DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

October 1, 2010

Directorate of Public Works

SUBJECT: Municipal Separate Storm Sewer System (MS4) Annual Report for July 1, 2009 through June 30, 2010

Mr. J. Douglas Fritz
MS4 Program Manager
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, Virginia 23219

Dear Mr. Fritz,

Enclosed is the 2009 – 2010 Annual Report for the Fort Belvoir MS4 Permit, VAR040093.

"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 fine and imprisonment for knowing violations."

Point of contact is Bill Sanders, Director of Public Works at 703-806-3017.

Sincerely,

Stephen J. Burke, Deputy
John J. Strycula
Colonel, US Army
Commanding

Enclosures

Municipal Separate Storm Sewer System (MS4) Permit VAR040093
Annual Report for US Army Garrison at Fort Belvoir, Virginia
July 1 2009 through June 30 2010

Fort Belvoir's MS4 Permit VAR040093 is administered by the Environmental and Natural Resources Division (ENRD) of the Directorate of Public Works (DPW). One project in Belvoir Village located in the PL27 Hydrologic Unit Code (HUC) is treating five acres of land using bioretention was completed during the 2009 – 2010 reporting cycle. A copy of the updated projects list noting the Belvoir Village project is attached to this report.

Fort Belvoir issued 453 Excavation Permits during the 2009 – 2010 reporting cycle. Excavation Permits are required for all land disturbing projects on Fort Belvoir regardless of the amount of disturbed area. Of the total number of Excavation Permits issued, approximately 45 also required a Virginia Stormwater Management Program (VSMP) Permit.

Review and approval procedures for construction design plans along with field inspections were conducted in accordance with Fort Belvoir's MS4 Permit for the ongoing construction activities on Fort Belvoir throughout the 2009 – 2010 reporting cycle. Over the 2010 – 2011 reporting cycle a large number of these projects are anticipated to be completed to meet the September 2011 completion dates for Base Realignment and Closure Act of 2005 (BRAC). The stormdrain pipes, structures and facilities associated with those projects, the HUCs they are located in and the acreages they treat will be provided for the 2010 – 2011 reporting cycle.

Fort Belvoir's three waterways, Pohick Creek, Accotink Creek and Dogue Creek, are listed as impaired by fecal coliform and bacteria. The three waterways are in suburban Fairfax County, and none have agricultural land uses within their watersheds. Total Maximum Daily Loads (TMDLs) for the Accotink Creek and Chesapeake Bay are still under development. Inclusion of the TMDL requirements into Fort Belvoir's review of stormwater management plans will occur after they are incorporated into state and county stormwater regulations.

The signed certification for this report, in accordance with 4VAC50-60-370, is contained in the cover letter for this report.

Status of Compliance

BMP 1 – Public Education and Outreach on Stormwater Impacts

- **Measurable Goal:** Support one activity per year on the effects of stormwater discharge.

On July 22, 2010 the article *"Everyone contributes to cleanliness of stormwater, Chesapeake Bay"* was published in the Belvoir Eagle as an outreach to the residents and tenants of Fort Belvoir. The article provides a discussion about how stormwater can pick up trash, fertilizer, pesticides, pet waste, grease, oil and gasoline and transport these pollutants into the streams found on Fort Belvoir. The article discusses how these pollutants make their way into the Accotink Creek, Accotink Bay, Dogue Creek, Gunston Cove the Potomac River and the Chesapeake Bay. The article provides URL's for websites created by the United States

Environmental Protection Agency and the Weather Channel where readers can go to **further understand what they do on Fort Belvoir will affect the health of the Chesapeake Bay. A** copy of the article is attached to this report.

BMP 1.1 Support Accotink Bay Wildlife Refuge Environmental Education Center

- **Measurable Goal:** Present information regarding stormwater discharge to receiving waters and general watershed data on the Fort Belvoir website.

During Earth Week, held from April 10 to 23, 2010, numerous public education activities were conducted. The activities included the creation and dedication of the T-17 Gunston Cove Loop Trail, the opening of the handicapped access fishing piers in Gunston Cover, guided canoe and kayak trips at Thompkins Basin, the Potomac River Watershed Cleanup, a guided bird walk through the Accotink Bay Refuge, educational exhibits at the Accotink Bay Wildlife Refuge Education and the Kent Knolls' Raptor show. The dates, locations and times for the events were listed in a poster developed by the DPW, the Directorate of Morale, Welfare and Recreation (MWR) and the US Army Child, Youth and School Services which was distributed via the Belvoir Eagle, MWR's Outdoor Recreation webpage and list serve and the Fort Belvoir Public Affairs Office's list serve. A copy of the poster is attached to this report.

Approximately 200 people including pre-school and school age children came to Tompkins Basin and the Accotink Bay Wildlife Refuge Environmental Education Center for the Kent Knoll's Raptor Show and to witness the feeding of the Black Rat snakes, to observe and learn about non-native snakes, to look at some of the native fish species found in Accotink Bay, wildlife display mounts, preserved bug specimens, educational displays for the Accotink Bay Wildlife Refuge and the Jackson Miles Abbott Wetland Refuge, tree specimen displays and posters and presentation on geothermal and renewable energy sources.

BMP 1.2 Present Stormwater and Watershed Information on the Belvoir Website

- **Measurable Goal:** Support a program for stenciling stormwater drains or inlets with phrasing to identify the structure as a storm drain, identify the receiving waters and discourage introduction of pollutants. Stencil 100% of the stormwater drains leading to the receiving waters.

On the Fort Belvoir website through the "Relocating to Fort Belvoir" section residents can access the Resident Responsibility Guide where they will find on page 42 of the Guide a flyer titled "We Want Your Waste!! (Household Hazardous Waste, that is)". The Guide lists what materials are considered household hazardous waste such as fertilizer, paint thinner, antifreeze, car batteries, oil-based paint, weed killer and used or unused motor oil and it tells the reader where and how to turn in such waste and who they can contact with any questions. A copy of the flyer is attached to this report. The URL for the Resident Responsibility Guide is:

https://pinnaclemil.residentworks.com/media_library/1927/4b3a6e123ec94242.pdf

Also available on the website is the "Information Fact Sheet: Environmental Stewardship Fort Belvoir, Base Relocation and Alignment Act of 2005 (BRAC)" which contains information on stormwater management design methods being incorporated into construction design plans such

as sand filters, underground detention and bioretention basins. The flyer also contains general information on stream/wetland restoration projects being built on Fort Belvoir to restore stream habitat, to remove impervious surfaces and to remove invasive/exotic vegetation to mitigate for impacts to Waters of the US caused by the BRAC projects. A copy of the Fact Sheet is attached to this report. The URL for the Fact Sheet is:

http://www.belvoirnewvision.com/files/Environmental%20Fact%20Sheet%20_%20May%202010%20_%20low.pdf

The ENRD is in the process of putting together its Sharepoint Site which will include information about the Fort Belvoir MS4 Program. We will provide an update on the status of the Sharepoint Site and material content in the 2010 – 2011 Annual Report.

BMP 1.3 Support the Fort Belvoir Storm Drain Stenciling Initiative

- **Measurable Goal:** Support a program for stenciling stormwater drains or inlets with phrasing to identify the structure as a storm drain, identify the receiving waters and discourage introduction of pollutants. Stencil 100% of the stormwater drains leading to the receiving waters.

