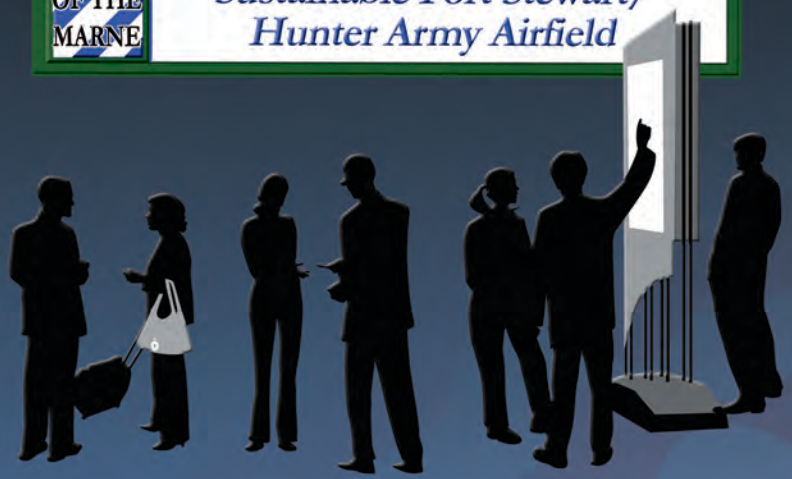
Sustainability Management System

R	RESOURCES	Pollution P2 Prevention; Natural Resources
O	OPTIMIZE	MISSION; WELL-BEING; ENVIRONMENT
C	COMPLIANCE	
K	KEEP IMPROVING	
OF THE MARNE	*Sustainable Fort Stewart/ Hunter Army Airfield*	



ENVIRONMENTAL DIVISION DPW

DPW Environmental Division
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Fort Stewart, GA 31314
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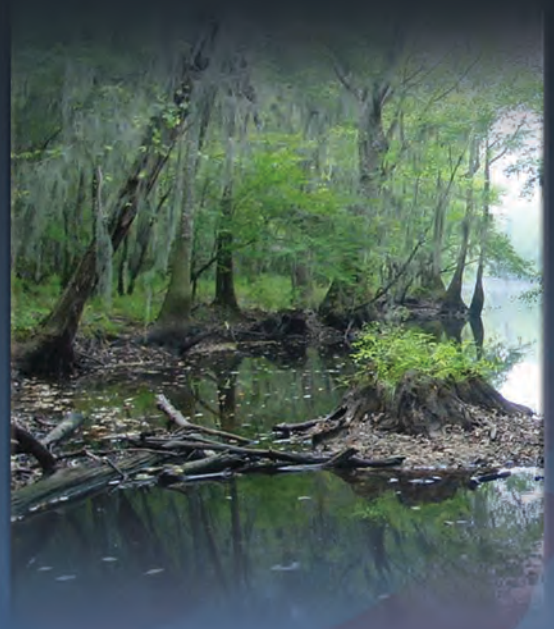
For more information, visit us online at:
http://www.stewart.army.mil/dpw/EN.asp

Professional Development Program



ENVIRONMENTAL DIVISION DPW

Sustainability Tour 2011

Professional Development Program Tour

Tour Contents:

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Notes

CEP Purple Pipe

- In an effort to further conserve potable water, a partnership between Fort Stewart and the City of Hinesville routes reuse water through purple pipe from an off-post city wastewater treatment plant to the Fort Stewart CEP cooling towers and Fort Stewart Golf Course.
- Since the purple pipe system became operational in JUN 10 thru APR 11, the partnership has saved Fort Stewart approximately 27,000 gallons of potable water per day at the CEP with a maximum design capacity savings estimated at 190,000 gallons of potable water per day.
- Total potable water savings for the JUN 10 – APR 11 time period is 9.0 million gallons at the Fort Stewart Central Energy Plant cooling towers.

- This partnership is a win-win for both Fort Stewart and the City of Hinesville, providing the Installation with an alternate water supply for two of our major water users and the City of Hinesville with the ability to obtain the environmental permit or its newest wastewater treatment plant.

