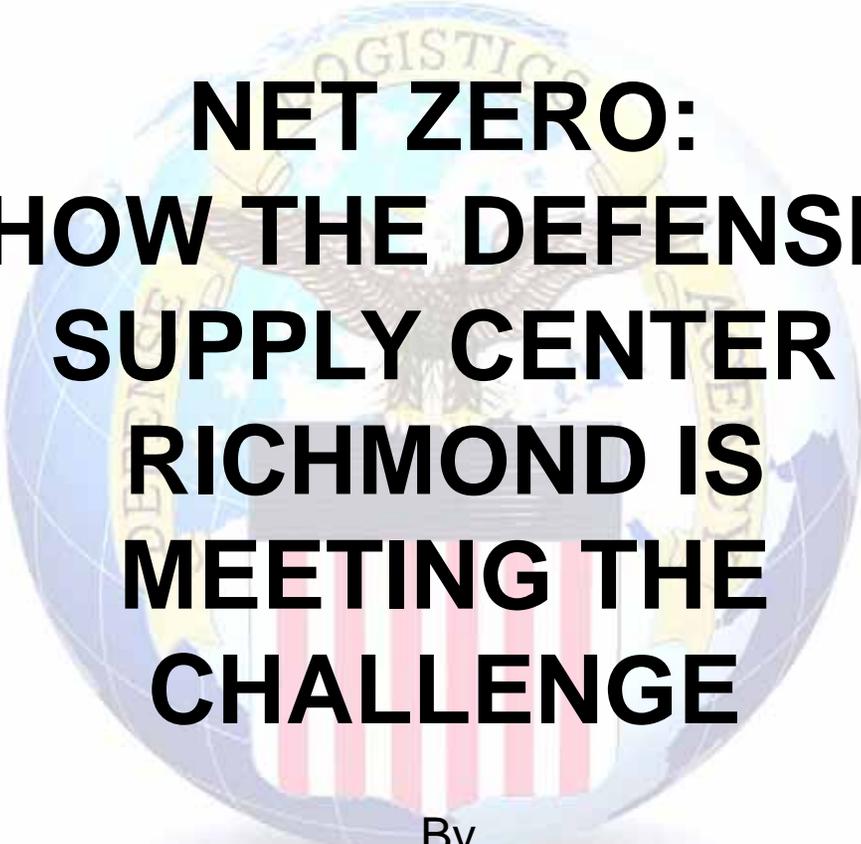


DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



NET ZERO: HOW THE DEFENSE SUPPLY CENTER RICHMOND IS MEETING THE CHALLENGE

By

Adrienne Moore

March 11, 2014

DEFENSE LOGISTICS AGENCY



**AMERICA'S COMBAT
LOGISTICS SUPPORT AGENCY**

**DLA AVIATION
DLA ENERGY
DLA DOCUMENT SERVICES**

**DLA TROOP SUPPORT
DLA DISTRIBUTION**

**DLA LAND & MARITIME
DLA DISPOSITION SERVICES
DLA LOGISTICS INFORMATION SERVICE**



DLA Aviation



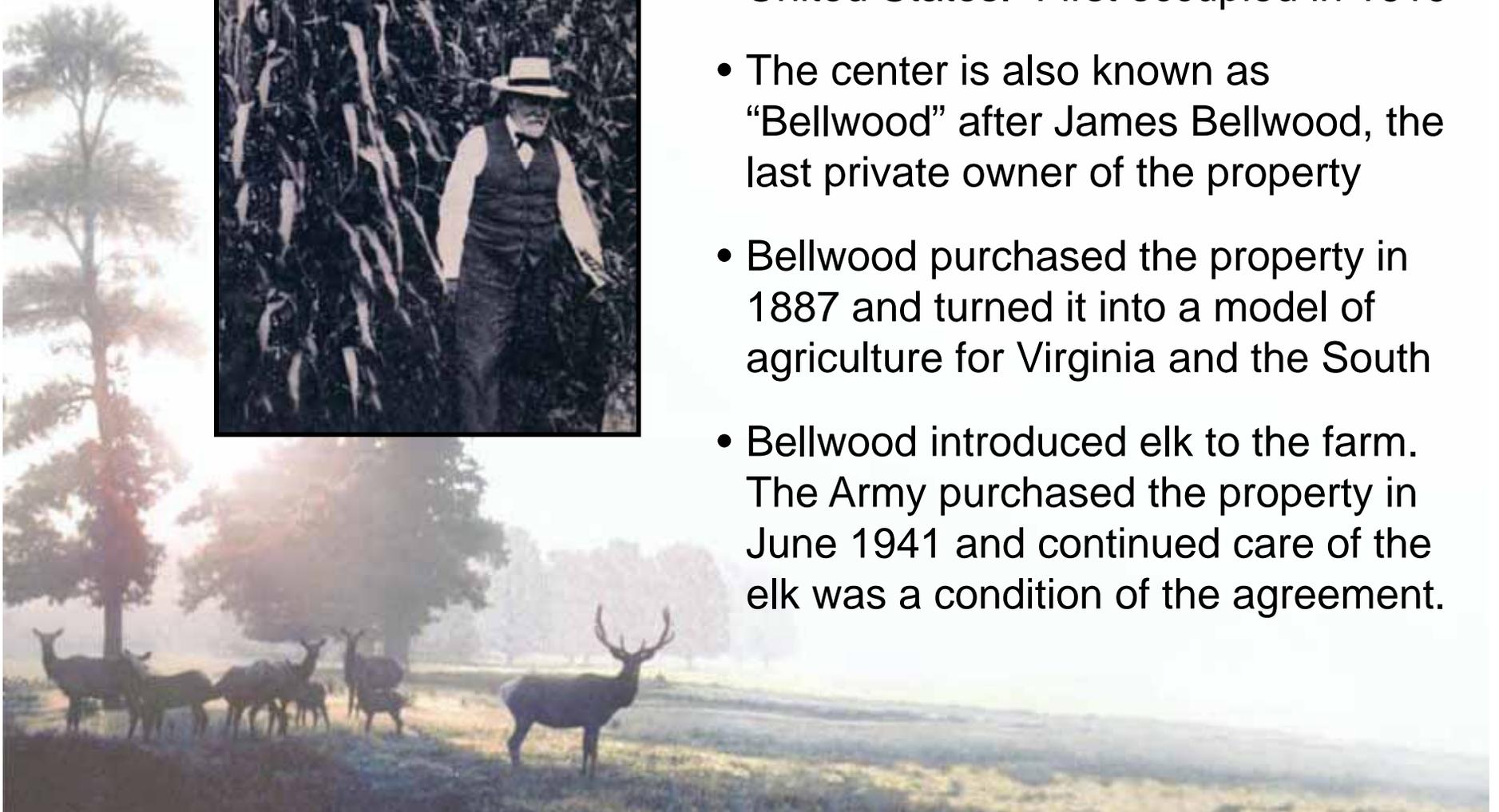
Defense Supply Center Richmond



History



- One of the earliest settled sites in the United States. First occupied in 1619
- The center is also known as “Bellwood” after James Bellwood, the last private owner of the property
- Bellwood purchased the property in 1887 and turned it into a model of agriculture for Virginia and the South
- Bellwood introduced elk to the farm. The Army purchased the property in June 1941 and continued care of the elk was a condition of the agreement.