Staffing levels increased over the current reporting cycle however funding restrictions still remain. Over the 2010 – 2011 we will look into funding opportunities for this initiative. Funding options that will be looked at will include a joint effort with MWR, schools and residential/tenant organizations. If it is determined the initiative can be funded, we will then determine if it is cost effective to stencil the inlets or to attach small medallions to the inlets.

BMP 1.4 Maintain General Watershed Information on the Fort Belvoir Website

- **Measurable Goal:** Update the watershed data to reflect changes or new information

See BMP 1.2

BMP 2 – Public Involvement/Participation

BMP 2.1 Support Volunteer Stream "Clean up"

- **Measurable Goal:** Hold one volunteer stream clean up activity to police areas around streams to collect debris or trash, remove dead branches, and note any obvious signs of deterioration or pollution. Involve tenant agencies, schools, community partners, and other members of the public.

The Potomac River Watershed Cleanup Day was held on April 18, 2010. Approximately 200 volunteers from a number of organizations participated in the Cleanup which yielded 13 tires, 2 lawn chairs, 1 plastic 50-gallon drum, 1 metal 50-gallon drum, floating marking buoy, alternator, shopping cart and about 100 bags of plastic, glass and metal. Volunteers came from the Society of American Military Engineers, Cub Scouts, Girl Scouts, Hayfield Secondary School's Leo Club, Belvoir Bowhunters, and Fort Belvoir's Directorates of Public Works and Morale, Welfare and Recreation. A copy of the article "Hundreds improve Accotink Bay in watershed cleanup" printed in the April 22, 2010 Belvoir Eagle is attached to this report.

BMP 2.2 Support Family Housing Occupant Orientation

- **Measurable Goal:** Develop and distribute materials [about dumping waste oil and chemicals in storm water systems to the housing and tenant facilities] to new tenants.

See BMP 1.2

BMP 2.3 Implement Fort Belvoir Pollution Complaint "Hot Line."

- **Measurable Goal:** Establish a phone listing accessible to persons living or working on Fort Belvoir in order for them to notify Fort Belvoir personnel of concerns, questions, or perceived environmental issues. Provide the "Hot Line" number(s) on the Fort Belvoir website and/or within the Belvoir Eagle.

A pollution complaint hot line does not exist and the funds to create and staff one are not available. The ENRD office however in cooperation with the Fort Belvoir Fire Department has in place a flyer titled "In Case of a Spill". The flyer is circulated to the Installation Fire Stations, fuel sites, motor pool site and it directs the person or persons involved in a spill of fuel or oil to determine if the spill amounts to five gallons or more, covers an area of 10 square feet or more; or if the spill has entered into any waterway, storm drain system or sewer system or if the spill involves any substance that may pose a threat to public health or welfare. If one of these criteria is met the persons responsible for the spill are directed to first call and report the spill to the Fort Belvoir Fire Department and to second call and report the spill to the ENRD office; the phone numbers Fire Department and ENRD office are listed on the flyer. The flyer also provides information about what and what not to do after the spill and after the incident has been reported. A copy of this flyer is attached to this report.

BMP 3 – Illicit Discharge Detection and Elimination

BMP 3.1 Develop, Implement, Update, and Support of Geographical Information Systems (GIS) Layers

- **Measurable Goal:** Develop, implement, update, and support GIS data layers containing storm water systems, watershed/sub-watershed boundaries, utility data, and other information pertinent to stormwater management to reflect changes or new information.

Fort Belvoir's GIS contains numerous layers. The layers include the locations of watersheds, subwatersheds, streams, water bodies, the stormdrain system, sewer and water lines, fuel tanks, land use control areas, solid waste management areas, fuel tanks, hazardous materials, hazardous waste areas. Use of these layers allows ENRD to trace the potential paths of spills or contaminated areas in the event of a spill and to determine where the flow of the spill could be stopped before it enters the streams and water bodies on and adjacent to Fort Belvoir. As new information is provided, these layers are updated.

BMP 3.2 Develop Methods to Detect Illicit Discharges

- **Measurable Goal:** Develop standardized procedures and processes to perform evaluations of various facility or installation operations, such as smoke or dye tests of drains, in order to identify illicit discharges.

The ENRD office contracted with an outside consultant to complete the Industrial Stormwater and Wastewater Survey, Phase I to identify the locations of and characterize the industrial stormwater outfalls on the Installation. The Survey work has been completed and the final report/list is expected by the end of September 2010. An update regarding the findings of the Survey will be provided in the 2010 – 2011 Annual Report.

The ENRD office is currently in the process of awarding the Industrial Stormwater – Phase II Implementation of Compliance. The goal of Phase II is to establish an overall operations management plan to detect, assess, monitor and mitigate illicit discharges to ensure all industrial stormwater discharges are permitted, are in compliance with permits issued and all applicable BMP's are implemented. An update regarding the outcome of Phase II will be provided in the 2010 – 2011 Annual Report.

BMP 3.3 Inform Installation Staff of Hazards Associated with Illicit Discharges

- **Measurable Goal:** Provide information to installation staff and operations on the identification and effects of illicit discharges via an article, newsletter, presentation, or by displaying information at appropriate facility locations, or on the Fort Belvoir website.

The ENRD office is the primary agency responsible for the administration of the "*Fort Belvoir Master Spill Plan*" (Revised August 2004 prepared by Dewberry & Davis). The Master Spill Plan contains specific information regarding what substances, equipment and materials are governed by the Plan, the chain of command and protocols for how to report spills, what actions have to be taken after a spill is reported, the location of known problem areas and evacuation routes.

As part of the review of construction design plans applicants are required to submit an Environmental Protection Plan (EPP) to ENRD for review and approval. The EPP requires documentation on the status of required permits and/or approvals for the project which includes cultural resources, protecting the natural resources on and adjacent to the site, erosion and sediment control and stormwater management. The EPP also includes information on handling petroleum liquids, sanitary waste, non-hazardous solid waste and recycling, hazardous waste and construction generated waste.

BMP 3.4 Maintain compliance with existing VPDES registrations

- **Measurable Goal:** Operate VPDES-registered systems in accordance with system design parameters and the registration statement, prevent and/or mitigate significant permit deviations.

Five VPDES General Permits have been issued for Fort Belvoir.

1. Davison Army Airfield, VAR051080. Quarterly visual monitoring for the permitted outfalls is required. Analytic sampling is not required for this permit.

2. Belvoir North Area, VAG830358. This Permit is for construction dewatering and consists of four outfalls. ENRD has been working with Virginia Department of Environmental Quality (DEQ) to correct sampling issues and the monitoring requirements are in compliance.

Dewatering activities at outfalls 003 and 004 were completed in June 2010; a Termination Notice was submitted to DEQ. DEQ accepted termination of dewatering activities at these two outfalls by letter dated July 12, 2010 with the understanding reporting requirements for them is expected through July 12, 2010. Dewatering activities continue at outfalls 001 and 002. Monitoring requirements are in compliance with the Permit.

3. Main Post – Building 305 VAG830285. This Permit is for discharges from a petroleum-contaminated site from a new remediation system (dual-phase extraction system) at building 305. Monitoring requirements are in compliance with the Permit.

4. Main Post – Building 1124 VAG830286. This Permit is for discharges from a petroleum-contaminated site from a new remediation system (dual-phase extraction system) at building 1124. Monitoring requirements are in compliance with the Permit.

5. Main Post – Building 3161 VAG830091. This Permit is for discharges from a petroleum-contaminated site from a new remediation system (dual-phase extraction system) at building 3161. Monitoring requirements are in compliance with the Permit.

