit: 15 July 2013)

*For military facilities, the map should identify the following features: [please see enclosures for bullets noted below]

- Delineation of the physical area of the facility (e.g. fence line);
- Areas of the facility covered by an existing NPDES Permit; and
- Any outfalls covered by an existing NPDES Permit.

B. Regulatory Mechanism Evaluation

1. Does the MS4 have a regulatory mechanism that effectively prohibits illicit discharges? Yes X No _____

If yes, submit a copy as an addendum to this form. (**Appendix E-1 Army Regulation 200-1 Section 4-2 Water Resources**)

2. If an evaluation of the regulatory mechanism must be completed, or the MS4 is aware that the regulatory mechanism will require revision, then a schedule for development of the document should be provided:

Task
N/A

Interim Date
N/A

Final completion date/ date for submittal to EPD (No later than two years after issuance date of the Permit): N/A

C. Best Management Practice (BMP) #1

1. Target audience: DPW Environmental Prevention & Compliance Branch
2. Description of BMP: EPCB will implement and develop an illicit discharge prevention program utilizing several strategies. Preliminary mapping completed; however, additional work and updating is required. The illicit discharge detection component of the program will center on developing a comprehensive geographic information system (GIS) mapping database of the MS4 Populated Area. The Arc-GIS-based mapping system will include coverage of stormwater utilities (piping, ditches, retention/detention basins, and drain inlets), watersheds, Phase II outfalls, and current stream sampling locations. Elements of the GIS system will be developed from existing facility plans and schematics, aerial photography, satellite imagery, field inspections, ground-truth studies, and U.S. Geological Survey (USGS) quadrant maps. In many cases, existing electronic data are converted from a variety of file formats to Arc-GIS formats. Other elements will also be added to the database, including land use, geology, and water-quality information. The GIS system will allow EPCB to review cross-connections, dry-weather discharges, and potential illegal dumping points. All Phase II outfalls will be field-verified using global positioning system units.
3. Measurable Goal(s): Complete updates to mapping by 2013; approximately 40% by completed by 2011, approximately 60% completed by 2012 and 100% by 2013.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Existing-Immediately
 - b. Implementation Date (if applicable): Continual as needed
 - c. Frequency of actions (if applicable): 40% 2011
60% 2012
100% 2013
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, GIS technician, and DPW Engineering Division.

D. BMP #2

1. Target audience: DPW Environmental Prevention & Compliance Branch
2. Description of BMP: Dry Weather Visual inspections Phase II MS4 Outfalls, Development of IDDE Plan for NSWDC inspections, testing, monitoring, and designed fixes, Outfall Reconnaissance Inventory (ORI), Development of ORI Standard Operating Procedures and existing Stormwater SOP revisions.

(a). EPCB will develop an IDDE Plan for all Installation outfalls, including an outfall reconnaissance inventory (ORI) of outfalls and discharge points. An initial dry weather screening of drainage ditches, piping, and high-risk areas for illicit discharges will be completed for visual signs of illicit discharges, which ultimately discharge to the Phase II MS4 outfalls. Discharges will be observed for rate of flow, color, oil sheen, floatables, stains from illicit dumping, and odor. If NSWDCs are discovered, the team will back track the system to determine the source and samples will be collected and analyzed per the IDDE Guidelines for parameter sampling. Once the source is determined the findings with recommendations for eliminating the discharge will be submitted to DPW Services Division. In certain cases, advanced screening techniques may need to be employed (e.g., dye tests, smoke tests, and camera inspections). The ORI will focus on specific outfalls and serve as an added tool in the development of a database of potential illicit discharges. From the results of the ORI, efforts to eliminate and prevent illicit discharges will be focused on specific areas or activities, allowing EPCB to further develop education and outreach strategies. EPCB will develop ORI Standard Operating Procedures that enforces compliance with the Stormwater Management Program, which includes the prohibition of illicit discharges. These Standard Operating Procedures will be distributed as needed, and will be available on the Installation intranet.

(b). EPCB will visually inspect the Phase II MS4 outfalls which discharge to the Waters of the State during dry weather for signs of NSWDCs utilizing Fort Stewart/Hunter Army Airfield Dry Weather Screening Procedures (**Appendix C-1**). Visually inspecting the discharge for biological indicators including: emergent vegetation, algae blooms, lack of or stunted vegetation, presence or absence of aquatic life, and fish kills. If NSWDCs are discovered, the team will back track the system to determine the source and samples will be collected and analyzed per the attached procedures for parameter sampling. The team will submit findings with recommendations for eliminating the discharge.

3. Measurable Goal(s): Upon completion of the initial screening the team will screen 25% of the MS4 outfalls per year.

4. Schedule:

(a).

1. Implementation Date (if applicable): April 2010
2. Submit to GA EPD for review April 2010
3. Frequency of actions (if applicable): N/A
4. Month/Year of each action (if applicable): N/A

(b).

1. Implementation Date (if applicable): June 2010
2. Frequency of actions (if applicable): 25% of outfalls per year
3. Month/Year of each action (if applicable): N/A

5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, stormwater personnel, DPW Services Division and contractors.

E. BMP #3

1. Target audience: DPW Environmental Prevention & Compliance Branch
2. Description of BMP: Existing Department of Defense Army Regulations-200-1 and the Unified Facilities Codes for Federal Facilities (Appendix E-1) in conjunction with State regulations establish criteria for identifying illicit discharges and reporting procedures. Utilizing the ORI SOP and annual inspections; violations will be enforced through a progressive system of notices and warnings from any findings during these inspections, with recommendations for corrective actions to be submitted to DPW Services Division within 30 days of discovery-(to follow procedural protocol of notifications and dependant upon cost for these corrections). Installation residents, workforce and Military personnel will report any violations EPCB, DPW Services Branch, and/or GMH, which will be brought to attention at the GMH residential town hall meetings, EQCC meetings with the Garrison Commander, Military Units and other Directorates in attendance, and filed at the Environmental Library (noted in Public Education/Outreach portion of NOI/SWMP).
3. Measurable Goal(s): Ensure 100% of illicit discharges are documented and corrective actions implemented within 30 days.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Dry Weather Screening Procedures (Appendix C-1) and development of ORI SOP by November 2010.
 - b. Submittal date to GA EPD for review: November 2010
 - c. Implementation Date (if applicable): Posting of ORI SOP and availability Installation Intranet and EP&CB Library January 31, 2011
 - d. Frequency of actions (if applicable): update annually as needed
 - e. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager/DPW Services Division.

Appendix D

Construction Site Storm Water Runoff Control

NPDES Permit Part IV.B.4 Requirement: You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. Your program must include:

- A) A regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance;
- B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
- C) 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;
- D) Procedures for site plan review which incorporate consideration of potential water quality impacts;
- E) Procedures for receipt and consideration of information submitted by the base community; and
- F) Procedures for site inspection and enforcement of control measures.

A. Regulatory Mechanism Evaluation

1. Does the MS4 have a regulatory mechanism which is adequate to require erosion and sediment controls at construction sites?
Yes X An Erosion & Sedimentation Specification for contracts
(Appendix D-1)

2. Does the regulatory mechanism include sanctions for failure to comply with erosion and sediment control requirements?
Yes X No _____

3. If an evaluation of the regulatory mechanism must be completed, or the MS4 is aware that the regulatory mechanism will require revision, then a schedule for development of the document should be provided:

<u>Task</u>	<u>Interim Date</u>
<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>

Final completion date/ date for submittal to EPD (No later than two years after the issuance date of the Permit): N/A

B. BMP #1

1. Target audience: Director, Public Works, DPW Engineering, Services, and Inspections Branches, United States Army Corps of Engineers (USACE), ITAM/Range Division, Construction contractors, Tenant Organizations, Military Units, NRCS and DPW Environmental Division.
2. Description of BMP: DPW EPCB and the National Resources Conservation Service (NRCS) developed an Erosion and Sedimentation (E&S) Control Specification Guidance document to provide detailed Fort Stewart-specific requirements. The guidance document describes approved methods for controlling splash erosion and runoff encountered during land disturbing activities for construction. In addition, from a recommendation made by the Director, Public Works and the Staff Judge Advocate Legal Office, Fort Stewart has developed a stringent size threshold policy requiring construction sites of 0.75 acres or greater to comply with the NPDES stormwater runoff program guidelines, this requirement is more stringent than GA EPD 1 acre requirement. The U.S. Army Corps of Engineers (USACE) has adopted the guidance document and requires contractors to comply. Presently in conjunction with the United States Army Corps of Engineers, the DPW Engineering and Inspections Divisions the E&S Specification and 0.75 acre threshold has been implemented with all contracting for construction development on the Installation. Additionally, in the contracts it requires the contractors to prepare site specific stormwater pollution prevention plans to address waste containment measures, proper storage of operations and equipment, spill prevention, and documentation. This E&S specification will be made available on the Installation intranet public folders.
3. Measurable Goal(s): Ensure E&S Specification is included with 100% of awarded contracts.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Submittal to GA EPD: **Appendix D-1**
 - c. Implementation Date (if applicable): E&S Specification available on Installation Intranet February 2011
 - d. Frequency of actions (if applicable): On-going, update as needed annually with new regulatory or Department of the Army Executive Orders related to the same
 - e. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Director, Public Works, DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager.