History

- Army bought the property in 1941. Installation was activated January 1942
- Depot Operations were split out in the late 1980s
- The Consumable Item Transfers and BRAC decisions of the 1990s realigned the center's mission. Name changed to Defense Supply Center Richmond December 1995
- Management and distribution of maps and map products was transferred to DLA and Richmond in 1998





Environmental Mission

Our mission assures that Agency functions are performed in a manner that safeguards human health and the environment, provides safe and healthful working environment conditions for employees, and ensures compliance with applicable laws, regulations and policies, thereby maintaining readiness and enhancing support to the war fighter





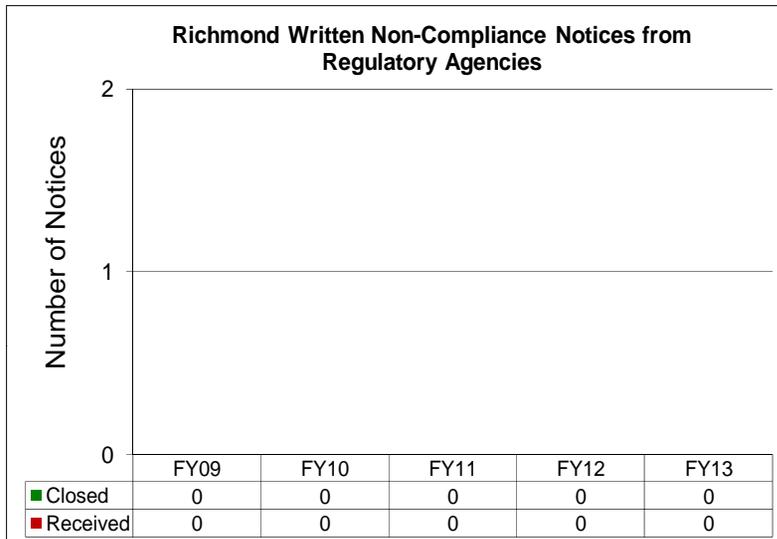
Compliance Programs

- Air Quality
- Water Quality
 - Industrial Storm Water
 - Water Permit/Wastewater
- Asbestos/Lead
- Tank Management
 - Underground
 - Aboveground
- Pollution Prevention
 - Solid Waste
 - Green Procurement
 - Recycling
- PCBs
- Environmental Management System (EMS)
- Cultural Resources
 - Historical District
 - African American Grave
- Natural Resources
 - Elk Herd/Wildlife
 - Plantings
- Hazardous Materials/Waste
 - Hub/Large Generator
- NEPA
- Pest Management
- Installation
Restoration/Cleanup
- EPCRA
- Audits

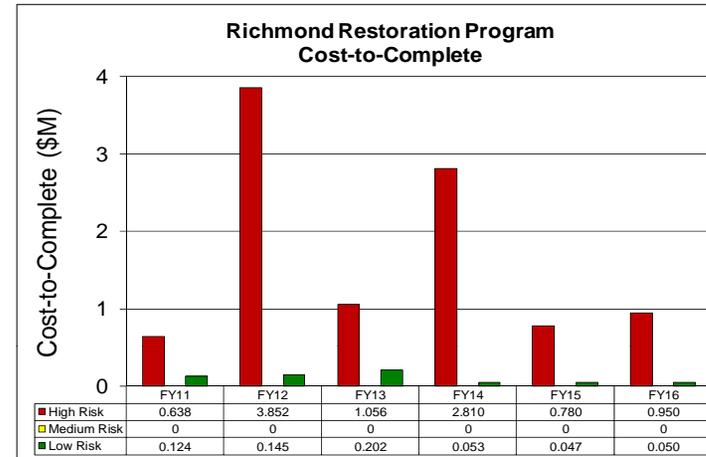


Environmental Programs

Compliance



Restoration



Number of Sites = 12; Low Risk – 8, Medium Risk – 0, High Risk - 4
 100% Remedy In Place for 12 Sites by FY 14
 100% Remedy In Place for remaining site by FY 15 (Pending Fund Availability)

Conservation

- Corporate Lands for Learning Certification since 2008
- Wildlife at Work Certification since 2004
- Developed long-term Programmatic Agreement with Federal and State Historic Agencies concerning planned building demolitions and new construction

Stewardship

- Two-time winner White House Closing the Circle Award for Environmental Management System
- Ten-time Gold Award Winner for 100% Compliance for Chesterfield County Department of Utilities Industrial Waste Pretreatment Program
- Winner of the 2011 Secretary of Defense Environmental Quality Award
- Secretary of Defense Honorable Mention Recognition for 2012 Environmental Sustainability, 2012 and 2013 Cultural Resources Management



