



Environment and Energy Summit

17 July 2014

Agenda

0730 – 0800	Sign In
0800 – 0805	Welcome
0805 – 0815	Introduction from Colonel Maxwell
0815 – 0845	CAPT Patrick Garin, CEC, USN
0845 – 0915	Mr. Thomas A. Faha, VDEQ
0915 – 0930	Break
0930 – 1000	Ms. Sarah Diebel , DoD/DoN Chesapeake Bay Program
1000 – 1015	Mr. Stephen Clark, DLA CIV Installation Support
1015 – 1115	Roundtable: Stormwater Management/LID
1115 – 1230	Lunch
1230 – 1300	Mr. Paul G. Wirt, Army Reserve Installation Management Directorate (ARIMD)
1300 – 1330	Mr. Jeromy Range, Marine Corps Installations Command, Headquarters
1330 – 1345	Mara Zingg, Lincoln Housing
1345 – 1400	Break
1400 – 1430	Mr. Matthew A. Young, DLA CIV Installation Support
1430 – 1515	Roundtable: Energy Awareness on Bases and Campuses
1515 – 1530	Closing Remarks



MARINE CORPS INSTALLATIONS ENERGY MANAGEMENT PROGRAM

Presented to the MCB Quantico 2nd Annual
Environment and Energy Summit
17 JUL 2014

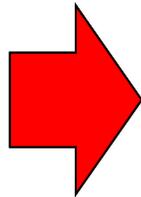
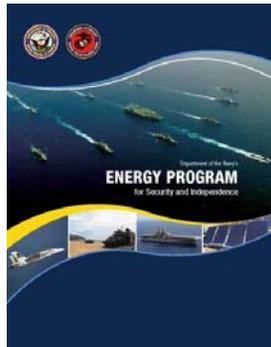
1 MW Photovoltaic System
MCAGCC, Twentynine Palms



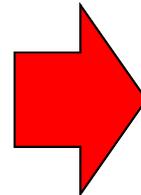
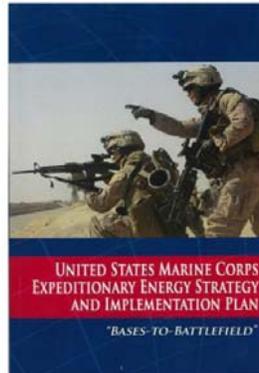
Energy Program Strategy



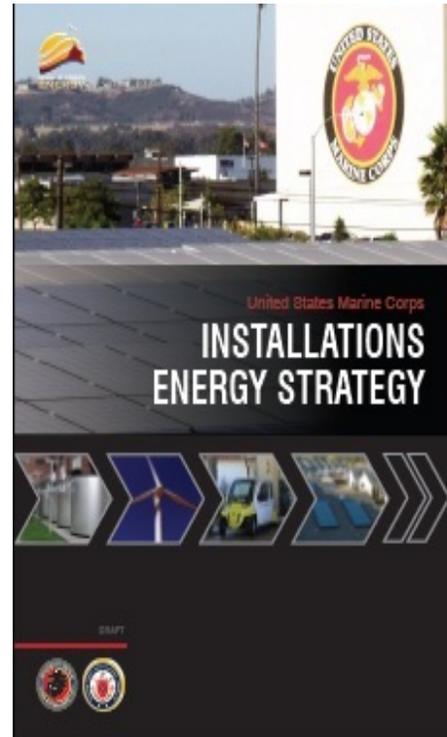
DON Energy Program



USMC Energy Strategy "Bases to Battlefield"



Installations Energy Strategy (Signed July 2013)



Energy Focus

Areas:

- Ethos
- Information
- Efficiency
- Renewables
- Security

"Those who question why the Navy should be leading on energy should study their history"

Secretary of the Navy Ray Mabus

"Energy efficiency will increase our combat effectiveness and save lives"

General James F. Amos, USMC

Bottom Line:

Energy is a valuable resource that is essential for USMC readiness and success.

We need and will pursue secure, reliable energy for our installations.

We will continually strive to improve efficiencies and lower life cycle costs.



USMC Installations Energy Strategy



Mission

- Ensure a secure and reliable energy supply to support the operating forces and their families through the prudent management of energy resources and infrastructure.
- Achieve requirements mandated by Congress and the President to promote the efficient use of energy and water, increase the use of renewable energy sources, and reduce our nation's dependence on foreign oil.
- Reduce the lifecycle operating costs of Marine Corps facilities and manage future commodity price volatility.

Lines of Operation

Energy Information

Provide clear feedback to all energy users and emphasize user-controlled reductions.

Energy Efficiency

Invest USMC resources to improve facilities energy efficiency and cut energy intensity.

Renewable Energy

Pursue third-party financing for cost-effective renewable energy resources.

Energy Security

Upgrade and integrate energy infrastructure to improve security and mitigate risk.