C. BMP #2

1. Target audience: Director, Public Works, DPW Engineering and Services Division's, United States Army Corps of Engineers (USACE), ITAM/Range Division, Construction contractors, Tenant Organizations, Military Units and DPW Environmental Division.
2. Description of BMP: To enforce the guidelines, EPCB and NRCS provides annual Stormwater Construction E&S Training and information related to any new effective technologies available for utilization during construction activities, at the Installation to educate USACE and their contractors, Engineering Division personnel, the roads/grounds O&M contractor, Environmental Division forestry and fish and wildlife branch personnel, and any other contractor or tenant agency involved with land disturbance activities on Fort Stewart.
3. Measurable Goal(s): Hold one (1) training event annually. Maintain copies of training attendance rosters with the total number of attendees annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Once annually (spring March-May)
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and NRCS.

D. BMP #3

1. Target audience: Director, Public Works, DPW Engineering and Services Division's, USACE, ITAM/Range Division, Contractors, Tenant Organizations, and DPW Environmental Prevention & Compliance Branch.
2. Description of BMP: Certified personnel from EPCB and the NRCS, located at Fort Stewart, conducts weekly inspections of construction sites. A Construction site compliance inspection checklist is utilized with photo documentation of positives as well as deficiencies noted at each site. Upon completion of inspections, the report is disseminated to all concerned with timelines for correction of any noted deficiencies; follow-up inspections are performed and documented. Inspection items include site hydrology, Erosion and Sedimentation Pollution Control Plan (E&SPCP) BMPs, E&S State Certified personnel on site, spill prevention and controls, dust control measures, waste containment measures, operations and equipment, and site specific daily, weekly, monthly inspections and rain data logs documentation. Construction site inspections are prioritized based on known violations, proximity to stormwater conveyances and natural water bodies, complexity of operations, and overall disturbed acreage. NRCS is responsible for "technical oversight," reviewing and approving submitted E&SPCPs. Community concerns/complaints regarding construction sites are addressed similarly as to Public Involvement BMP # 4; memorandums for record are documented describing the complaint and corrective actions taken.
3. Measurable Goal(s): Construction compliance site inspections will be performed weekly DPW Environmental Prevention & Compliance Branch personnel. Track and report total number of inspections performed annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Weekly Inspections
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, Stormwater Personnel, and NRCS.

E. BMP #4

1. Target audience: Director, Public Works, DPW Engineering, Services, Division's, USACE, ITAM/Range Division, Contractors, Tenant Organizations, and DPW Environmental Prevention & Compliance Branch
2. Description of BMP: Erosion and Sediment Pollution Control Plans (E&SPCP); NRCS is responsible for "technical oversight," reviewing and approving 100% of the submitted E&SPCPs by contractors for projects on the Installation. Although the E&SPCP must be reviewed by NRCS, EPCB is responsible for coordinating the completion of the Notice of Intent (NOI) to maintain compliance. DPW as "owner" is ultimately responsible for signing the NOI submitted to the State of Georgia.
3. Measurable Goal(s): NRCS will review 100% of the construction site E&SPCPs. The total number of plans submitted for review will be tracked and reported in the annual report.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: NRCS, DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager.

F. BMP #5

1. Target audience: Director, Public Works and construction site operators
2. Description of BMP: Notice of Intent's (NOI's) Construction Director, Public Works and construction site operators jointly sign Construction NOI's, the DPW as "owner" for Installation Projects. NRCS will be responsible for "technical oversight," reviewing and approving 100% of the submitted E&SPCPs. Although the E&SPCP must be reviewed by NRCS, EPCB is responsible for coordinating the completion of the Notice of Intent (NOI) to maintain compliance. DPW as "owner" is ultimately responsible for signing the NOI submitted to the State of Georgia.
3. Measurable Goal(s): EPCB will continue to encourage cooperation in the construction community by requiring DPW and the site operator to jointly sign 100% of the submitted NOIs.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Director, Public Works, DPW Environmental Prevention & Compliance Branch Stormwater Program Manager, and contractors

G. BMP #6

1. Target audience: Garrison, Military Units, Directorates, Tenant Organizations
2. Description of BMP: Forum meetings are utilized to key in on areas where additional involvement and/or participation from the Military Units, Tenant Organizations, and other Directorates, (such as Housing Division & Residents, Morale Welfare and Recreation, and Services Division) are needed to assist with all aspects of environmental compliance.
3. Measurable Goal(s): Attend and participate in two (2) Environmental Quality Control Committee (EQCC) forum meetings with Garrison Commander and other sectors of the Installation community annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): 2 times a year
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Garrison, Directorate of Public Works, and DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and Public Relations personnel.

Appendix E

Post-Construction Storm Water Management in New Development and Redevelopment

NPDES Permit Part IV.B.5 Requirement: You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development that discharge into your small MS4. You must:

- A) Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for your community, including use of the Georgia Stormwater Management Manual or an equivalent stormwater management design manual;
- B) Use a regulatory mechanism to address post-construction runoff from new development or redevelopment projects; and
- C) Ensure adequate long-term operation and maintenance of BMPs.

A. Regulatory Mechanism Evaluation

1. Does the MS4 have a regulatory mechanism that effectively controls runoff from new development or redevelopment construction sites?
Yes X and No _____

If yes, submit a copy as an addendum to this form. (*Federal Executive Order #13423 The EISA 2007 and Executive Order #13451- 5 OCT 09- Requires low impact development related to stormwater runoff to maintain or restore the predevelopment hydrology of the property for new or redevelopment projects with a footprint of 5,000 square feet (0.11 acres) or more to the maximum extent practicable. Additionally, DoD Facilities are required to utilize the United Facilities Criteria (UFC) Manual for Low Impact Development Design for DoD Facilities, design to LEEDs Silver Standards, and utilize the USACE PWTB 200-1-62 LID for Sustainable Installations: Stormwater Design Planning Guidance for Development within Army Training Areas is required: [Appendix E-1]*).

In addition, when reviewing projects for the National Environmental Policy Act EIS, EAs and/or RECs; it is noted to assist with implementing designs for compliance with NPDES Stormwater Permitting requirements for Pre/Post Construction: Sites involving at least 0.11 acres of land disturbance must include flow calculations demonstrating concentrated runoff flows from peak rain events will not impact (a) the existing stream,

(b) upstream systems, and (c) downstream systems of the site as required for Total Maximum Daily Loads (TMDLs) for water quality standards for the removal of any potential pollutants. By removing Total Suspended Solids [TSS] by 80%; maintaining predevelopment time of concentration by strategically routing flows to maintain travel time, improve water quality, and to control the discharge.

To meet the NPDES Permitting requirements for Pre/Post Construction, the Energy & Independence Security Act of 2007, and the TMDL requirements; utilization of the Coastal Stormwater Supplement [CSS] in the Georgia Stormwater Management Manual

<http://www.box.net/shared/static/puss89kpgf.pdf>

Worksheet to ensure consistency with CSS, April 2009:

<http://www.box.net/shared/static/al69icbt6p.xls>

Must be utilized for site designs.

2. If an evaluation of the regulatory mechanism must be completed, or the MS4 is aware that the regulatory mechanism will require revision, then a schedule for development of the document should be provided:

Task

N/A

N/A

N/A

Interim Date

N/A

N/A

N/A

Final completion date/ date for submittal to EPD (No later than two years after the issuance date of the Permit): N/A

B. Best Management Practice (BMP) #1

1. Target audience: Director, Public Works, the DPW Master Planning, Engineering, Services (Roads & Grounds), and Environmental Divisions, USACE, ITAM/Range Division & Contractors.
2. Description of BMP: Development of the Installation Stormwater Guidance, distribute by making available from the Installation intranet public folders-will reinforce the state and federal regulatory requirements. The development of Stormwater Guidance will assist with compliance of the SWMP, including requirements for post-construction stormwater management. The policy will target contractors and applicable units and tenants who are subject to comply with existing stormwater policies. Upon completion of the guidance it will be forwarded to the Staff Judge Advocate Office for legal review; once approved it will be implemented Installation wide. The policy will be distributed as necessary (e.g., noted during NEPA project reviews, Design Charrettes, and pre-construction meetings, and made available on the Installation intranet). Develop Stormwater Guidance by June 2010. The guidance will require compliance with the Installation Stormwater Program and the NPDES permitting requirements, including the maintenance and inspection of post-construction BMPs, upon completion of the guidance it will be forwarded to the Staff Judge Advocate Office for legal review; once approved it will be implemented Installation wide.
3. Measurable Goal(s): 100% of the post construction projects will be reviewed for compliance with the Stormwater Guidance.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Develop by June 2010
 - b. SJA legal and Submittal to GA EPD for review: by July 2010
 - c. Implementation Date (if applicable): upon approval of SJA/GA EPD December 2010
 - d. Frequency of actions (if applicable): On-going, update as needed
 - e. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Director, Public Works and Environmental Prevention & Compliance Branch/Stormwater Program Manager