BMP 3.5 Evaluate Industrial Storm Drain Outfalls

- **Measurable Goal:** Perform inspections of 5% of identified outfalls for nuisance species or other indicators that would indicate illicit discharge into the storm drain system.

See BMP 3.2

BMP 3.6 Perform Illicit Discharge Detection and Mitigation Procedures

- **Measurable Goal:** Perform previously developed illicit discharge detection procedures at five installation facilities with the potential for illicit discharge, develop recommendations for potential mitigation actions.

See BMP 3.2

BMP 3.7 Develop a Plan for Operations that may affect Industrial Stormwater

- **Measurable Goal:** Develop an assessment plan to identify and evaluate other routine operations such as waterline flushing, golf course irrigation, basement drains, and condensation drains which may have an impact on stormwater quality.

See BMP 3.2

BMP 3.8 Perform Routine Operation Assessments and Develop BMPs

- **Measurable Goal:** Implement the assessment plan to identify potential impacts to stormwater quality from various routine operations. Develop BMPs or engineering controls to address identified non-stormwater discharges. Incorporate engineering controls or implement BMPs to address identified non-stormwater discharges that impact stormwater quality; implement by the end of the fourth year. Perform inspections and necessary maintenance on engineering controls or BMPs to ensure functionality; implement by the end of the fifth year.

See BMP 3.2

BMP 3.9 Evaluate Potential Combined Sewer Overflow Connections

- **Measurable Goal:** Conduct and/or evaluate studies of potential combined sewer overflow connections; develop recommendations and or mitigation actions.

There are no known combined sewer and storm sewer lines; consequently this BMP does not apply to Fort Belvoir.

BMP 3.10 Evaluate Storm Water Sampling

- **Measurable Goal:** Evaluate the stormwater system for the potential development of a sampling strategy and, if appropriate, develop a detailed sampling plan and perform sampling in accordance with plan (as needed).

See BMP 3.2

<u>BMP 4 – Construction Site Stormwater Runoff Control</u>

BMP 4.1 Establish a Construction Project Review Procedure

- **Measurable Goal:** Establish a procedure to review construction projects to evaluate the project's potential to impact water quality, and the project's compliance with MS4 and Stormwater Management Plan. Procedure will include: requiring signature of the design engineer attesting that the construction plans and design documents were prepared in accordance with the MS4 Permit and incorporates the minimum standards of the Virginia Erosion and Sediment Control Handbook (VESCH), Virginia Stormwater Management Handbook (VSMH), and Fairfax County Public Facilities Manual (PFM); copies of design analyses, design plans, and erosion control plans will be routed to appropriate, experienced staff at Fort Belvoir for review; each iteration in the design process must maintain the minimum standards of the VESCH, VSMH, and PFM and is subject to additional review; and deficient or non-compliant documents will be returned to designers for modification and resubmission. Review 100% of construction projects for compliance with the MS4 Permit, Erosion & Sediment Control laws and regulations, VSMH, and PFM.

The ENRD personnel that work in the MS4 Program are certified as Combined Administrators or are Licensed Professional Engineers in accordance with the requirements administered by the Virginia Department of Conservation and Recreation (DCR). In accordance with the Fort

Belvoir MS4 Permit ENRD reviews construction plans for projects disturbing areas of 2500 square feet and greater to determine if the design plans are in compliance with the Virginia Erosion and Sediment Control Handbook (VESCH), the Fairfax County Public Facilities Manual (PFM) and the Virginia Stormwater Management Handbook (VSMH). Plans that impact streams and/or wetlands are also reviewed by ENRD to ensure compliance with erosion and sediment control regulations.

Once it has been determined the project meets the design requirements for stormwater management and erosion and sediment control, ENRD MS4 staff direct the project proponent to submit the Registration Statement for the Virginia Stormwater Management Program (VSMP) Permit and the Stormwater Pollution Prevention Plan (SWPPP) to the DCR along with the permit fee and they are asked to provide copies of these three documents to ENRD for our records. At this time the project proponent is also directed to submit three copies of the approved design plans. Following receipt of the Registration Statement and the paid fee ENRD MS4 staff will direct the project proponent to submit an application for an Excavation Permit to the DPW. With completion of the Excavation Permit review, ENRD MS4 staff will prepare a Land Disturbance Letter for signature from the Director of DPW and will have the Director sign the approved plans at that time. No work can begin on a project before the signed Land Disturbance Letter and approved plans have been provided to the project proponent.

Once construction begins on a project, Erosion and Sediment Control Inspections are conducted biweekly and within 48 hours of rainfall events greater than 0.5 inches. During the field inspection, any deficiencies found are discussed along with how the contractor will correct them and when the corrections have to be completed. Following the on-site field inspection, a written inspection report is prepared identifying the deficiencies found during the inspection and the date by which the deficiencies must be corrected. The inspection report is provided to the project engineer, the Contractor and/or the Responsible Land Disturber identified for the project.

If the deficiencies are corrected by the following inspection, the correction is noted and the deficiency is deleted from the report. If the deficiencies are not corrected, a 2nd notice for the deficiencies will be discussed with the project engineer and the contractor, a new date by which the deficiencies must be corrected will be listed in the report. If the contractor does not correct the violations after the second notice, a Notice to Comply letter is issued by the Director of Public Works. The Notice to Comply may include a Stop Work Order that cannot be lifted until the deficiencies are corrected. If the deficiencies continue, the DCR is notified by the Director of Public Works.

At the end of the project, after all items identified on the final erosion and sediment control punch list have been satisfactorily addressed, the contractor will be directed to submit the VSMP Termination Notice to DCR. The contractor is asked to provide ENRD with a copy of the Termination Notice for our files.

The Erosion and Sediment Control Inspection Reports completed during the 2009 – 2010 reporting cycle are available upon request.

BMP 4.2 Communicate the Requirements of the Stormwater Program

- **Measurable Goal:** Distribute MS4 Permit requirements to designers during initial planning phases of construction projects. All construction contract packages (including designs and specifications) shall incorporate a requirement to conform to the conditions of the MS4 Permit and Program Plan.

The procedures employed under the Fort Belvoir MS4 Program as described in BMP 4.1 are in the process of being incorporated into the Fort Belvoir Installation Design Guide and into the Fort Belvoir Sharepoint website for public posting. The MS4 review process is identified in project design meetings to ensure project proponents understand the process they will be working under and what information is needed to ensure successful and timely completion of the construction design phase.

DPW, ENRD personnel review and approve all construction plans and documents that are submitted to the DPW as outlined in section BMP 4.1.

BMP 4.3 Develop a Tracking System

- **Measurable Goal:** Establish a tracking system to ensure review comments are adequately addressed; include number and acreage of disturbed land. Develop in conjunction with National Environmental Policy Act and Environmental Management Systems regulations and policies.

ENRD maintains an Approved Plans List which contains all of the project plans under review by the ENRD. The List is updated each month to ensure it remains current. The List also tracks the progress of projects as they move through the construction phase. This list is available upon request.

BMP 4.4 Obtain Registration under VSMP for Construction Projects

- **Measurable Goal:** Construction projects that disturb one or more acres of land must obtain permit registration under the general VSMP Permit for construction projects and must adhere to the requirements of the permit. Incorporate a procedure under the utility clearance permit process to determine construction-VSMP applicability and verify existence of required erosion control plans prior to utility clearance permit approval.

Contractors are required to apply for and to obtain VSMP Permits for their projects. ENRD requires the contractors to provide a copy of the VSMP Registration Statement submitted to the DCR along with a copy of the check used to pay the fee before the Land Disturbance Letter can be signed.