Service Orders & Projects

How do I submit a Service Order?

You can call in Service Orders (SO) or submit in person at the SO desk. At Fort Stewart Bldg 1114, the number is 767-2883 and at HAAF Bldg 1003, the number is 315-4003. Both numbers are answered 24/7, however, if you submit in person, the desks are only manned M-F, 0730 – 1600. If your needed repair is NOT an emergency and NOT estimated to be in excess of $2K (falls into Individual Job Order (IJO) category), you can also submit the SO online at: https://intra.stewart.army.mil/svcforms/Documents/DPWSvcOrd.aspx.

How soon will someone respond to my Service Order (SO) request?

Based on the information given in the SO request, a priority number is assigned to each SO. Priority 1 (emergency – gas leaks, major utility failures, broken electrical components, broken water or steam pipes, spills of hazardous or toxic substances) SOs are responded to immediately. Normal response time is within 1 hour. Once started, the work will continue until it is complete. Priority 2 SOs are considered urgent – Examples would be heating and warm water supply outages, air condition system failure, functional failure of ranges and refrigerators. Response time for Priority 2 Urgent may vary from 2 to 72 hours, depending upon availability of craftsmen and relative urgency. Priority 3 SOs are for routine issues – Any work not meeting priority 1 or 2 criteria is considered priority 3. It is anything that merely constitutes an inconvenience or unsightly condition if not accomplished. SOs in this category will generally be grouped by geographical area for accomplishment in the most economical manner, on a first-come, first served basis.

What if I have a major repair?

For repairs estimated to be over $2K or work will take at least 40 hours, an Individual Job Order (IJO) Form 4283 must be submitted. IJO forms must be submitted in person or online at: http://stewdpwa401/wcstest/CustInfo.aspx. IJOs are prioritized for execution by the following criteria: Life, Health and Safety; Command Directed; Installation Planning Board; Reimbursable Customer Funding; DPW Infrastructure approved by GC/SC (e.g., roofs, HVAC, fire, etc). Dependent upon complexity of design, funding method or if construction is needed, IJOs can take anywhere from 1 month to 18 months (or longer) to complete.

Hazardous Waste

- Fort Stewart/Hunter Army Airfield has progressed dramatically in the collection and management of Hazardous Waste (HW) and Hazardous Materials (HM) in the past 20 years. We have developed a uniform standard for HW in that each maintenance facility has a storage building for HW collection.
- The HAZMART Program is a partnership program with the Directorate of Logistics who manages the HM storage lockers. An individual is assigned who delivers the material, receives product orders, and ensures products are rotated – first in first out – to reduce loss from expired shelf-life. Since its inception the program has saved the Installation over $2 million.