C. BMP #2

1. Target audience: Director, Public Works, the DPW Master Planning & Engineering Divisions, ITAM/Range Division, USACE & Contractors, DPW Environmental Prevention & Compliance Branch.
2. Description of BMP: Up-dates of the Installation Design Guide (IDG-Appendix E-2): The Fort Stewart Master Planning Division, with assistance from the U.S. Army Construction Engineering Research Laboratory (USACERL), will review and update the IDG. The IDG provides LEEDs standards on master planning and will encourage the use of LID to reduce stormwater pollution. The primary goals of LID enhancements are to reduce the volume of runoff and find beneficial uses for runoff water to eliminate disposal into the storm sewer. LID guidelines will (1) provide examples of approved LID methods and techniques for use in post-construction projects, including vegetative swales, water-tolerant native plants, rain gardens, bio-retention, and porous pavement systems, among others; and (2) provide continuity among Installation projects. LID will also reduce curbing and gutters, and the number of standing water ponds at the Installation, by requiring dry detention basins. Reducing curb/gutter systems encourages the infiltration of "flash" stormwater runoff into the ground, reducing the potential for erosion and increased sediment loads in area streams. Eliminating standing water ponds reverts stormwater drainage to more natural conditions, reduces mosquito problems, and ensures that new development stormwater runoff is better than or similar to pre-construction stormwater runoff, improving water quality and limiting the impacts of flooding of existing stormwater conveyance systems. EPCB will work closely with Master Planning and USACERL, to increase the use of LID techniques for Installation development and re-development projects. Upon approval, the IDG will be distributed to the other divisions and applicable tenant organizations. The IDG will be reviewed and updated as needed with new regulatory guidelines. Review, updating, and adhering to the IDG will provide guidance on master planning and mandate the use of Low Impact Development BMPs to reduce stormwater pollution.
3. Measurable Goal(s): IDG will be updated once every three-five years. The IDG will be utilized for 100% of development and re-development projects.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Update 1 time every 3-5 years
 - d. Month/Year of each action (if applicable): N/A

5. Person (position) responsible for overall management and implementation of the BMP: Director, Public Works, and Master Planning & Engineering Divisions, USACE and the DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager

D. BMP #3

1. Target audience: Director, Public Works, DPW Master Planning, Engineering, Services, and Environmental Divisions, USACE, ITAM/Range Division.
2. Description of BMP: Inspection and Maintenance of Post Construction Stormwater Structures. Fort Stewart presently has 13 engineered stormwater Retention Basins: one (1) off 15th Street near an elevated water tank, one (1) at the General Issue Facility at 6th Street and Essayons, five (5) collecting runoff from the UA-4 Modular Housing and Battalion/Brigade Headquarters Facilities along West 6th Street, three (3) at the Single Soldiers North Barracks off West 6th Street at Essayons, one (1) at the Single Soldiers South Barracks West 6th Street off tank trail 90, two (2) at the 4IBCT [formerly 5th BCT] Barracks, Dinning, Battalion/Brigade Headquarters, Physical Fitness Center and Vehicle Maintenance Facilities off GA Hwy 144 East at Tank Trail 47.

There are three (3) Bio-retention cells located at the Single Soldiers Barracks Bldgs. 501-504 and two (2) Rain Gardens located at Bldg. 1137.

There are various engineered Detention Basins, facilities include: FS Permanent Elementary School, FS Child Development Center-Hase Road and Lindquist, FS Chapel-Gulick Ave., Vehicle Maintenance Facility-West 15th St., Company Operations Facility-West 15th St., Tactical Equipment Complex-West 15th St., Dining Facility-West 6th St., EAB Barracks [48 Man Barracks]- tank trail 90 near South Barracks, Army Air Force Exchange Services-6th St. Mini-Mall and Harmon Gate Mini-Mall, several along Wilson Ave, FS Education Center-Main Gate Entrance, Secure Command & Control Facility and 2nd LT Audie Murphy Building/Soldiers Services Center-East Baultman Ave. at Hase Road, RV Storage & Pet Boarding Facility-Holbrook Pond, Explosive Ordnance Disposal Complex-GA Hwy 144 East, 4IBCT Company Operations Facilities-GA Hwy 144 East at Tank Trail 47, WAAF-Mid Coast Regional Airport-WAAF, and any new construction activity designs are to be dry detention per the DPW Engineering Policy Letter #10. The GSMM-CSS, USEPA and/or Center for Watershed Protection Inspection Checklist and Recommended Maintenance schedules for the specific type structure will be utilized for these inspections. An inventory of these detention basins is being performed.

3. Measurable Goal(s): EPCB will implement an Inspection Schedule for these basins and inspect 20% of the structures annually. When maintenance is needed a Service Order will be generated within 24 hours of discovery.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Complete the inventory of existing basins by January 31, 2010

- b. Implementation Date (if applicable): February 2010
 - c. Frequency of actions (if applicable): 20% of the structures inspected annually
 - d. Month/Year of each action (if applicable): Update structures inventory as needed annually
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, Services Division O&M Contractor.

E. BMP #4

1. Target audience: Garrison, Military Units, Directorates, Tenant Organizations
2. Description of BMP: Forum meetings are utilized to key in on areas where additional involvement and/or participation from the Military Units, Tenant Organizations, and other Directorates, (such as Housing Division & Residents, Morale Welfare and Recreation, and Services Division) are needed to assist with all aspects of environmental compliance.
3. Measurable Goal(s): Attend and participate in two (2) Environmental Quality Control Committee (EQCC) forum meetings with Garrison Commander and other sectors of the Installation community annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): 2 times a year
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Garrison, Directorate of Public Works, and DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and Public Relations personnel.

Appendix F

Pollution Prevention/ Good Housekeeping for Municipal Operations

NPDES Permit Part IV.B.6 Requirement: You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal-type operations. In addition, the operation and maintenance program must address the following areas:

- Maintenance activities including maintenance schedules and long-term inspection procedures for controls to reduce floatables and other pollutants from the MS4.
- Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, waste transfer stations, fleet and maintenance shops with outdoor storage areas, and salt/sand storage locations.
- Procedures for the proper disposal of waste removed from the MS4 and municipal-type operations, including dredged spoils, accumulated sediments, floatables, and other debris.

A. Best Management Practice (BMP) #1

1. Target audience: Director, Public Works, the DPW Master Planning, Engineering, Services (Roads & Grounds), and Environmental Divisions, USACE & Contractors.
2. Description of BMP: Revisions of existing Installation Stormwater Maintenance SOP (**Appendix F-1**). The existing Stormwater Standard Operating Procedures for stormwater conveyance systems will ensure compliance with the Installation's SWMP, including the maintenance and upkeep of the stormwater conveyance system (e.g., canals, streams, and major drainage ditches, etc.). The SOP will target contractors, applicable units, and tenant organizations that are subject to comply with the existing stormwater policies, focusing on the maintenance and inspection of major stormwater conveyances on the Installation. The SOP will be distributed as necessary and made available on the Installation Intranet. However; revisions will be made to include maintenance of catch basins, inspections schedules with quantities for inspections Qrtly/annually for maintenance; requirements of the Georgia Erosion and Sediment Control Manual, which serves as a technical guide for land disturbing activities; and the Georgia Stormwater Manual/Coastal Stormwater Supplement recommended inspection checklists. All Installation contractors, tenant organizations, and Military Units will be required to follow the SOP. Update and re-distribute Installation Stormwater (major ditches, streams and canals) Maintenance SOP, which requires compliance with USEPA guidelines for ditches, streams, and canals maintenance, the Georgia Erosion and Sediment Control Manual, and the Georgia Stormwater Management Manual/Coastal Stormwater Supplement. Establishes a standard approach for major collection system maintenance for the Installation that is consistent with State policy. Ensures the system is in proper operating order and will assist with discovery and elimination of illicit discharges. Stormwater conveyances will be serviced as needed by Service Order requests, following E&S, Stormwater Guidance and Stormwater SOPs. Ensures the system is in proper operating order for rain events. EPCB will initiate Service Orders for any repairs of the system with the DPW Services Division, for Operations & Maintenance.
3. Measurable Goal(s): Update and distribute the Installation Stormwater (major ditches, streams and canals) Maintenance SOP. Inspect 20% of stormwater conveyance systems annually. Within 10 days of discovery, submit Service Orders for needed MS4 repairs to the DPW Services Division Operations & Maintenance Branch.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Update of existing SOP August 2010

- b. Submit to GA EPD for review: August 2010
 - c. Implementation Date (if applicable): September 2010
 - d. Frequency of actions (if applicable): Inspections of conveyances for deficiencies once quarterly, submit service orders for repairs/maintenance as needed
 - e. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: Director, Public Works and Environmental Prevention & Compliance Branch/Stormwater Program Manager/DPW Services Division.