BMP 4.5 Initiate Periodic Site Inspections

- **Measurable Goal:** Establish periodic inspection procedures to determine adherence to the approved design plan and the construction-VSMP Permit (as applicable) and to evaluate performance of the BMPs and/or engineering controls. Require site inspectors to be Virginia Certified Stormwater Inspectors. Any deficiencies identified during inspection shall be rectified immediately. In the event that the same deficiency is noted during reinspections, an immediate report shall be filed with the Virginia Department of

Conservation and Recreation and site operations shall cease until the deficiency is corrected. Perform site inspections of 100% of construction projects.

See BMP 4.1

BMP 4.6 Evaluate Emerging Technologies

- **Measurable Goal:** Review or evaluate one new product or engineering control designed to reduce soil erosion, consider possibility of use and potential effectiveness.

Dave Derrick of the US Army Corps of Engineers led a training class on stream restoration in June 2010. About 100 people from local, state and federal government agencies, private environmental consulting firms and environmental watchdog groups learned about stream and stream bank habitat restoration techniques Mr. Derrick has been employing over the years. Using two sites he had previously designed and constructed on Fort Belvoir at the Panther Bridge over Accotink Creek on Farrar Drive and at the rechlorination plant on Accotink Creek near Telegraph Road, attendees were able to see how the erosion found at these locations had been stopped and stabilized. A copy of the announcement for the class is attached to this report.

BMP 5 – Post-Construction Stormwater Management in New Development

BMP 5.1 Establish a Construction Project Review Procedure

- **Measurable Goal:** All construction contract packages (including designs and specifications) shall incorporate a requirement to conform to the conditions of this MS4. Establish a procedure to review projects to evaluate proposed structural and non-structural BMPs and project compliance with MS4 and Stormwater Management Plan. Procedure will include: requiring signature of the design engineer attesting that the project was prepared in accordance with the MS4 Permit and incorporates the minimum standards of the VESCH, VSMH, and PFM; copies of design analyses, design plans, and information regarding stormwater control structures will be routed to appropriate, experienced staff at Fort Belvoir for review; each iteration of the design process must maintain the minimum standards of the VESCH, VSMH, and PFM and is subject to additional review; and deficient designs or noncompliant project documents will be returned to designers for modification and resubmission.

See BMP 4.1

BMP 5.2 Develop a Tracking System

- **Measurable Goal:** Establish a tracking system to include information regarding the type of BMP, the location, the receiving waters, the number of acres treated by the BMP, and inspection and maintenance information.

The ENRD Office contracted with an outside company to conduct field surveys to locate existing stormwater management structures and/or facilities to determine if they are functioning as designed and remain in compliance with state and county stormwater management laws and regulations. The survey requires that the location of each structure and/or facility be confirmed with the GIS layer for stormwater and each structure and/or facility is characterized by size, type,

material and condition. The survey will also identify maintenance requirements including repairs or retrofits.

The survey will result in an MS4 GIS layer and a spreadsheet listing all structures and/or facilities. Using this information ENRD MS4 staff will work with DPW Operations and Maintenance Office to get maintenance and/or repair work on their work lists. The list provided to Operations and Maintenance will be given in priority order.

For those structures and/or facilities located in residential areas, ENRD will provide the residential maintenance office with the same information and will work with them to get the maintenance and/or repair work completed.

Fort Belvoir will develop a plan for yearly inspections of the stormwater drainage system following completion of the survey. All structures and/or facilities that come on line after the initial map and list are created will be added to the spreadsheet and the MS4 GIS layer.

BMP 5.3 Initiate Periodic Site Inspections

- **Measurable Goal:** Establish periodic inspection procedures to determine adherence to the approved design plans and to observe status of BMP. Establish periodic inspection procedures to determine adherence to the approved design plans and to evaluate performance of the BMPs and/or engineering controls. Require site inspectors to be Virginia Certified Stormwater Inspectors. Perform site inspections of 100% of active construction projects and 10% of post-construction projects (per year).

See BMP 5.2

BMP 5.4 Present Sustainable Development Considerations/New Technologies

- **Measurable Goal:** Hold one technical workshop for designers, inspectors, project managers, etc., on the implementation of BMPs; technological advances in control structure design, installation and operation; and designing for low impact and sustainable development.

See BMP 4.6

BMP 5.5 Audits of Existing Conditions.

- **Measurable Goal:** Perform an audit of the existing conditions of stream channels and banks, outfalls, etc., to include: a topographic survey to quantify channel cross-sections, installation of monitoring points and collection of photographic documentation to allow visual comparisons of existing and future conditions.

Fort Belvoir updated the installation GIS watershed data layer in 2009 to revise subwatershed boundaries, and to include new stream information (e.g., perenniality, Resource Protection Area). This update was based upon a field inspection of stream and watershed conditions. Fort Belvoir will assess the need for future updates after completion of BRAC construction currently slated for September 2011.

BMP 5.6 Corrections of Existing Watersheds

- **Measurable Goal:** Systematically correct watershed damages caused by existing conditions, poor design of control structures, or inadequate maintenance of control structures. Program and implement an investment program where 10% of identified requirements are executed each year.

Two restoration projects were completed in the 2009 – 2010 reporting cycle. One was a stream restoration project at the Fort Belvoir North Area (North Area). The DEQ and US Army Corps of Engineers were notified via email dated September 16, 2008 that the existing culvert immediately downstream of Impact NGA2 had blown out during a significant storm (approximately 6" of rain) and the resulting material had washed downstream. The gravel road bed had also washed out leaving behind a downcut channel with vertical slopes and a head cut in the center of the former road bed. The restoration project restored 94 linear feet of a perennial stream using a natural stream design. The work began on April 27, 2010 was completed on May 20, 2010.

The second restoration project involved the Tompkins Basin Shoreline of Gunston Cove in Pohick Bay. Approximately 750 linear feet of bulkhead were removed and/or repaired and a natural shoreline was created in the uplands behind the bulkhead. The work was completed in April 2010.

BMP 6 – Pollution Prevention/Good Housekeeping for Municipal Operations

BMP 6.1 Develop Installation Operations and Maintenance Training Materials

- **Measurable Goal:** Develop a training program for installation personnel and partners regarding pollutant run-off reduction as it applies to various installation operations such as building and road maintenance, storm system maintenance, landscaping activities, etc.

See BMP 3.3

BMP 6.2 Support Recycling and HAZMAT Programs

- **Measurable Goal:** Support of these programs facilitates appropriate waste management. Accomplish by providing relevant information to the public through monthly periodicals or Fort Belvoir website.

Fort Belvoir actively supports recycling and HAZMAT programs by providing information during newcomer "in-briefs" to new tenants or personnel. ENRD developed tracking and reporting metrics for items such as volumes of recycled products or collected waste and providing these metrics to the Garrison Command and to other tenant groups during Environmental Quality Control Committee meetings. ENRD's program ensures facilities have recycling bins to encourage use and ensures compliance with requirements of the HAZMAT program.

Fort Belvoir maintains a household hazardous waste program with a designated drop-off location and a contract mechanism for proper disposal of the waste. Information about this program is communicated to the residents of Fort Belvoir through informational flyers located at the Fort

Belvoir Community Center, recycling center and new comers' briefings. Additionally, Fort Belvoir educates personnel and encourages support of these programs during semi-annual hazardous waste handler refresher training provided through the Fort Belvoir ENRD Hazardous Waste Management Program.