Hazmart 20 years ago

Hazmart 5 years ago

Hazmart Today

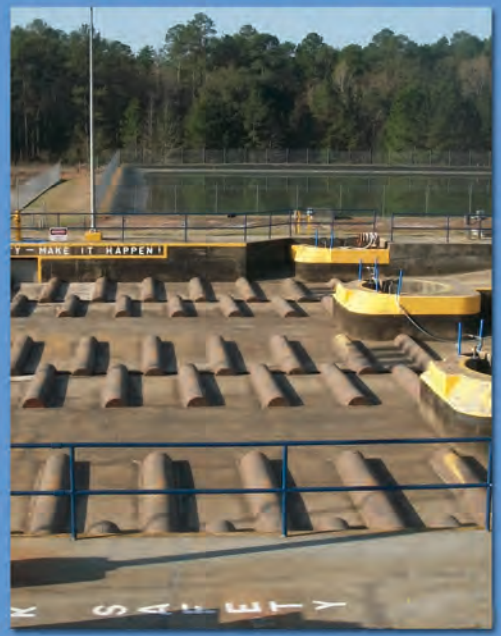
E & S Project

This intersection; over a 5 year period (1999 -2003) due to its topography & soils, would wash out on average 4 to 6 times a year. These wash outs would adversely impact training, and access to ranges, create serious safety concerns and result in the significant transfer of silts & sediments being transferred to Taylor's Creek or "Waters Of The State". Typical maintenance costs for each repair would run approximately $14,000 dollars. Given the significance and frequency of the storm events Fort Stewart experiences each year, coupled with the maintenance costs of such repairs, the expenditure of "Sustainability Dollars" to permanently harden this intersection has proved to be funds well spent to ensure the long term viability of the training platform. In only 8 years, the funds spent for this construction has practically paid for itself, eliminated the environmental infractions, removed all training delays, adverse training impacts and all safety issues from the wash outs.

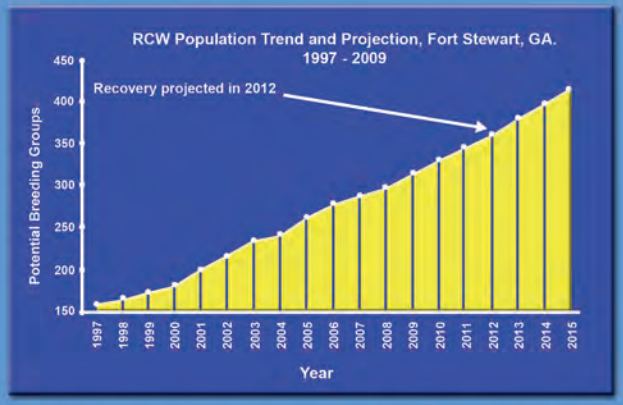
Central Vehicle Wash Facility

The Fort Stewart Central Vehicle Wash Facility (CVWF) is a vehicle maintenance area for washing tracked vehicles, HUMMVs, and fuel tanker trucks subsequent to field exercises, prior to the Units returning to their designated motorpool areas. The Fort Stewart Central Vehicle Wash Facility is a closed-loop, rain capture system with no direct potable water makeup source. This self-contained closed loop system has wash water recycled, by discharging through sand filters, where sediment is captured into two grit chambers, and the remaining wash water is discharged to a series of two settling lagoons. These lagoons also capture rain water. The recycled wash water along with the captured rain water is pumped from the second lagoon to the area where the vehicles are washed.

The Fort Stewart CVWF currently saves the Installation approximately 200,000 gallons of potable water per day and has done so since its construction in the late 1980s.



Red Cockaded Woodpecker (RCW) Cluster



- Proactive habitat management through prescribed burning, timber harvests, hardwood mid-story removal, and artificial cavity installation is the key to RCW population increase.
- There are 196 RCW clusters on Fort Stewart with NO TRAINING RESTRICTIONS.
- Revised Army RCW Management Guidelines allow for removal of training restrictions as we move toward recovery (see graph).
- When we reach recovery (350 pairs of birds) ALL training restrictions will be removed.
- Our success is a result of our partnerships with DPTMS, US Fish and Wildlife Service, GA Department of Natural Resources, and conservation organizations.

Red-cockaded Woodpecker Habitat

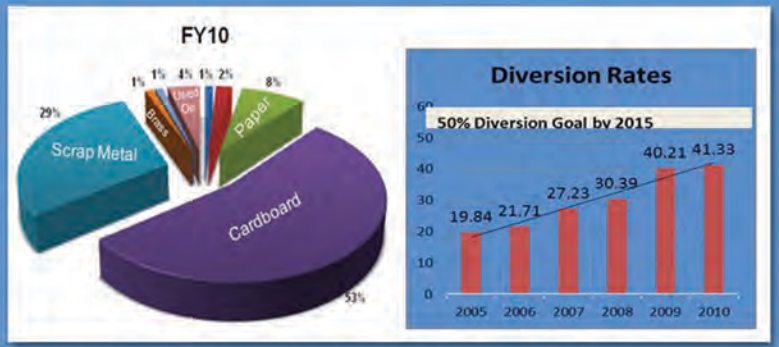
Red-cockaded Woodpecker

RECYCLING

- Sustainability Management System Objective to Reduce Solid Waste Disposal.
  - Incorporating Sustainability Management System Policy into Recycling Compliance briefings/presentations.
  - Four year increase in useful life of landfill because of the Installation's recycling efforts.
  - Extending overall awareness throughout the Installation.