DLA Sustainability Program

- Goal: Improve energy and conservation practices as directed by Executive Order (EO) 13514
- Target Areas:
 - Solid Waste
 - Construction/Demolition Debris
 - Toxic Chemical Release
 - Certified Pesticide Applicators
 - Integrated Pest Management
 - Environmental Management Systems
- Metrics:
 - Fossil Fuel – 30% reduction of energy intensity of facilities (2015)
 - Renewable Energy – 20% facility electric from renewable sources (FY 2020)
 - Vehicle Fleet Fuel – 30% reduction (FY 2020)
 - Greenhouse Gas Emissions - 34% Reduction of Scope 1 and 2 by FY 2020



Installation Energy Conservation Goals and Initiatives

- Electric and hybrid cars replaced gas-powered vehicles and scooters
- E-85 available at AAFES Gas Station
- Energy cost savings contract resulted in estimated monthly savings of \$60K
- On schedule to meet an energy reduction goal of 3% per year by 2015
- Generators provide power to shed the electrical load from the utility during “A days”
 - High-Efficiency LED, Low Maintenance
 - Electrical meters to monitor usage
 - In-Ground heat pumps
 - Solar power
 - Full-time Energy Manager





Installation Energy Reduction

- FY11 to FY12 - reduced total energy consumed 7.4%
- FY 13 - increased total energy consumed by 4% (seasonal weather variation)
- FY 12 to FY 13
 - Electricity decrease 5%
 - Fuel increase 10%
 - Natural Gas increase 15.9%



FY13 Projects Completed



- Light Emitting Diode (LED) lamps that use 17 watts of electricity replaced 560 T8 lamps that consume 37 watts
- Replacing every 15 years compared to 2 years
- Estimated Savings \$2,096 per year



FY13 Projects Completed

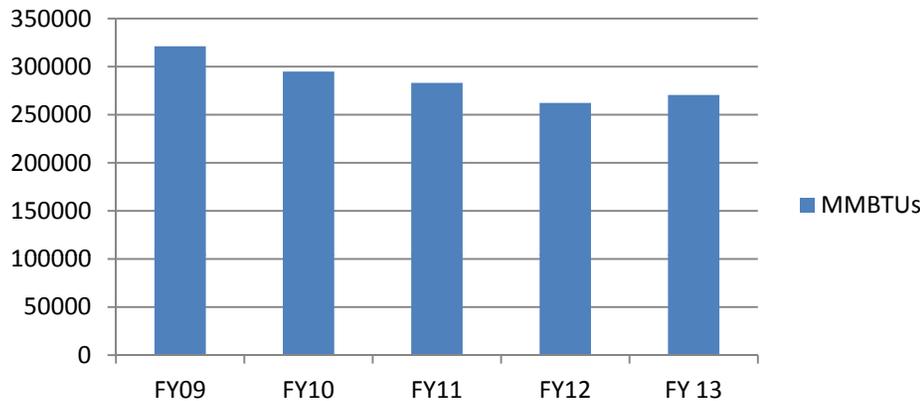
- Replaced 200 inefficient high pressure sodium lights fixtures with high output T5s with occupancy sensors
 - Reduction
 - From 5,256 mWh/yr at cost - \$31,5436 to 50 mWh/yr at cost of \$3,033
 - Project cost \$110,000
 - Payback 3.88 years