B. BMP #2

1. Target audience: Soldiers, tenant organizations, municipal operations & maintenance, civilian and housing personnel
2. Description of BMP: Municipal Operations personnel, Recycling, and Solid Waste Training. The ECO/ECNCO Environmental training course trains designated Soldiers, Tenant, Civilian, Municipal and Housing personnel regularly in good housekeeping and preventive maintenance procedures for Industrial Activities such as tracked/wheeled vehicles and fleet maintenance areas, waste transfer stations, wastewater and industrial treatment facilities; waste disposal such as hazardous waste storage & handling, the Fort Stewart sanitary, yard waste and construction debris landfills. EPCB's RCRA team and the Recycling Program team schedules, conducts, and tracks this training, which operates on a train-the-trainer concept for the local community and for each facility to have a Recycling/Solid Waste Compliance Person. Training is conducted both at centralized locations and onsite. Topics include maintenance inspections, stormwater management, and hazardous material management, recycling and solid waste management, good housekeeping and preventive maintenance. Educates selected Soldiers, civilian workforce, Operations & Maintenance and housing personnel in importance of environmental requirements.
3. Measurable Goal(s): Provide ECO/ECNCO course minimum twice per year. Maintain copies of ECP/ECNCO training attendance rosters. Provide the total number of attendees annually.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): annual report
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, RCRA Section Leader-Instructors, Recycling Program Instructors, ECO/ECNCOs-once training has been completed.

C. BMP #3

1. Target audience: Soldiers, tenant organizations, municipal operations & maintenance, civilian and housing personnel
2. Description of BMP: Municipal Operations, Recycling, and Solid Waste Inspections. EPCB's Stormwater, RCRA and the Recycling Program teams perform inspections of facilities to ensure compliance of industrial activities and to ensure other facilities are compliant with good housekeeping and preventive maintenance procedures for such as tracked/wheeled vehicles and fleet maintenance areas, waste transfer stations, wastewater and industrial wastewater treatment facilities; waste disposal such as hazardous waste storage & handling, the sanitary, yard waste and construction debris landfills, and the solid waste and recycling programs. Inventory of current facilities (**Appendix F-1**). These inspections include areas of maintenance, equipment storage, stormwater management, and hazardous material management, recycling and solid waste management, good housekeeping and preventive maintenance. Ensures Soldiers, civilian workforce, operations & maintenance, and housing personnel are aware of proper procedures, and are adhering to the environmental compliance requirements for several media areas.
3. Measurable Goal(s): Conduct inspections of 20% of the total number of the facilities annually. Update facility inventory annually. Track and report the total number of inspections performed on an annual basis.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): annual report
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager, RCRA Section Leader-Instructors, Recycling Program Instructors, ECO/ECNCOs-once training has been completed.

D. BMP #4

1. Target audience: Soldiers, tenant organizations, municipal operations & maintenance, civilian and housing personnel
2. Description of BMP: Areas of the MS4 are serviced once weekly by pick up for recycling and solid waste in residential housing, Soldiers Barracks, administrative, and industrial areas. Construction sites have appropriate roll-off containers at each construction site to ensure appropriate pick-up and sorting of waste materials. Military Units monitor their respective areas and are assigned other areas for litter pick-up which is disposed of in appropriate dumpsters for pick-up by the aforementioned truck services. This prevents large amounts of trash, litter and recyclables from accumulating on roadways, in catch basins, and in riparian areas. The waste trucks are then directed to the appropriate facility on the Installation, such as sanitary waste, yard waste, construction debris land fills, and the recycling processing areas where they are weighed and weight tickets are utilized for tracking and documentation.
3. Measurable Goal(s): Track and report total tonnages of 100% sanitary waste, yard waste, construction debris, and recycling on an annual basis.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): Once per year
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager and stormwater personnel, and DPW Housing Division.

E. BMP #5

1. Target audience: Installation community
2. Description of BMP: Storm sewer system problems and illegal dumping complaints may be reported to the GMH, DPW Services Branch, or EPCB phone lines. Reporting of storm sewer system problems or issues, and illegal dumping to DPW Housing and Services Division, or DPW Environmental Prevention & Compliance Branch phone lines. Provides medium for community to file complaints and feedback.
3. Measurable Goal(s): Respond to 100% of complaints within 24 hours.
4. Schedule:
 - a. Interim Milestone Dates (if applicable): Immediately
 - b. Implementation Date (if applicable): Immediately
 - c. Frequency of actions (if applicable): On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: DPW Housing and Services Division's, and DPW Environmental Prevention & Compliance Branch/Stormwater Program Manager

APPENDIX G

Fort Stewart Total Maximum Daily Loads [TMDLs] Plan

The Fort Stewart [FS] Municipal Separate Storm Sewer System [MS4] discharges stormwater into the following surface waters: Mill Creek, Taylors Creek (which discharges into a tributary of Canoochee Creek and ultimately into the Canoochee River); and Goshen and Melvin Swamps (which drain into Peacock Creek).

Peacock Creek, Taylors Creek, and Canoochee Creek are 2008 303(d) listed streams (*Georgia Environmental Protection Division's "Total Maximum Daily Loads" Web Page*). The 303(d) list includes all surface waters in the State for which beneficial uses of the water, such as drinking, recreation, aquatic habitat, and industrial use, are impaired by pollutants.

It does not appear as though stormwater discharges from the FS MS4 contribute directly or indirectly to a 303(d) listed (impaired) water bodies. Canoochee Creek (at Taylors Creek and the Canoochee River and a tributary of Taylors Creek from Hinesville Waste Water Treatment Plant) was on the 303(d) list during the 2008 cycles for dissolved oxygen. Peacock Creek (at Highway 144 to the North Newport River) was also on the 303(d) list during the 2008 cycles for dissolved oxygen (DO) and fecal coliform (FC). Total Maximum Daily Loads [TMDLs] were developed and approved for Taylors Creek, Canoochee Creek, and Peacock Creek.

The Stormwater Management Plan [SWMP] applies to the FS MS4 Urbanized Areas, which includes hundreds of linear miles of roadways and stormwater sewer utilities, and several stormwater discharge areas. The storm sewer system draining the Urbanized Area is considered an MS4. Information on the FS MS4, including pipes, ditches, swales, outfalls, and drainage areas [illustrated on the enclosed map titled FS-MS4 Appendix G-TMDLs Sampling Locations Map].

The majority of the FS MS4 outfalls discharge into stream segments or wetlands which discharge into a 303(d) listed impaired water body. There are some outfalls which discharge directly into the impaired stream of Taylors Creek tributary in the central portion of the FS MS4 [illustrated on the enclosed map titled 2008 303(d) Listed Streams-FS Discharge Outfalls]. The western portion of the FS MS4 drains into Mill Creek, which flows north toward Taylors Creek. The central and northeastern portions of the MS4 areas drain into Taylors Creek. The western, northeastern and central portions that discharge into Mill Creek and Taylors Creek ultimately discharge to Canoochee Creek and then into the Canoochee River. The eastern portion of the FS MS4 includes the Southern Oaks residential housing, the GA Army National Guard Training areas, and Wright Army Airfield (WAAF), which drains into Melvin and Goshen Swamps, respectively. Evans Army Airfield simulation training area and Land Application System [off GA Hwy 144E] drains southwestward into Big Swamp which ultimately drains into Goshen Swamp. Goshen and Melvin Swamp's ultimately discharge into Peacock Creek. The Tac-X Non-Commissioned Officer Academy and

wastewater treatment lagoons area drains into wetlands and an un-named tributary of the Canoochee River.

Fort Stewart performs Industrial Activity Stormwater inspections quarterly and annually. Hazardous materials are stored under cover and/or are indoors, and spill prevention and clean up measures have been implemented for any accidental spills. Inclusive of these inspections sanitary and industrial wastewater treatment facilities, lift stations, land application systems, and septic tank systems which are inspected daily by the Directorate of Public Works [DPW] Services Division Operators and inspected quarterly and annually by DPW Environmental Division program media personnel. Additionally, weekly Erosion & Sedimentation compliance construction inspections are performed by DPW Environmental Stormwater personnel, to ensure Erosion & Sedimentation Pollution Control Plans best management practices have been implemented and are functioning as designed at construction sites.