BMP 6.3 Support Street Sweeping Activities

- **Measurable Goal:** Develop street sweeping operations and maintenance standards to evaluate the effectiveness of street sweeping activities; and inspect 10% of the total street sweeping area for visible pollutants.

Street sweeping and dust control requirements are implemented during construction to ensure dust and roads kept clear in accordance with VESCH standards & specifications. Contractors utilize mechanical street sweepers or workers with brooms and shovels to ensure dirt and other debris is not tracked onto the roadway. Contractors use water trucks to suppress dust generated by construction activities.

The Fort Belvoir Operations and Maintenance contractor uses a mechanical street sweeper to keep parking lots clear of sediment and debris on an as needed basis.

BMP 6.4 Implement Periodic Inspections and Clean out of Catch Basins

- **Measurable Goal:** Develop catch basin operations and maintenance clean out standards and perform inspections to evaluate the effectiveness of maintenance activities; and evaluate 25% of the catch basins for clean out effectiveness.

See BMP 5.2

BMP 6.5 Ensuring Functionality of Existing Storm Water Management Structures

- **Measurable Goal:** Develop an operations and maintenance plan to ensure functionality of existing stormwater management ponds, infiltration swales, and other stormwater engineering structures by identifying structures, and developing required maintenance tasks and associated activity completion schedules, and inspect 20% of stormwater management structures for general condition and functionality.

See BMP 5.2

BMP 6.6 Maintain Spill Response Vehicle/Trailer

- **Measurable Goal:** Maintain a minimum of one spill response trailer equipped with appropriate equipment and absorbents; ensure appropriate training of spill response personnel.

Spill response trailers are located at Davison Army Airfield and at the Main Post Fire Station.

BMP 6.7 Support Stream Restoration

- **Measurable Goal:** Support one stream restoration project, either on the installation or in partnership with the surrounding community for shared receiving water; advertise activity on the website or within the Belvoir Eagle to encourage public participation.

See BMP 5.6

During the 2010 – 2011 reporting cycle two stream restoration projects will be constructed. One mitigates for impacts associated with the Main Post Infrastructure project and will restore 1260 linear feet of the stream reach between the railroad bed and Pohick Road. This work is set to begin October 1, 2010.

The second project to restore the stream at the Meade Road and Gunston Road intersection is under design. Design is scheduled to be completed by the end of October 2010. After the design specifications are completed, the required permits will be obtained. Work is anticipated to begin in the winter or spring of 2011.

BMP 6.8 Support "Self Help" Programs

- **Measurable Goal:** Fort Belvoir provides access to facilities at which tenants may perform crafts or auto repair or accept chemicals and equipment for lawn maintenance. Prior to participating within such programs, individuals must understand proper use of the facility and provided materials. Insert information about these programs into stormwater pamphlets and include information about "Self help" programs on the Fort Belvoir website.

See BMP 1.2 and BMP 3.3

ATTACHMENTS

List of Projects:	MS4 Annual Report 2009 – 2010 List of Projects
Article:	Everyone Contributes to Cleanliness of Stormwater, Chesapeake Bay
Poster:	Earth Day 2010
Flyer:	We Want Your Waste!! (Household Hazardous Waste, that is).
Fact Sheet:	Information Fact Sheet: Environmental Stewardship Fort Belvoir, Base Relocation and Alignment Act of 2005
Article:	Hundreds improve Accotink Bay in Watershed cleanup
Flyer:	In Case of a Spill
Flyer:	Stream & Riparian Stabilization & Restoration Workshop

Reporting Year 1 July 2009 to 30 June 2010 Permit No. VAR040093 Fort Belvoir, Virginia

BMP Type	HUC	Impaired Water	No. of Acres Treated
Extended Detention	PL27	Dogue Creek	55.8
Enhanced Extended Detention	PL27	Dogue Creek	6.5
Sediment Forebay	PL27	Dogue Creek	6.5
Extended Detention	PL27	Dogue Creek	12.2
Extended Detention	PL27	Dogue Creek	9.1
Detention	PL27	Dogue Creek	4.7
Extended Detention	PL27	Dogue Creek	8.4
Detention	PL27	Dogue Creek	4.2
Detention	PL27	Dogue Creek	12.7
Extended Detention	PL27	Dogue Creek	16.8
Detention	PL27	Dogue Creek	5.4
Detention	PL27	Dogue Creek	3.6
Detention	PL27	Dogue Creek	14.5
Detention	PL27	Dogue Creek	2.3
Detention	PL27	Dogue Creek	20.4
Detention	PL27	Dogue Creek	16.7
Detention	PL27	Dogue Creek	3.4
Detention	PL27	Dogue Creek	6.2
Detention	PL27	Dogue Creek	5.8
Enhanced Extended Detention	PL27	Dogue Creek	26.4
Enhanced Extended Detention	PL27	Dogue Creek	15.7
Sediment Forebay	PL27	Dogue Creek	15.7
Rain Garden	PL27	Dogue Creek	0.75
Rain Garden	PL27	Dogue Creek	0.75
Enhanced Extended Detention	PL27	Dogue Creek	18.4
Bioretention	PL27	Dogue Creek	10.2
Enhanced Extended Detention	PL27	Dogue Creek	18.4
Enhanced Extended Detention	PL27	Dogue Creek	14.8
Enhanced Extended Detention	PL27	Dogue Creek	14.8
Enhanced Extended Detention	PL27	Dogue Creek	16.9
Rain Garden	PL27	Dogue Creek	0.25
Detention	PL27	Dogue Creek	4.5
Rain Garden	PL27	Dogue Creek	0.25
Rain Garden	PL27	Dogue Creek	0.25
Rain Garden	PL27	Dogue Creek	0.25
Rain Garden	PL27	Dogue Creek	0.25
Enhanced Extended Detention	PL27	Dogue Creek	15.6
Enhanced Extended Detention	PL27	Dogue Creek	15.6
Sediment Forebay	PL27	Dogue Creek	15.6
Enhanced Extended Detention	PL27	Dogue Creek	14.3
Enhanced Extended Detention	PL27	Dogue Creek	14.3
Enhanced Extended Detention	PL27	Dogue Creek	13.8
Enhanced Extended Detention	PL27	Dogue Creek	13.8
Sediment Forebay	PL27	Dogue Creek	14.8

Enhanced Extended Detention	PL27	Dogue Creek	25.7
Enhanced Extended Detention	PL27	Dogue Creek	14.8
Bioretention	PL27	Dogue Creek	13.6
Bioretention	PL27	Dogue Creek	5
Enhanced Extended Detention	PL30	Accotink Creek	33.2
Detention	PL30	Accotink Creek	7.4
Detention	PL30	Accotink Creek	4.9
Infiltration	PL30	Accotink Creek	9.5
Detention	PL30	Accotink Creek	10.7
Retention	PL30	Accotink Creek	56.8
Detention	PL30	Accotink Creek	5.5
Extended Detention	PL30	Accotink Creek	6.9
Enhanced Extended Detention	PL30	Accotink Creek	24.8
Extended Detention	PL30	Accotink Creek	11.5
Detention	PL30	Accotink Creek	7.4
Detention	PL30	Accotink Creek	12.9
Detention	PL30	Accotink Creek	18.4
Extended Detention	PL30	Accotink Creek	19.6
Detention	PL30	Accotink Creek	4.5
Detention	PL30	Accotink Creek	6.2
Detention	PL30	Accotink Creek	7.8
Detention	PL30	Accotink Creek	5.6
Rain Garden	PL30	Accotink Creek	0.75
Bioretention	PL30	Accotink Creek	16.5
Retention	PL30	Accotink Creek	42.7
Extended Detention	PL30	Accotink Creek	26.8
Plunge Pool	PL30	Accotink Creek	3.5

Everyone contributes to cleanliness of stormwater, Chesapeake Bay

Belvoir Eagle
July 22, 2010

By Directorate of Public Works, Environmental and Natural Resources Division staff

Photo by Wilamena Harback, DPW ENRD

All the trash that was picked up, just at Patrick Beach along the Potomac River, closest to Belvoir Village, during the April Potomac River Watershed Cleanup.