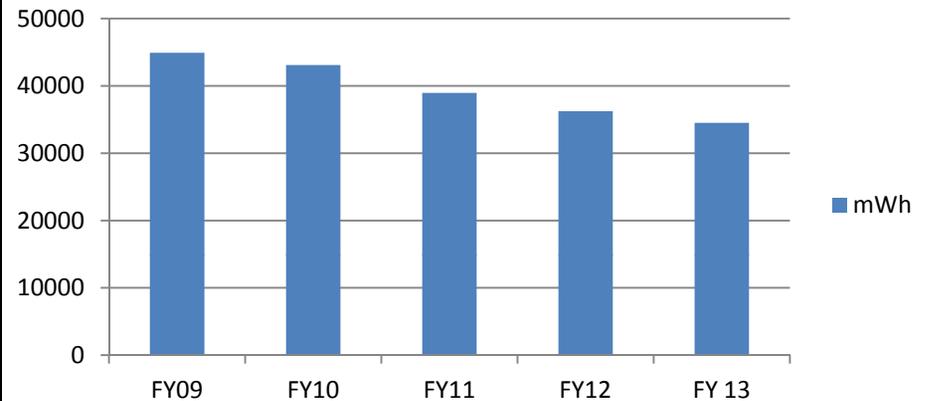


Richmond Energy and Water Conservation

**DSCR Energy Use Decreased 15.7 %
FY09-13**



**Electricity Use Decreased 23.1%
FY09-FY13**



FY	Projected Square Footage [kSF]	Energy Avoidance Realized [MMBTU]	Projected Energy Intensity [MMBTU/kSF]	Energy Intensity Goal [MMBTU/kSF]	Difference from Goal [MMBTU/kSF]
12	5,681	-	46.1	37.2	9.0
13	5,681	16397.0	43.2	35.8	7.5
14	4,862	1280.0	50.3	34.3	15.9
15	4,862	2510.0	49.7	32.9	16.8
16	4,862	630.0	49.6	32.2	17.4
17	4,862	8431.0	47.9	31.5	16.4
18	4,949	101000.0	26.6	30.8	-4.2

Energy and Water Projects

- Ground Source Heat Pumps
- Solar Photovoltaic
- Solar Water Heating
- Water System Repairs
- Occupancy Sensors
- Energy Efficient Lighting
- LED Street Lighting
- Footprint Reduction



Future Initiatives- New Operations Center

- 70% of DSCR's energy consumed in 3 buildings
 - Built during World War II as warehouses, converted to administrative space
 - Long rectangular shape, no insulation in the exterior walls
- Military Construction
 - FY 14 - Operations Center and demolition of buildings begin
 - FY 19 - Operations Center will be operating using a fraction of the energy of the buildings it will replace
- Operations Center
 - Largely heated and cooled by 800 tons of ground source heat pumps supplemented by conventional chillers and boilers
 - Installation's energy costs will be cut in half, from \$4.2 million to \$2.1 million
 - Investment in ground source heat pumps, the installation's renewable energy increase from 0.4% to 15%



Ecological Restoration

- Hydro seed one acre in southwest corner of installation
 - Test acre is to determine feasibility and effort required to ecologically restore area
- Jogging trail upgrade
 - Goal is to slow runoff down and stabilize trail
- Elk Pasture
 - Increased footprint from 23 acres to 28 acres
 - Goal is to install LID Bio Filtration Units in Elk Pasture to meet total maximum daily load requirements effective in 2017



Pollution Prevention

- Solid Waste
 - Reducing amount of waste generated through our purchases using supply contractor and our HAZMAT pharmacy
 - Waste reduction through green procurement purchases
- Green Procurement
 - Required training - Working to get all employees trained in Green Procurement through DAU or LMS
 - Policy - Working to implement policy installation-wide
- Recycling
 - Cardboard, newspaper, mixed paper, toner cartridges, plastic, aluminum, CDs, ceiling tiles, pallets, used oil, used antifreeze, drums, oily rags, batteries, and construction debris
 - Diversion rate - 85%



Partnering Initiatives

Virginia Environmental and Virginia Tier III Partnerships

- Consists of Senior Managers from Region III:
 - State Environmental Regulators
 - DOD Installations within Region
 - Regional Environmental Coordinators from Services
 - Environmental Protection Agency
- Addresses Mutual Environmental Issues
 - Share Lessons Learned
 - Training

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