Water Quality in stream grab samples are collected once annually during non-rain events from the stream segments and streams which discharge into the 303(d) listed impaired water bodies; these grab samples are collected utilizing automatic samplers [illustrated on the enclosed map with triangles, titled FS-MS4 Appendix G-TMDLs Sampling Locations Map]. The annual quantitative samples are collected and analyzed for Five-Day Carbonaceous Biochemical Oxygen Demand (CBOD5) and Ammonia (NH3) with calculations IAW Part III.C.1.b.1 of the National Pollutant Discharge Elimination System [NPDES] Industrial Stormwater Permit and results must be under the applicable benchmark value of Ultimate Oxygen Demand (UOD) of 125.0 mg/l to maintain compliance with the NPDES Permit. This annual in stream non-rain event grab sampling (2006-2009) of the stream segments which discharge into the listed impaired waters, documents FS MS4 does not exceed the TMDLs. The FS DPW Environmental Division will continue to monitor the FS MS4 outfalls and the stream segments which discharge into the 303(d) listed waters, and make required adjustments if conditions change or the TMDLs are exceeded. Enclosed is documentation of the parameters and results from 2009 sampling.

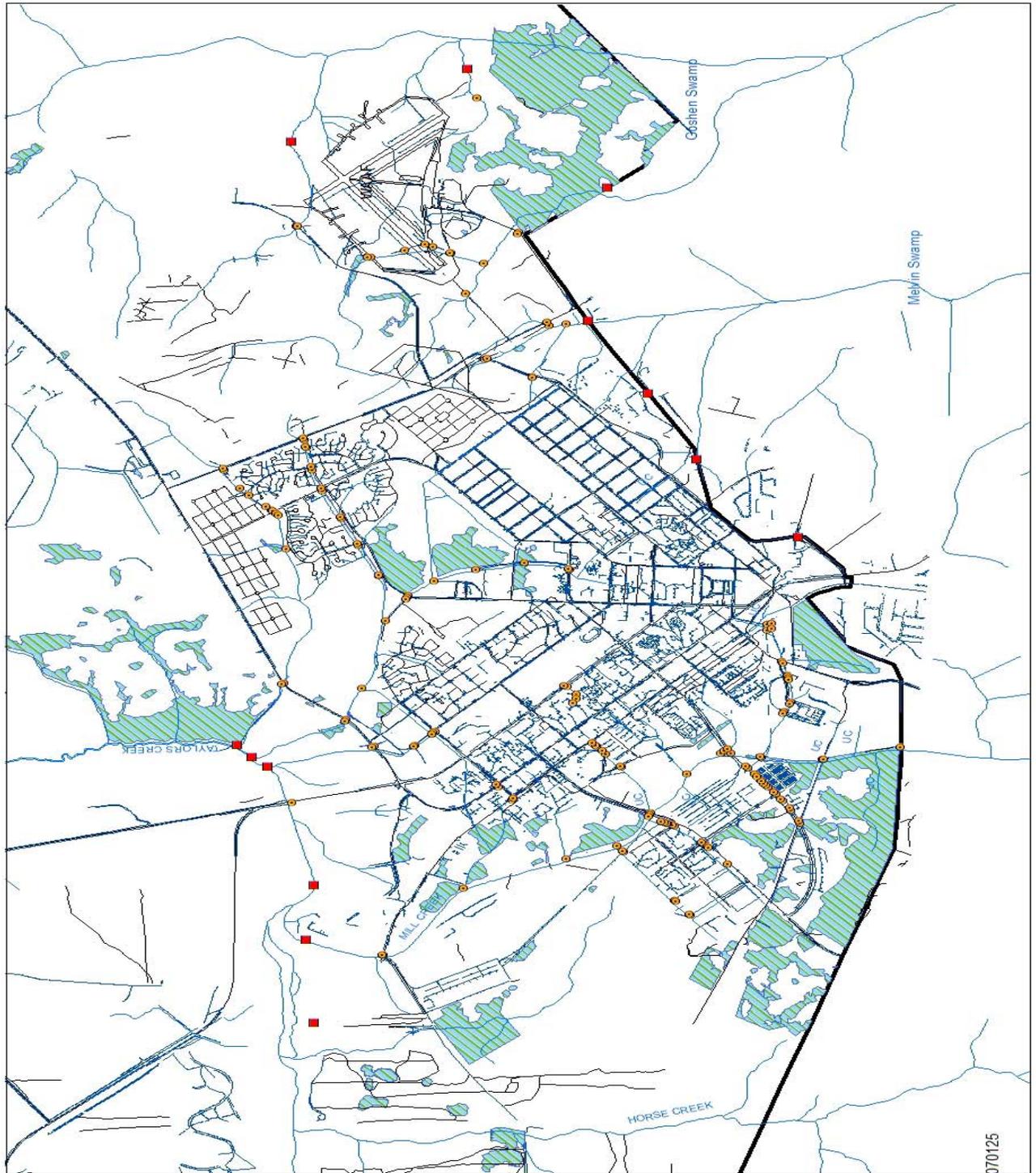
Fort Stewart implemented a compliance evaluation outfall screening program for Phase I Industrial Activities and outfalls for non-stormwater discharges (NSWDs) as part of Phase I Industrial Stormwater Permit requirements.

Additionally, the stream segments of the FS MS4 which discharge into the listed impaired waters are visually monitored during and after each rain event for the presence of stormwater parameters (color, odor, turbidity, floating solids, settled solids, suspended solids, foam, and oil sheen). There are visual grab samples collected on the stream segments which discharge into these listed impaired water bodies which are photo documented with date/time stamp and placed in the Industrial Master Stormwater Pollution Prevention Plan.

Sampling of the Phase II MS4 303(d) listed impaired water bodies for dissolved oxygen and fecal coliform will be performed once annually for the TMDL compliance requirements. Dissolved oxygen will be sampled by utilizing a sampling probe, and

documented on a field inspection report with date, time, and the individual performing the sampling, instrument calibration, sample results, and a certification statement on the form. Samples for fecal coliform will be collected, handled and stored properly for submittal to a state certified lab, once annually for analyses. Documentation for these sampling events will be kept with the MS4 Stormwater Management Plan and submitted to the state during the annual reporting cycle.

Fort Stewart MS4



Legend

junctions

TYPE

● Node

■ Outfall

— streams_region

— storm_sewer_line_070125

Surface Water

Wetland Delineations_081013

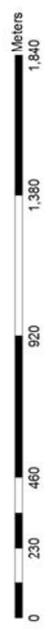
Installation Boundary



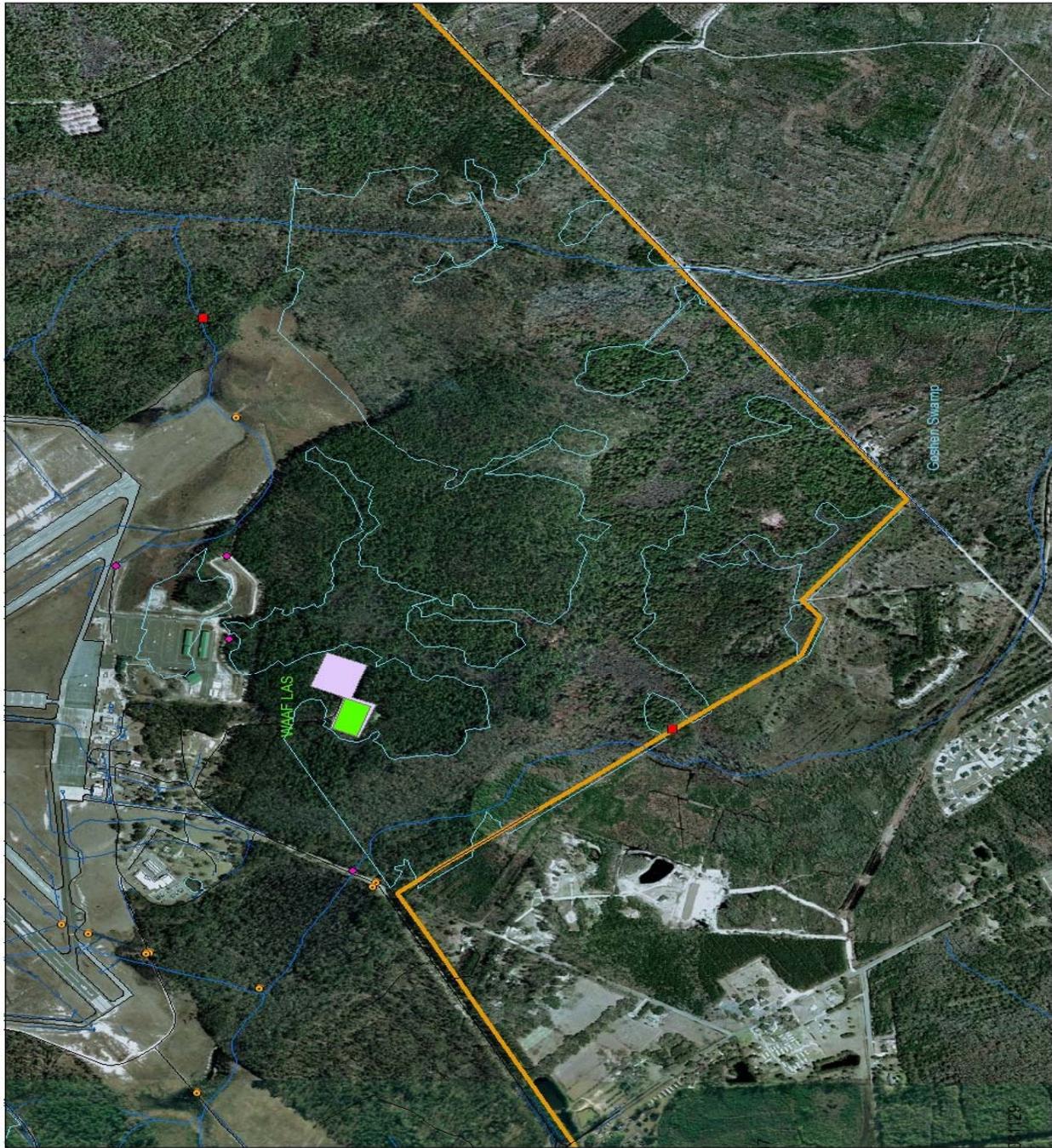
2008 303(d) Listed Streams-FS Discharge Outfalls