- Self Sustaining
  - Revenue from recycling operations funds annual processing costs.
  - Revenue generated covered Recycling Operations cost for the last three years.
  - -$8,000 annual Incentive Award Program (Quarterly military and civilian recognition).

- FY10 $2.1 Million in Solid Waste Cost Avoidance Savings from Landfill diversion.
  - Recycling Revenue – $859,022 / Cost Avoidance – $1,248,440.
  - 18,379 tons of solid waste diverted (10,466 tons - Construction & Demolition / 7,913 tons - Municipal Solid Waste.
  - Goal and objectives established to meet requirements of Executive Order 13514 by 2015.



- Diversion Rate rose from 20% in 2005 to 41% in 2010 (Solid Waste Annual Reports).
  - Installation Commander signed into effect Command Recycling Policy Memorandum.
  - Program success attributed to Command Emphasis.
  - Recycling Certification, Training, and Assessment Programs which increased awareness.

TAYLORS CREEK GOLF COURSE

- Recent water conservation efforts have led to state-imposed watering restrictions on irrigtion using potable water. The decision to totally remove Taylors Creek Golf Course from the potable water system and transfer to reuse water via purple pipe, ensures that Fort Stewart is being a good steward to the environment and maintains a quality experience for golfers.
- Since the purple pipe system became operational in MAY 10, the partnership has saved Fort Stewart approximately 100,000 gallons of potable water per day, at the golf course, with a maximum design capacity savings estimated at 700,000 gallons of potable water per day.
- Total potable water savings for the MAY 10 – APR 11 time period is 33.8 million gallons.

New IBCT Construction

Leeding in Energy & Environmental Design (LEED) New Construction Version 2.2 Silver. To become LEED Silver Accredited the site did many things, some of those are:

1. Company Operations Facility and Tactical Equipment Maintanance Facility buildings have solar hot water heaters for 30% of domestic hot water.
2. Bicycle racks in the barracks.
3. High efficiency Boilers used throughout the site.
4. High efficiency Chillers used throughout the site.
5. Split-ductless systems used for communication rooms.
6. Dedicated Outside Air Systems used throughout the barracks.
7. High efficiency water source heat pumps for the barracks.
8. Highly insulated walls and glazing throughout the site.
9. Encouraged the use of carpooling.
10. Selection of landscaping that does not require watering.
11. Most of the sites were able to divert at least 75% of the construction waste from landfills.
12. Water use reduction by at least 30%.
13. Eliminating the heat island effect on the roof.

The Barracks complex is predicting to attain 40 points, which would give them a LEED Gold building.

Landfill

- Fort Stewart/Hunter Army Airfield has 5 landfills that all receive different types of waste. Only one landfill, the sanitary land fill, currently accepts waste from the brown dumpsters on post and the household waste from housing.
- Hunter Army Airfield's housing waste is deposited in an off-post landfill.
- Sanitary landfill operations have occurred at or near this site since the construction of Fort Stewart in the early 1940s. It was first permitted in 1982 with a total available waste volume of 1,507,500 yd^3. As of AUG 10, it was estimated that the Sanitary Landfill has 27 years of remaining life, if waste disposal continues at the same rate.
- An average of 9,700 tons is deposited each fiscal year. 8821 tons was deposited in FY10 and 10,774 tons in FY09.
- Cost to dispose of 9,700 tons off post would be $504K in tipping fees alone. That doesn't include collection and transportation costs.
- Please recycle to continually increase the life of the landfill.