Now that spring showers have given way to summer's occasionally heavy - and sometimes daily - thunderstorms, do you ever wonder where all that rainwater (commonly called stormwater) goes? You can see torrents of water rushing along the road's edge, but where does that water go after it disappears into grates or curb inlets?

If you said "to the sewer plant for treatment," you'd be wrong.

All of the water running off roofs and yards and over parking lots and roadways flows into ditches or pipes that carry it to the local streams, the Potomac River and, ultimately, to the Chesapeake Bay.

When stormwater is moving, it can pick up almost anything it comes into contact with. Pet waste, fertilizers and pesticides get picked up as the water flows across lawns and down roads. Grease, oil and gasoline dripped from cars, trucks and lawnmowers get picked up as the water flows down driveways and roads.

Trash, like plastic bags and wrappers, plastic bottles and cigarette butts, gets picked up from everywhere and carried along with the stormwater. Even sediment from within streambeds can get picked up and carried away by rushing stormwater.

All these things can really add up and have a cumulative, bad effect on local streams, the Potomac River and the Chesapeake Bay.

If you think that what you drop on the ground does not amount to much, take a look at the photo. It shows all the trash that was picked up, just at Patrick Beach along the Potomac River (closest to Belvoir Village) during the April 2010 Potomac River Watershed Cleanup.

In addition to being unsightly, trash is dangerous. It can choke and strangle fish, birds and turtles.

While maybe not as obvious as trash, waste materials, chemicals and sediments can have just as bad an impact on aquatic resources. Chemicals cause many changes, including removing oxygen, which results in the aquatic systems less able to support aquatic vegetation and fish.

Overloading sediments and fine particles damages aquatic habitats by smothering aquatic vegetation and choking filter feeders, like clams and oysters.

So what can you do to protect both our aquatic resources on post and in the Chesapeake Bay?

* Be careful with your trash - don't throw things on the ground, and pick up and properly dispose of trash and pet waste.

* Use lawn chemicals responsibly - only when needed and in accordance with label instructions.

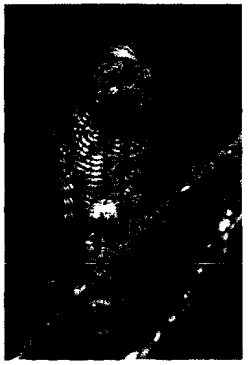
* Maintain your vehicles to minimize the potential for leaks and never dispose of motor oil or any other substance down any storm drains.

The Army is working hard to control sediment pollution. New developments on post are being designed and constructed to control water flows to reduce the amount of sediment that gets picked up and carried to local streams, the Potomac River and eventually the Chesapeake Bay.

Several stream restoration projects are underway to restore more-natural conditions within several on-post waterways.

If you want to know more about stormwater, the Environmental Protection Agency and The Weather Channel have co-produced a half-hour TV special, "After the Storm," which originally aired on The Weather Channel. More information on stormwater is available from the EPA's website, epa.gov. People who search The Weather Channel on the EPA's website can see a link to the video.

A copy of the most recent "Bay Barometer; A Health and Restoration Assessment of the Chesapeake Bay and Watershed in 2009," detailing the level of pollutant reduction, is available from chesapeakebay.net.



Earth Day 2010

Tompkins Basin Park

Call 703-805-1143 for details!

Earth Day Activities:

April 10th: Creating a new trail by T17 and Gunston Cove, Sign-up to volunteer!

April 17th: Family Campout at Tompkins Basin with guided canoe and kayak trips at 2pm & 4pm!

April 18th: Potomac Watershed Clean-Up Day 8am-12pm, Sign-up to volunteer!

April 19th: Guided Bird Walk through Accotink Bay Refuge, 8am & 10am, call to Sign-up!

April 20th: T-17 Gunston Cove Loop Trail & Handicapped Fishing Pier Dedication with support from the Warrior Transition Unit. Guest Speaker & Dedication Activities at 1pm!

April 22nd: ~ 40th *Anniversary of Earth Day and 30th Accotink Bay Refuge* ~ Join us at the Accotink Bay Wildlife Refuge Education Center for a celebration of Earth Day and educational activities.

April 23rd: Join us at Castle Park to experience Kent Knolls' Raptor Show at 10am & Free Lunch will follow at the Pavilion!

We want your waste!!

(Household Hazardous Waste, that is.)

Are you harboring these in your house on Post?

- Fertilizer
- Paint Thinner
- Antifreeze
- Car Batteries
- Oil-Based Paint
- Weed Killer
- Motor Oil (used or unused)

- **These waste products are often responsible for harming and endangering people and animals. Improper disposal of these household products can result in polluted creeks, streams, and woods.**
- Look around your home for pesticides, insecticides, oil-based paint, chemical thinners and solvents, petroleum products, acids, automotive products, and other hazardous materials.
- **Check garages, storage sheds, basements, and cabinets**
- Buy only what you need and use up what you have before buying additional chemicals.
- **Some empty containers can be rinsed out and safely recycled or thrown away. Follow instructions on manufacturers labels.**

For any questions regarding HHW Disposal, call the Hazardous Waste Manager at 806-0022

HHW Turn-In Procedures

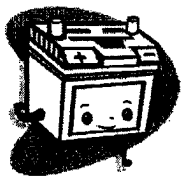
- ❑ material should be in closed containers with labels identifying what the material is.
- ❑ Chemicals can not be mixed (i.e., oil mixed with antifreeze is unacceptable)
- ❑ no leaking or unmarked containers will be accepted
- ❑ containers must be inspected by the attendant on duty
- ❑ containers must be dropped off during hours of operation at the Fort Belvoir Recycling Center, building 1089, Mon – Sat 0700-1400

Can I turn in.....?

People are often confused as to what is a household hazardous waste and what can be thrown out, recycled, or poured down the drain. Continue reading to find out what Fort Belvoir's HHW program will accept.

Items Accepted

- ✓ **Pesticides, herbicides & rodenticides**
- ✓ **Petroleum products (polish, thinners, varnish)**
- ✓ **Solvents**
- ✓ **Acids (muriatic, sulfuric, phosphoric)**
- ✓ **Oil-based paint**
- ✓ **Automotive products (antifreeze, motor oil, gas)**
- ✓ **Batteries (car, lithium, nickel-cadmium)**



Items not accepted

× Latex Paint: Many people think latex paint is hazardous, but it is not. Unwanted cans of latex paint can be air dried until solid and disposed of with your regular trash. Use kitty litter or newspaper to soak up excess liquid.