- Legend**
- FS Outfalls
 - stormwater_storage_pond_070117
 - storm_water_line_070115
 - streams_align
 - watermain_treatment_plant_061123
 - watermain_allocation_081229
 - wetland_area
 - habitat_area_06

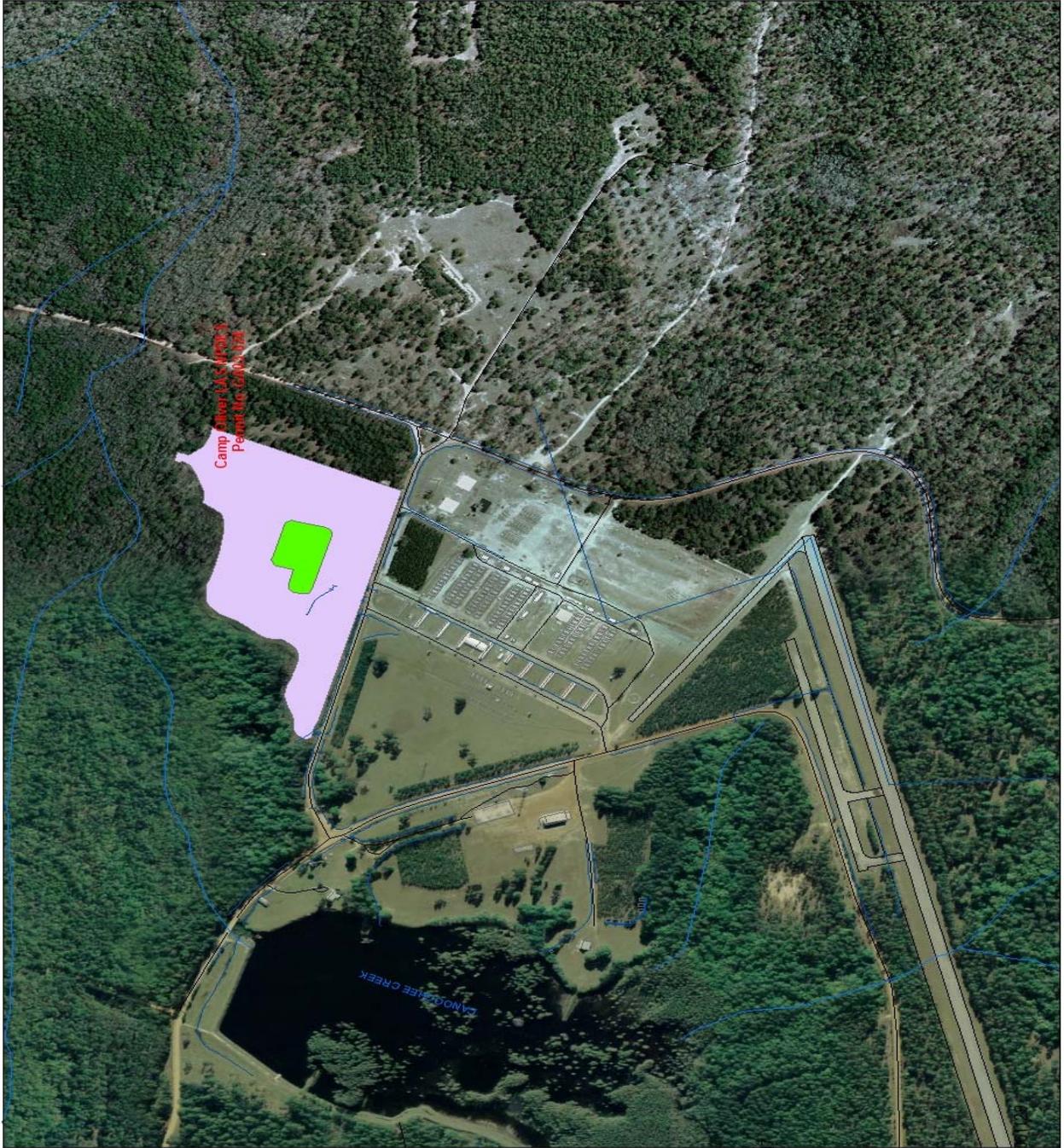


Fort Stewart Wright Army Airfield LAS NPDES Permit No. GA03-834



- Legend**
- ◆ stormwater_sampler_points_07011
- junctions**
- | TYPE | |
|------|---------------------------------------|
| ● | Node |
| ■ | Outfall |
| — | streams_region |
| — | storm_sewer_line_070125 |
| — | Surface Water |
| ■ | wastewater_treatment_plant_site_11124 |
| ■ | spray_fields |
| □ | Installation Boundary |
| □ | Wetland Delineations_091013 |

Fort Stewart Camp Oliver NPDES Permit No. GA03-624



Legend

◆ stormwater_sampler_points_07011

junctions

TYPE

● Node

■ Outfall

— streams_region

— storm_sewer_line_070125

Surface Water

■ wastewater_treatment_plant_site

■ spray_fields

■ Installation Boundary

■ Wetland Delineations_091013



**Fort Stewart Evans Army Airfield LAS NPDES
Permit No. GA03-325 & GA0004308 Outfall 001**



Legend

◆ stormwater_sampler_points_0701

junctions

● Node

■ Outfall

— streams_region

— storm_sewer_line_070125

Surface Water

■ wastewater_treatment_plant_site

■ spray_fields

■ Installation Boundary

■ wetland_area

■ Wetland Delineations_091013



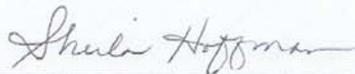
ANALYTICAL REPORT

Job Number: 680-46373-1

Job Description: 09-60-S

For:

Environmental Branch/Directorate of PW
1550 Frank Cochran Drive - Bldg. 1137
Ft. Stewart, GA 31314-4928
Attention: Mr. Christian Montano



Approved for release.
Sheila Hoffman
Project Manager I
4/22/2009 4:43 PM

Sheila Hoffman
Project Manager I
sheila.hoffman@testamericainc.com
04/22/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

Job Narrative
680-J46373-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

General Chemistry

Method(s) SM 4500 O C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. All associated samples have been qualified with the "HF" flag to indicate they were performed in the laboratory outside the 15 minute timeframe.

No other analytical or quality issues were noted.

METHOD / ANALYST SUMMARY

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Method	Analyst	Analyst ID
MCAWW 350.1	Ross, Jon	JR
SM SM 2540D	Hunter, Dyanne	DH
SM SM 4500 O C	Lawhon, Jon	JL
SM SM 5210B	Lawhon, Jon	JL

SAMPLE SUMMARY

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Client Matrix</u>	<u>Date/Time Sampled</u>	<u>Date/Time Received</u>
680-46373-1	Bridge 5	Water	04/14/2009 1007	04/14/2009 1155
680-46373-2	Mill Creek	Water	04/14/2009 0952	04/14/2009 1155
680-46373-3	Golf Course	Water	04/14/2009 0920	04/14/2009 1155
680-46373-4	Taylors Creek	Water	04/14/2009 0914	04/14/2009 1155
680-46373-5	RCI	Water	04/14/2009 0900	04/14/2009 1155
680-46373-6	WAAF	Water	04/14/2009 0849	04/14/2009 1155

Analytical Data

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

General Chemistry

Client Sample ID: Bridge 5

Lab Sample ID: 680-46373-1
Client Matrix: Water

Date Sampled: 04/14/2009 1007
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.18		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	11		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135544	Date Analyzed	04/19/2009 1420			
Oxygen, Dissolved	4.0	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			
Carbonaceous Biochemical Oxygen Demand	<2.0		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

Client Sample ID: Mill Creek

Lab Sample ID: 680-46373-2
Client Matrix: Water

Date Sampled: 04/14/2009 0952
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.20		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	9.0		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135530	Date Analyzed	04/18/2009 1545			
Oxygen, Dissolved	3.1	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			
Carbonaceous Biochemical Oxygen Demand	2.6		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