FORESTRY

The Fort Stewart/Hunter Army Airfield (FS/HAAF) Forestry program is one of the largest in the Department of Defense (DoD) and manages the largest remaining acreage of longleaf pine wiregrass ecosystem in Georgia. The primary goals of the Forestry program are to provide a superior training environment for the 3rd Infantry Division, quality habitat for Threatened and Endangered Species (TES) and maintaining the longleaf pine wiregrass ecosystem. Controlled burning and timber thinning are the primary management tools utilized to achieve these goals and are the reason FS/HAAF is recognized as one of the best examples of longleaf pine forest in the United States.

Fort Stewart is recognized as one of the largest controlled burn programs in the world. The Installation's controlled burning efforts have contributed to the significant increase in Fort Stewart's Red-Cockaded Woodpecker (RCW) population. Controlled burning is also beneficial to many other protected species, as well as game and non-game animals. Another ecological benefit of controlled burning is the biodiversity it creates. More than one-third of all Georgia's plant species exist on Fort Stewart. Burning enhances and maintains this diversity.

Commercial timber is regularly thinned on a long-term, sustainable basis to provide military training opportunities in maneuver areas and within live-fire ranges. Thinning also creates and maintains habitat for federally protected species and supports Installation compliance with federal law. As a result of these efforts, FS/HAAF is recognized as one of the largest timber revenue producers in the DoD. This approach to ecosystem management has enabled FS/HAAF to reduce or eliminate training restrictions by demonstrating our ability to expand populations of sensitive species even in heavily used training areas.

The success of this forestry program can be measured by the Installation's immensely valuable forest resources, excellent military training platform, healthy natural environment, reimbursable nature of the program, and sustainable flow of forest products to the economy, while also ensuring the well being of our Soldiers; providing safe training and creating an area that is easier for Soldiers to maneuver.

BLUE/BROWN DUMPSTERS

- Blue Dumpster – Each unit/activity collects recyclables from inside their building and brings them to these dumpsters. Please ensure that only recyclable items are placed in these bins and that those items are not contaminated by food particles or other liquids.

- Brown Dumpster – These bins are for all other trash/solid waste that will be deposited in the landfill.

HOUSING

What is RCI?
The Residential Communities Initiative (RCI) is the innovative program developed and managed under the oversight and direction of the Office of the Assistant Secretary of the Army (Installations and Environment), OASA (I&E), on behalf of the Secretary of the Army to pursue the privatization of Army military family housing.

Who is RCI?
The RCI Office provides oversight of the private partner's new construction, renovation and maintenance, and management operations to ensure partner's compliance with all requirements and customer satisfaction.

Who is Fort Stewart and Hunter Army Airfield's partner?
Balfour Beatty Communities L.L.C. is Fort Stewart and Hunter Army Airfield's partner.

How many military homes will be on base as a result of Privatized Housing?
Our partner will construct 589 new homes at Fort Stewart and 187 new homes at Hunter Army Airfield for a total of 776 additional new homes to build out the housing deficit. At the end of eight years, Fort Stewart will have a total of 3,027 homes and Hunter Army Airfield will have a total of 675 homes. Also, our partner will demolish and replace old existing units, making a dramatic change to Fort Stewart and Hunter Army Airfield community housing landscape to reflect new and modern housing standards.

How can I apply for on post housing?
You can either apply online via the Fort Stewart BBC web site or the Hunter Army Airfield BBC web site or call the Community Management Office at Fort Stewart (912) 408-2460 and Hunter Army Airfield at (912) 459-2133 for asistance.

What is RCI's vision for Privatized Housing?
The vision of the RCI Office is to have thriving on post housing communities where military personnel and their families can feel safe and enjoy a high quality of life.