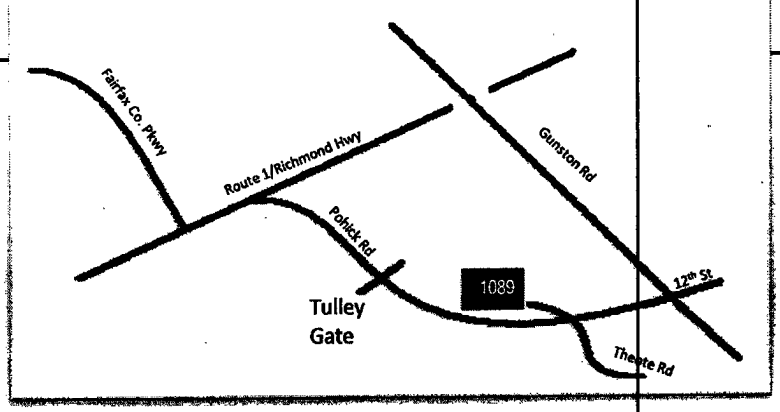
× Alkaline Batteries: Common household batteries such as size A, AA, C, D, and 9-volt can be thrown out with your regular garbage. Be sure to check whether your battery is a lithium battery (often used in electronic devices). These can NOT be thrown away with regular trash.

× Explosives: Explosives can NOT be turned in at the Recycling Center. Call the Military Police at 806-3104 for more information.

× Cleaning Supplies: Cleaning supplies (such as bleach, liquid detergent, and comet) are not considered household hazardous waste, but they *can* harm the environment. When you move, give them to a neighbor or you can bring them to 1089.

IMPORTANT: You must be a RESIDENT of Fort Belvoir Family Housing in order to drop off Household Hazardous Waste at Fort Belvoir. If you live off post, you are not eligible to participate in this program. Your HHW should be turned in to Fairfax County. Please refer to http://www.fairfaxcounty.gov/dpwes/trash/disphhw.htm for more information.

HHW is collected in building 1089 on Pohick Rd



Information Fact Sheet: Environmental Stewardship

FORT BELVOIR

BASE REALIGNMENT AND CLOSURE ACT OF 2005

The implementation of the Base Realignment and Closure Act of 2005 (BRAC) at Fort Belvoir includes 20 separate projects with a total of nearly 6.2 million square feet of building space, 7 million square feet of parking structures and areas, and an overall construction cost of approximately $4 billion. The renovation of existing facilities and construction of new facilities are well under way to support a net gain of approximately 19,300 military and civilian employees at Fort Belvoir. The law requires implementation of the BRAC Commission's decisions by Sept. 15, 2011.

ENVIRONMENTAL STEWARDSHIP

Environmental stewardship is a major focus of the installation staff throughout planning and construction. Examples include:

- **Tree Replacement** – The installation's policy is to plant two trees for every one tree removed during the construction of BRAC 2005 projects. Every tree four inches in diameter or larger that is removed during construction will be replaced with two landscape trees, two inches in diameter. Accordingly, several thousand trees will be planted as a result of the construction of the BRAC 2005 projects at Fort Belvoir.
- **Migratory Bird Nest Surveys** – For most species, the Northern Virginia breeding season occurs from May 15 to July 15. Contractors were encouraged to conduct land clearing operations prior to or after the nesting season. In the event that the contractors could not do so, the Environmental and Natural Resources Division (ENRD) and members of the environmental team in Fort Belvoir's BRAC Operations Office conducted bird nest surveys to avoid destroying active bird nests. When an active nest was found, the area was flagged and not disturbed until after the young birds fledged the nest.

PROTECTION OF THREATENED AND ENDANGERED SPECIES

Protective measures are being implemented for two species that are found in the Fort Belvoir North Area. The Small Whorled Pogonia (Isotria medeoloides) is listed as a federally threatened species by the U.S. Fish and Wildlife Service. Prior to groundbreaking, a construction exclusion zone was marked off and monitoring is currently being conducted of this area while construction is ongoing. The Wood Turtle (Clemmys insculpta) is listed as a state threatened species by the Virginia Department of Game and Inland Fisheries. Prior to all land clearing activities, surveys were conducted to ensure that wood turtles were not present within the construction limits of disturbance. Contractors were educated on identification and what to do in the event that a wood turtle is found during construction.

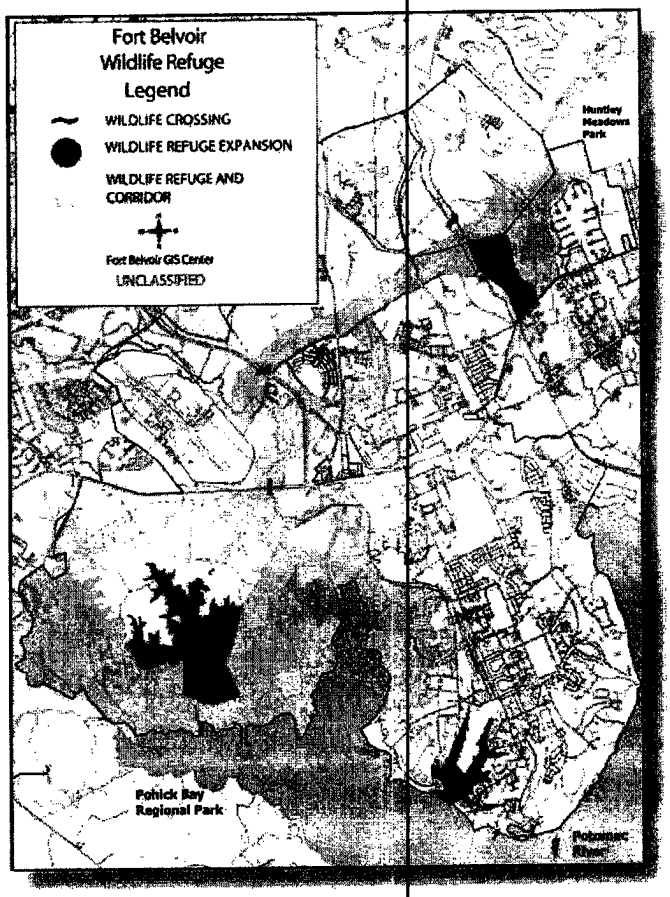
An Eastern Bluebird tree cavity nest (center of photo) was protected from tree cutting until the young birds fledged the nest.

ENVIRONMENTAL PROGRAM COMPLIANCE

The environmental team in Fort Belvoir's BRAC Operations Office works closely with the ENRD to ensure that the BRAC construction projects comply with local, state, and federal environmental laws and that mitigation measures, as identified during the National Environmental Policy Act of 1969 (NEPA) process, are accomplished. Examples of environmental program compliance include:

- **Air Quality** – Each contractor on a BRAC project site is responsible for preparing a construction performance plan that identifies measures to reduce the negative effects of BRAC construction activity on air quality in the National Capital Region. These measures include restricting the use of large horsepower equipment on critical ozone days, using ultra-low sulfur diesel fuel, instituting idling restrictions on construction equipment, and requiring the use of construction equipment that meets the U.S. Environmental Protection Agency's (EPA's) new emission standards.
- **Wetlands** – During the design-build process, wetlands were either avoided, when feasible, or impacts on wetlands were reduced. To mitigate for wetlands that could not be avoided, either wetland credits were purchased to allow for the creation and/or preservation of wetlands off-site or, as in the case of the new community hospital, wetlands enhancement (e.g., stream restoration) was performed on-site.
- **Stormwater Management** – Many of the BRAC projects had space limitations that required the utilization of innovative stormwater detention methods that were integrated into the projects' design. These included the use of underground stormwater detention, sand filters, tree box filters, porous pavement, bioretention basins and swales. Reducing the impacts of stormwater runoff associated with new construction will help to sustain water resources, protect flora and fauna dependent on surface water or groundwater, provide water quality benefits, and recharge aquifers.