Analytical Data

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

General Chemistry

Client Sample ID: Golf Course

Lab Sample ID: 680-46373-3
Client Matrix: Water

Date Sampled: 04/14/2009 0920
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.15		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	<5.0		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135544	Date Analyzed	04/19/2009 1716			

Analyte	Result	Qual	Units	RL	Dil	Method
Oxygen, Dissolved	6.7	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			

Analyte	Result	Qual	Units	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	2.5		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

Client Sample ID: Taylors Creek

Lab Sample ID: 680-46373-4
Client Matrix: Water

Date Sampled: 04/14/2009 0914
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.74		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	10		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135530	Date Analyzed	04/18/2009 1546			

Analyte	Result	Qual	Units	RL	Dil	Method
Oxygen, Dissolved	5.3	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			

Analyte	Result	Qual	Units	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	4.6		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

Analytical Data

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

General Chemistry

Client Sample ID: RCI

Lab Sample ID: 680-46373-5
Client Matrix: Water

Date Sampled: 04/14/2009 0900
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.20		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	23		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135530	Date Analyzed	04/18/2009 1546			

Analyte	Result	Qual	Units	RL	Dil	Method
Oxygen, Dissolved	6.3	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			

Analyte	Result	Qual	Units	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	2.4		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

Client Sample ID: WAAF

Lab Sample ID: 680-46373-6
Client Matrix: Water

Date Sampled: 04/14/2009 0849
Date Received: 04/14/2009 1155

Analyte	Result	Qual	Units	RL	Dil	Method
Ammonia	0.18		mg/L	0.030	1.0	350.1
	Anly Batch: 680-135763	Date Analyzed	04/21/2009 1438			

Analyte	Result	Qual	Units	RL	Dil	Method
Total Suspended Solids	5.5		mg/L	5.0	1.0	SM 2540D
	Anly Batch: 680-135530	Date Analyzed	04/18/2009 1544			

Analyte	Result	Qual	Units	RL	Dil	Method
Oxygen, Dissolved	1.0	HF	mg/L	0.10	1.0	SM 4500 O C
	Anly Batch: 680-135188	Date Analyzed	04/14/2009 1742			

Analyte	Result	Qual	Units	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	2.5		mg/L	2.0	1.0	SM 5210B
	Anly Batch: 680-135181	Date Analyzed	04/14/2009 1714			

DATA REPORTING QUALIFIERS

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
General Chemistry	HF	Field parameter with a holding time of 15 minutes

Quality Control Results

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Method Blank - Batch: 680-135763

Method: 350.1
Preparation: N/A

Lab Sample ID: MB 680-135763/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/21/2009 1438
Date Prepared: N/A

Analysis Batch: 680-135763
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Ammonia	<0.030		0.030

Lab Control Spike - Batch: 680-135763

Method: 350.1
Preparation: N/A

Lab Sample ID: LCS 680-135763/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/21/2009 1438
Date Prepared: N/A

Analysis Batch: 680-135763
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia	1.00	0.990	99	90 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Method Blank - Batch: 680-135530

Method: SM 2540D
Preparation: N/A

Lab Sample ID: MB 680-135530/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/18/2009 1518
Date Prepared: N/A

Analysis Batch: 680-135530
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

Analyte	Result	Qual	RL
Total Suspended Solids	<5.0		5.0

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-135530**

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID: LCS 680-135530/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/18/2009 1518
Date Prepared: N/A

Analysis Batch: 680-135530
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

LCSD Lab Sample ID: LCSD 680-135530/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/18/2009 1521
Date Prepared: N/A

Analysis Batch: 680-135530
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	98	97	80 - 120	1	25		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Duplicate - Batch: 680-135530

Method: SM 2540D
Preparation: N/A

Lab Sample ID: 680-46373-5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/18/2009 1546
Date Prepared: N/A

Analysis Batch: 680-135530
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	23	21.0	9	25	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Method Blank - Batch: 680-135544

Method: SM 2540D
Preparation: N/A

Lab Sample ID: MB 680-135544/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/19/2009 1412
Date Prepared: N/A

Analysis Batch: 680-135544
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

Analyte	Result	Qual	RL
Total Suspended Solids	<5.0		5.0

Lab Control Spike - Batch: 680-135544

Method: SM 2540D
Preparation: N/A

Lab Sample ID: LCS 680-135544/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/19/2009 1413
Date Prepared: N/A

Analysis Batch: 680-135544
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 200 mL
Final Weight/Volume: 200 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Suspended Solids	100	98.5	98	80 - 120	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Environmental Branch/Directorate of PW

Job Number: 680-46373-1

Unseeded Control Blank - Batch: 680-135181

Method: SM 5210B

Preparation: N/A

Lab Sample ID: USB 680-135181/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/14/2009 1714
Date Prepared: N/A

Analysis Batch: 680-135181
Prep Batch: N/A
Units: mg/L

Instrument ID: BOD AssayPlus #1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Carbonaceous Biochemical Oxygen Demand	<2.0		2.0

Lab Control Spike - Batch: 680-135181

Method: SM 5210B

Preparation: N/A

Lab Sample ID: LCS 680-135181/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/14/2009 1714
Date Prepared: N/A

Analysis Batch: 680-135181
Prep Batch: N/A
Units: mg/L

Instrument ID: BOD AssayPlus #1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Carbonaceous Biochemical Oxygen	198	216	109	85 - 115	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Serial Number 014650

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Website: www.testamericainc.com
 Phone: (912) 354-7858
 Fax: (912) 352-0165

5102 LaRoche Avenue
 Savannah, GA 31404

Phone: _____
 Fax: _____

Alternate Laboratory Name/Location

PROJECT REFERENCE: 09-60-5
 PROJECT NO.: 09-60-5
 P.O. NUMBER: _____
 CONTRACT NO.: _____

CLIENT (SITE) PM: C. WOODWARD
 CLIENT PHONE: 912-315-5537
 CLIENT FAX: _____

CLIENT NAME: C. WOODWARD
 CLIENT ADDRESS: Christiana, Monrovia @ US Army Mil
 CLIENT ADDRESS: C/O R. Ellis 195 S. Rose Mont Rd
 COMPANY CONTRACTING THIS WORK (if applicable): Virginia Beach VA 23452

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX TYPE				REQUIRED ANALYSIS	PAGE	OF	REMARKS
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL SOLVENT...)				
09-14-09	1007	Bridge 5						1	1	
09-14-09	0952	Mill Creek								
09-14-09	0920	GOLF COURSE								
09-14-09	0914	Taylor's Creek								
09-14-09	0900	RCT								
09-14-09	0844	WAAF								

RELINQUISHED BY: (SIGNATURE) _____ DATE: 14/09/09 TIME: 1155

RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) Beth O'Daugherty DATE: 4/14/19 TIME: 1155