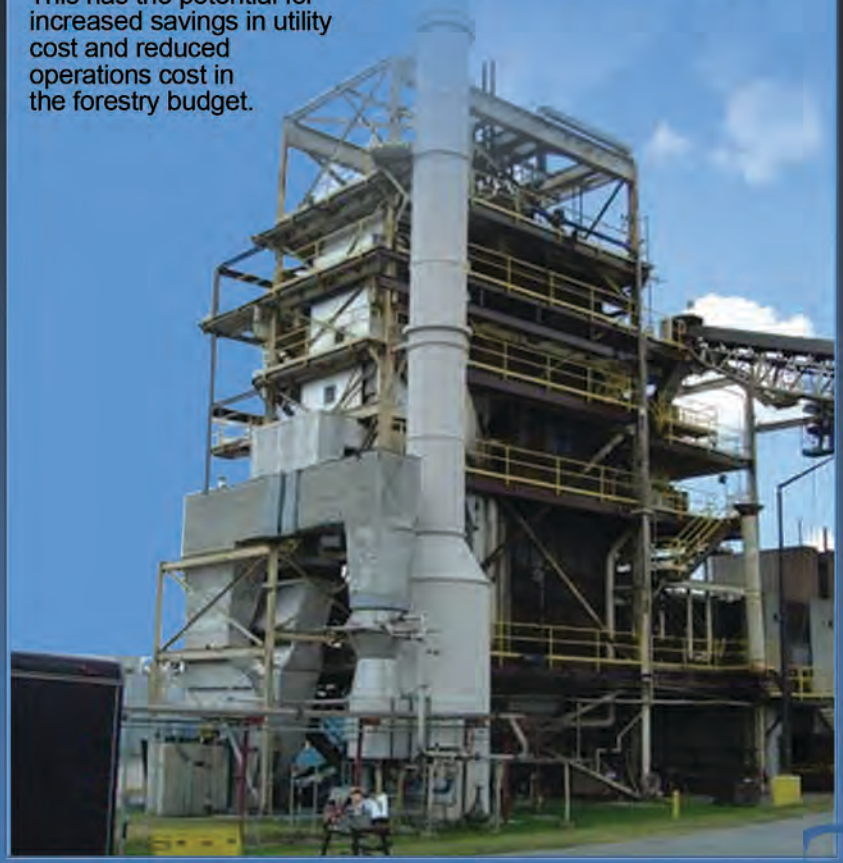
Partnership (LLC) Formed Nov 2003
1449 of 1663 new units: 87% Complete.
1350 of 1729 renovated units: 78% Complete.
699 of 954 demolished units: 73% Complete
Current State as of May 2011
- 2824 Family Units (Homes) - 334 apartments
End State Dec 2012
- 3629 Homes - 334 Privatized UPH Apartments (Marne Point)

CEP/WOOD BURN

Fort Stewart has a wood fired boiler at the Central Energy Plant (CEP). This boiler burns scrap wood to produce steam which is used to produce high temperature water (HTW) and chilled water (CHW). The HTW and CHW are used to cool and heat approximately 100 buildings in the Garrison area.