Environmental program compliance is accomplished through close communication and coordination between the installation, the U.S. Army Corps of Engineers (USACE), incoming tenant partners, contractors and the environmental regulatory community.



Fort Belvoir Wildlife Refuge

MITIGATION

During the NEPA process, ENRD, various regulatory agencies and the public identified mitigation recommendations. As of spring 2010, $4.7 million has been allocated to implement the following mitigations:

- Invasive/exotic vegetation control
- Removal of impervious surfaces
- Stream habitat restoration
- Partners in Flight (PIF) habitat restoration
- Wildlife crossings
- Expansion of wildlife refuge (as depicted above)

KEEP IN TOUCH

Be the first to hear about upcoming events and construction activities at Fort Belvoir.

We encourage you to subscribe to our mailing list if you would like to receive our newsletters via mail and/or receive announcements and other construction-related information via e-mail.

To subscribe to our mailing list or to receive additional information, please call 1-877-BNV-2424 (1-877-268-2424) or send an e-mail to info@belvoirnewvision.com. Please visit our web site at www.belvoirnewvision.com

Follow Fort Belvoir on Facebook (www.facebook.com/Fort.Belvoir), Twitter (www.twitter.com/Fort_Belvoir), and Flickr (www.flickr.com/photos/belvoirphotos/).

200 Daingerfield Road, Suite 201, Alexandria, VA 22314

The information contained in this publication is subject to change due to funding availability, mission requirements, or other factors.

This document was published in May 2010.

Hundreds improve Accotink Bay in watershed cleanup

Belvoir Eagle
Apr 22, 2010

By Andrew Sharbel
Staff writer

Members of the Fort Belvoir community teamed up Sunday morning to participate in the 22nd Annual Alice Ferguson Potomac River Watershed Cleanup at Tompkins Basin.

The cleanup, hosted by the Fort Belvoir Directorate of Public Works Environmental and Natural Resources Division, disposed of trash, recyclables and large items that had been dumped in the Accotink Bay.

"The Alice Ferguson Foundation is located in Accokeek, Md., and is a nonprofit organization that does a lot of stuff with the environment and organizes this event," Kevin Walter, Belvoir Natural Resources Specialist, said. "We are one of the sites that extend through Pennsylvania, Maryland, Virginia and D.C. and we have a site that encompasses the entire shoreline of Belvoir."

Approximately 200 people were grouped into teams of organizations and community groups and spread throughout Belvoir's shoreline to dispose of trash that has accumulated over the past year.

Participating organizations included the Society of American Military Engineers; Cub Scouts; Boy Scouts; Girl Scouts; Hayfield Secondary School's Leo Club; Belvoir Bowhunters, DPW; Directorate of Morale, Welfare and Recreation and others.

Photo by Andrew Sharbel

Volunteers from Fort Belvoir spend Sunday morning cleaning up during the 22nd Annual Alice Ferguson Potomac River Watershed Cleanup at Tompkins Basin.

Some of what was removed by Fort Belvoir volunteers during Sunday's Accotink Bay Watershed Cleanup includes:

- 13 tires
- 2 lawn chairs
- 1 plastic, 50-gallon drum
- 1 metal, 50-gallon drum
- Floating marker buoy
- Alternator
- Shopping cart
- About 100 bags of plastic, glass and metal

"As far as shoreline, we are probably covering about 5 miles altogether and we will be collecting tires, bottles and cans. We also try to look and see what companies are producing the most trash and that actually goes on record now," Walter said. "Obviously, the top companies are Pepsi, Coke, Budweiser and Deer Park Water."

IN CASE OF A SPILL

1. **IDENTIFY** one of the following criteria:
   a. **5 gallons** or more of fuel or oil
   b. Spill covering an area of **10 square feet** or more
   c. Spill of any size that enters **waterways, storm drains, sewer system or surface waters**
   d. Spill of any substance which may **pose a threat** to public health or welfare

2. **CALL and REPORT** the spill if it meets any of the criteria:

FORT BELVOIR FIRE DEPARTMENT
911 / 703-781-1800

AFTER calling the Fire Department, notify the following
Fort Belvoir DPW-ENRD employees:
703-806-0022 (Jan Walwyn) or
703-806-3694 (Ben Wallen) or
703-806-0627 (Kevin Kivimaki)

3. **DO NOT** wash or dilute the pollutant with water

4. **CONTAIN** the spill while waiting for assistance
   a. Prevent pollutant from entering waterways or sewer systems
   b. Apply absorbents (soil, sawdust, sweeping compound, etc)
   c. Construct dams, berms, dikes

5. **IF** the spill is contained, and less than 5 gallons or smaller than 10 square feet, you do not need to report the spill. **YOU MUST**
   a. Clean up the spill with rags or absorbent materials
   b. Place materials used to clean in a garbage bag
   c. Seal the bag
   d. Turn in used materials to the Fort Belvoir Hazardous Waste Program by calling **806-4537** or **806-0022**.

STREAM & RIPARIAN STABILIZATION & RESTORATION
FAIRFAX COUNTY, VIRGINIA

FREE 3 DAY WORKSHOP & SITE VISITS TO ACCOTINK CREEK PROJECTS

INNOVATIVE APPROACHES TO STREAM STABILIZATION AND RESTORATION

DATE: Tuesday-Thursday, June 22-24, 2010
TIME: 9:00 am to 4:30pm
LOCATION: Mosby Reserve Center, 8831 Farrar Road, Fort Belvoir, VA 22060. (Drill Hall). Picture ID required for entrance into the Mosby Center.

INSTRUCTORS: Dave Derrick[1], and Dr. Rich Fischer[2]
U.S. Army Corps of Engineers (USACE)

[1]Research Hydraulic Engineer, USACE Engineer Research & Development Center, Coastal & Hydraulics Laboratory (ERDC-CHL)

[2] Research Wildlife Biologist, USACE Engineer Research & Development Center, Environmental Laboratory (ERDC-EL)

This exciting FREE workshop will showcase three innovative stream projects on Accotink Creek in northern Virginia. It will present the stream stabilization methods used, design considerations, ongoing Corps research, and the role of sediment management in watershed planning and restoration.

The **Panther Bridge project** was built in 1997 as an environmentally sensitive and cost-effective means of reducing severe erosion problems. Despite receiving flows from a highly urbanized watershed, the project has performed well, and exhibits the use of two methods: stone toe bank protection and Bendway Weirs. In one area, stone toe was used to initiate the formation of a new bank line and floodplain. This is an excellent case study. **Hip boots, waders or rubber boots are recommended for the Panther Bridge site visit.**

Two new projects on Accotink Creek were constructed in December 2008 to protect both the runway and the re-chlorination plant. These projects used a variety of innovative streambank stabilization measures, many of which incorporate vegetation. They include Locked Logs, Slit Brush Layering, rooted stock plantings, Slit Trench Living Dikes, Longitudinal Peaked Stone Toe Protection (LPSTP), Live Siltation behind LPSTP, curved vegetative keys, short Bendway Weirs, and native grasses. For the third day of class.

Tuesday thru Thursday will consist of classroom presentations. Wednesday morning the class will visit the 1997 Accotink Creek Panther Bridge site, & the 2008 Runway and Re-chlorination sites.

Workshop Sponsors: Corps of Engineers Water Operations Technical Support program & U.S. Army Fort Belvoir

Register early! Workshop space is limited!

Registration form on next page
Contact Dave Derrick @ David.L.Derrick@usace.army.mil with questions.