SAVANNAH LOG NO. 680-411415

CUSTOMY SEAL NO. 411415

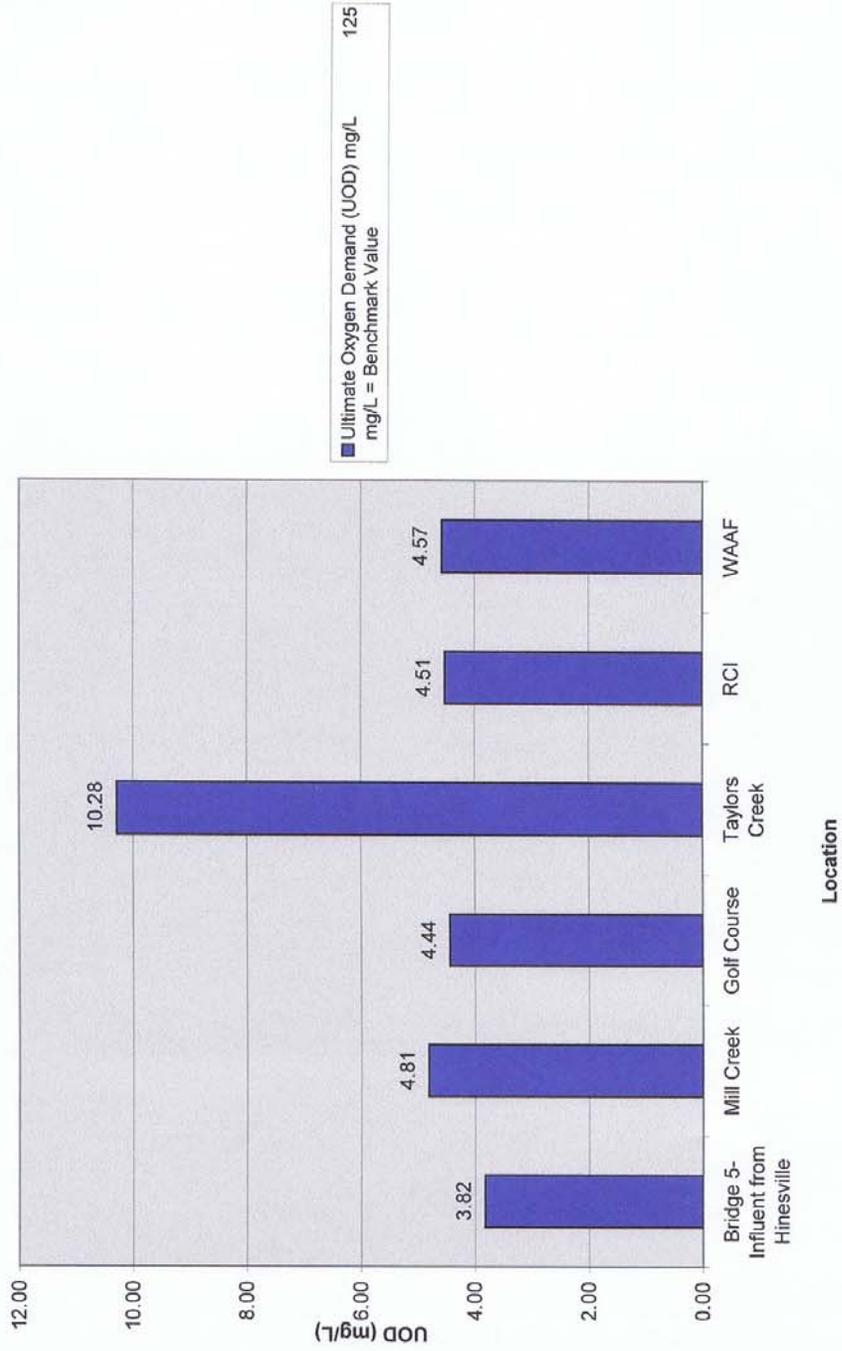
CUSTOMY INTACT YES NO

TEMPERATURE 11.0

FORT STEWART/HUNTER ARMY AIRFIELD TMDL SAMPLING FY 2009

Location	NH3	CBOD5	Notes	NH3 conversion	CBOD5 conversion	DO	Ultimate Oxygen Demand (UOD) mg/L	TSS	UOD benchmark value
Fort Stewart									
Bridge 5-									
Influent from Hinesville	0.180	2.00	<2.0	0.82	3.00	4.0	3.82	11.00	125 mg/L
Mill Creek	0.200	2.60		0.91	3.90	3.1	4.81	9.00	
Golf Course	0.150	2.50		0.69	3.75	6.7	4.44	5.00	
Taylor's Creek	0.740	4.60		3.38	6.90	5.3	10.28	10.00	
RCI	0.200	2.40		0.91	3.60	6.3	4.51	23.00	
WAAF	0.180	2.50		0.82	3.75	1.0	4.57	5.50	
HAAF									
Housing	0.120	2.00	<2.0	0.55	3.00	3.1	3.55	5.00	
Harman Canal	0.380	2.00	<2.0	1.74	3.00	4.3	4.74	5.50	
Saber Hall	0.230	2.00	<2.0	1.05	3.00	5.1	4.05	5.00	
Airfield	0.170	3.70		0.78	5.55	5.0	6.33	6.50	
Lamar Canal	0.210	2.00		0.96	3.00	4.9	3.96	8.50	

Fort Stewart TMDL Sampling Ultimate Oxygen Demand (UOD) mg/L



Appendix H

1. INTRODUCTION

The United States Army Garrison (USAG) Fort Stewart (hereafter referred to as Fort Stewart) Directorate of Public Works (DPW) Environmental Prevention and Compliance Branch (EPCB) is required to submit a Stormwater Management Plan (SWMP) in accordance with 40 CFR Part 122.26 and 122.30-35, and the Georgia Water Quality Control Act, Georgia Laws (1964, page 416, as amended). This document outlines the DPW program to develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act (CWA) in accordance with the Georgia Department of Natural Resources (DNR) Environmental Protection Division (GA EPD) Phase II General Permit #GAG480000. The SWMP addresses the six minimum control measures as required by state regulations. The plan also identifies the Installation's legal authority to implement the General Permit.

2. PERMIT COVERAGE AREA

Although Fort Stewart encompasses 280,000 acres, the MS4 Urbanized Areas subject to General NPDES Stormwater Permit No. GAG480000 (Authorization to Discharge under the NPDES; Stormwater Discharges Associated with Small Municipal Separate Storm Sewer Systems at Military Facilities) and containing conveyances meeting the definition of small municipal separate storm sewer systems (MS4s) (as that term is defined in the Permit and at 40 CFR Part 122.26(b)(8)] are limited to the following.

- a) Fort Stewart Cantonment-Urbanized Area (Fort Stewart Municipality)
- b) Wright Army Airfield (WAAF)
- c) Evans Army Airfield (Evans Field)
- d) Tac-X Non-Commissioned Officer (NCO) Academy.

Figure H-1 shows, in relation to the entirety of Fort Stewart, the MS4 Urbanized Areas listed above which are subject to the General NPDES Stormwater Permit No. GAG480000 and which are addressed by this NOI. The Fort Stewart property not addressed by the bullets above is exclusively utilized for military training and range qualifications and is not part of any urbanized area.

3. LEGAL AUTHORITY

Army Regulation AR 200-1, entitled "Environmental Protection and Enhancement," authorizes EPCB to control the quality of separate stormwater discharges to the Installation's stormwater sewer system. EPCB's authority, which is granted through the Directorate of Public Works (DPW) and Garrison Command, addresses both industrial

and municipal discharges. EPCB has both the fiscal authority and legal resources to fully implement its stormwater management program. Additionally, EPCB will utilize the resources of the DPW Environmental Division's Public Relations Section and the Installation Public Affairs Office (PAO) to communicate with a diverse community.

4. USAG FORT STEWART OVERVIEW

Fort Stewart is located on 280,000 acres in the southeastern region of Georgia, in Liberty, Long, Tattnall, Evans, and Bryan Counties. The Fort Stewart area lies in the Atlantic Coastal Flatwoods soil province of Georgia and is underlain with marine sands, loams, and/or clays. Elevations range from 5.5 to 30 feet above mean sea level. Annual rainfall for the region ranges from 44 to 53 inches. The majority of the Installation MS4 Urbanized Area (central, west, north, northeastern, and eastern portions) drains into the following creeks: Mill Creek, Taylors Creek, and Canoochee Creek; Melvin Swamp, Goshen Swamp, and Peacock Creek receive runoff from the southeastern portion of the MS4 Urbanized area and WAAF.

The Fort Stewart MS4 Urbanized Area is located near Hinesville, Georgia, which is approximately 40 miles southwest of Savannah (see Figure H-1). Fort Stewart is composed of an Urbanized-Municipal Area, Wright Army Airfield (WAAF), Evans Army Airfield (Evans Field), and the Tac-X Non-Commissioned Officer (NCO) Academy. The MS4 Urbanized Area (including WAAF) is located on the south side of the Installation, occupying approximately 17.6 square miles and consisting of base housing, training facilities, a hospital, motorpools and vehicle maintenance areas, and recreational facilities. Evans Field is located in a wooded terrain five miles east of the MS4 Urbanized Area and occupies approximately 0.42 square miles, consisting of eight unpaved, drained, helicopter landing pads, a small runway, several buildings for simulator training, food service, maintenance, and the Evans Field Wastewater Treatment Facility Lagoons and Land Application System. The Tac-X NCO Academy is located in the north-central portion of the Installation and occupies approximately 0.34 square miles, inclusive of a Wastewater Treatment Facility Lagoons with a Land Application System presently under construction which will be located near entrance of the Academy Road at GA Hwy 119. The primary mission of the United States Army Garrison – Fort Stewart is to train U.S. Army Soldiers and provide resources for the Army's Heavy and Medium Units of Action Division's in the Rapid Deployment Force. Fort Stewart also is home to the 3RD Infantry Division. Other supporting tenants include the following: 4th Brigade, 87th Division; 15th Air Force Support Operations Squadron; U.S. Army Material Command, Logistics Assistance Office, Field Support Center; Aviation and Missile Command Project OLR; 95th Maintenance; Special Forces Recruiting Team; 3rd Battalion, 160th Special Operations Aviation Regiment; 1st Battalion, 75th Ranger Regiment; and Army National Guard Training Center. Fort Stewart has a population of approximately 49,000 people, including 18,183 permanent-party Military personnel, 3,004 Civilian-government and commercial staff, and 27,813 Military Family Members. A population breakdown of the Installation is listed in Table 3-1.

Table 4-1

Population Estimates for USAG Fort Stewart (as of CY2005)

TYPE	POPULATION
Military (permanent-party)	18,183
Military (Family Members) – On-Base	4,991
Military (Family Members) – Off-Base	22,822
Civilian-Government and Commercial	3,004
TOTAL	49,000