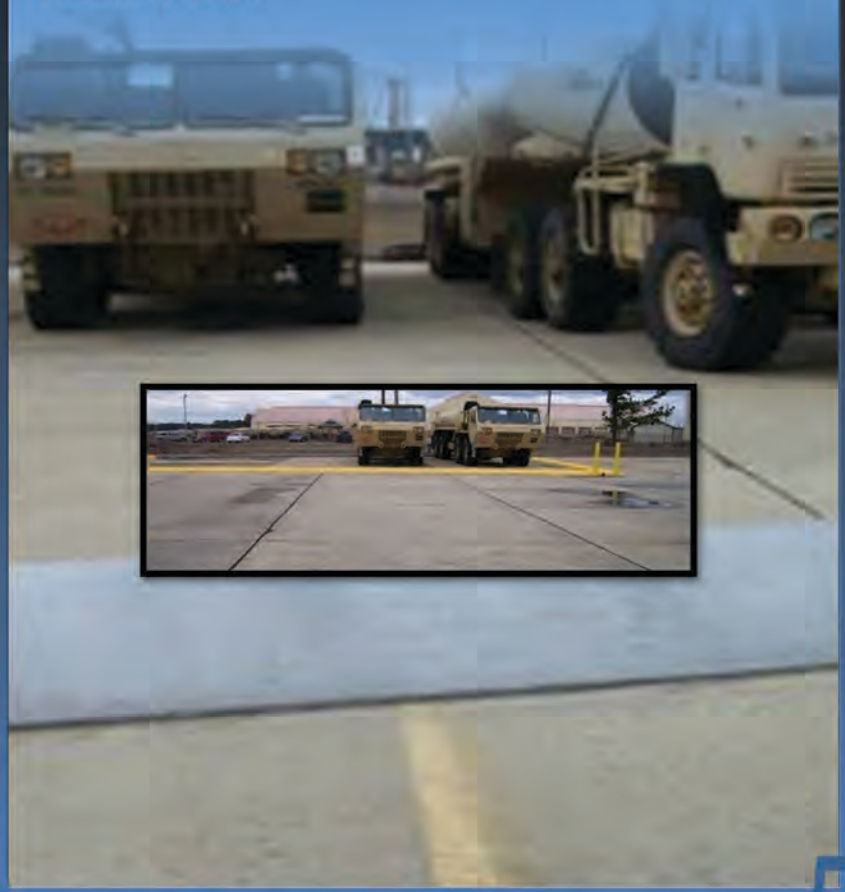
Scrap wood costs approximately 1/3 less than natural gas per unit energy. This results in a cost avoidance of $500K-$1.0M in energy cost when the wood fired boiler is in operation.

The Installation currently has a contract to purchase the scrap wood from the local industry such as pulp wood plants. The Installation is also in the process of determining the feasibility and cost effectiveness of using its own forestry resources for fuel. This has the potential for increased savings in utility cost and reduced operations cost in the forestry budget.



Pond 4 Wetland

- Wetlands are transitional areas between land and water that host species from both environments and contribute to water quality and flood control; an integral part of the Fort Stewart ecosystem.
- Fort Stewart contains about 91,000 acres of wetlands, roughly one-third of the Installation.
- Wetlands are protected by the Clean Water Act and Fort Stewart attempts to avoid wetland impacts during the review and planning stages of a project. However, due to the extent of wetlands on the Installation, avoidance is not always possible.
- Before a project may be constructed in a wetland, a permit must first be received from the US Army Corps of Engineers and the Georgia Department of Natural Resources. Any application for a permit to impact wetlands needs to include a description of the type of mitigation that would be conducted if a permit were issued.
- Fort Stewart mitigates its wetland impacts by purchasing credits from off-post wetland mitigation banks or by "debiting" credits from our own on-post bank, known as "Pond 4." This bank was created in 2000 when approximately 1,000 acres of upland habitat were converted to wetland status.
- Strum Bay is a wetland system dominating training areas B9 and B10, connecting with the Canoochee Creek and our "Pond 4" mitigation bank.
- The construction of Fort Stewart Road 22 and a canal associated with it changed the hydrology of the area and degraded large portions of the system. This construction predated legislation protecting wetlands; not much concern was apparently given to the negative effect it would have. In 2006, the area was identified as a possible restoration site suitable for providing mitigation for wetland clear cutting resulting from the construction of the Digital Multipurpose Range Complex, in Bravo 9.
- The restoration activities, performed in 2007, involved installing new culverts under Fort Stewart Roads 25 and 25A, and filling in a portion of the canal draining the area. The new water flow resulting from this work would more closely match the older, natural hydrology.
- The project was expected to restore some 584 acres of wetlands, and enhance another 243. The restoration and enhancement is still in progress as the natural hydrology returns, but monitoring indicates it is proceeding as expected and p`roviding a great ecological benefit to the area.

Curbing Projects

Last year we began installing curbed parking areas for multiple mobile fuel trucks at an average cost of $25K per curbing system. Individual containment systems cost $25K. We can install curbing for ten vehicles for less than the cost of an individual containment system. These curbing systems protect state waters in the event of an accidental release.