Energy Ethos

Recognize energy as a strategic resource by All Hands, 24/7/365, from Bases to Battlefield



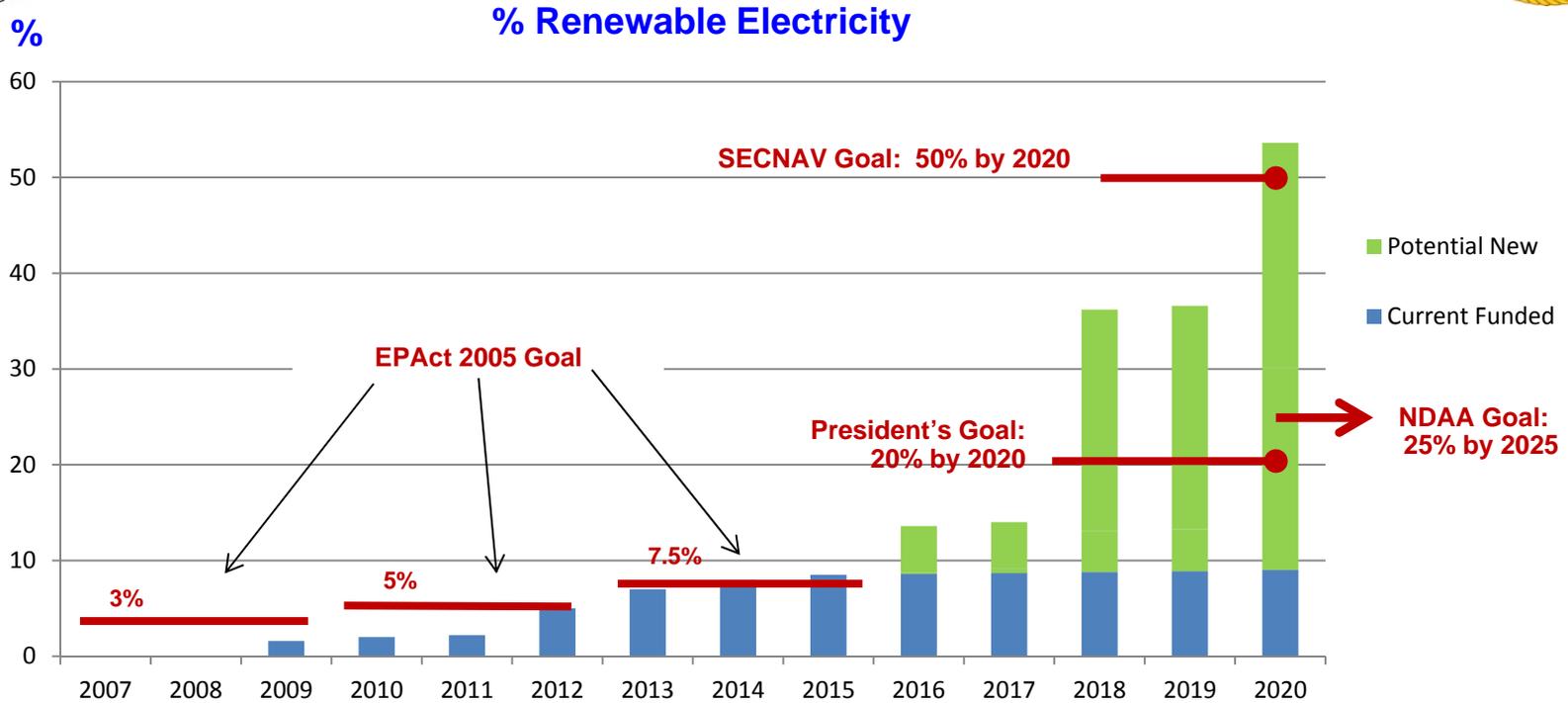
Renewable Successes



- **MCLB Albany Landfill Gas (on-line 2011)**
 - 1.9MW Provides up to 25% of base power
 - 3rd Party Financed (Energy Savings Performance Contract (ESPC))
 - Landfill Gas purchased from County Landfill
- **MCLB Albany Biomass plant (ESPC Sep 2014 award)**
 - Creates first net zero installation
 - Installation will be independent of the grid
- **MCAS Miramar Landfill Gas (on-line 2013)**
 - 3MW generator provides up to 30% of base power
 - Power produced from San Diego Landfill on MCAS Miramar
 - Power Purchase Agreement (PPA)
- **>30MW generated from Solar Photovoltaic (PV) at various bases**
MCB Camp Pendleton, MCRD San Diego, MCB Camp Lejeune, MCAGCC
Twentynine Palms



Renewable Generation



Currently funded:

- MILCON or 3rd Party Financing
- Examples:
 - 3.9MW Landfill Gas ESPC/ECIP, MCLB Albany
 - 3MW Landfill Gas PPA, MCAS Miramar
 - >30MW Various Solar PV, MCB Camp Pendleton, MCRD San Diego, MCB Camp Lejeune, MCAGCC Twenty-nine Palms

Potential New Projects:

- New renewable
- Funded using 3rd Party Financing



Energy Efficiency Investments

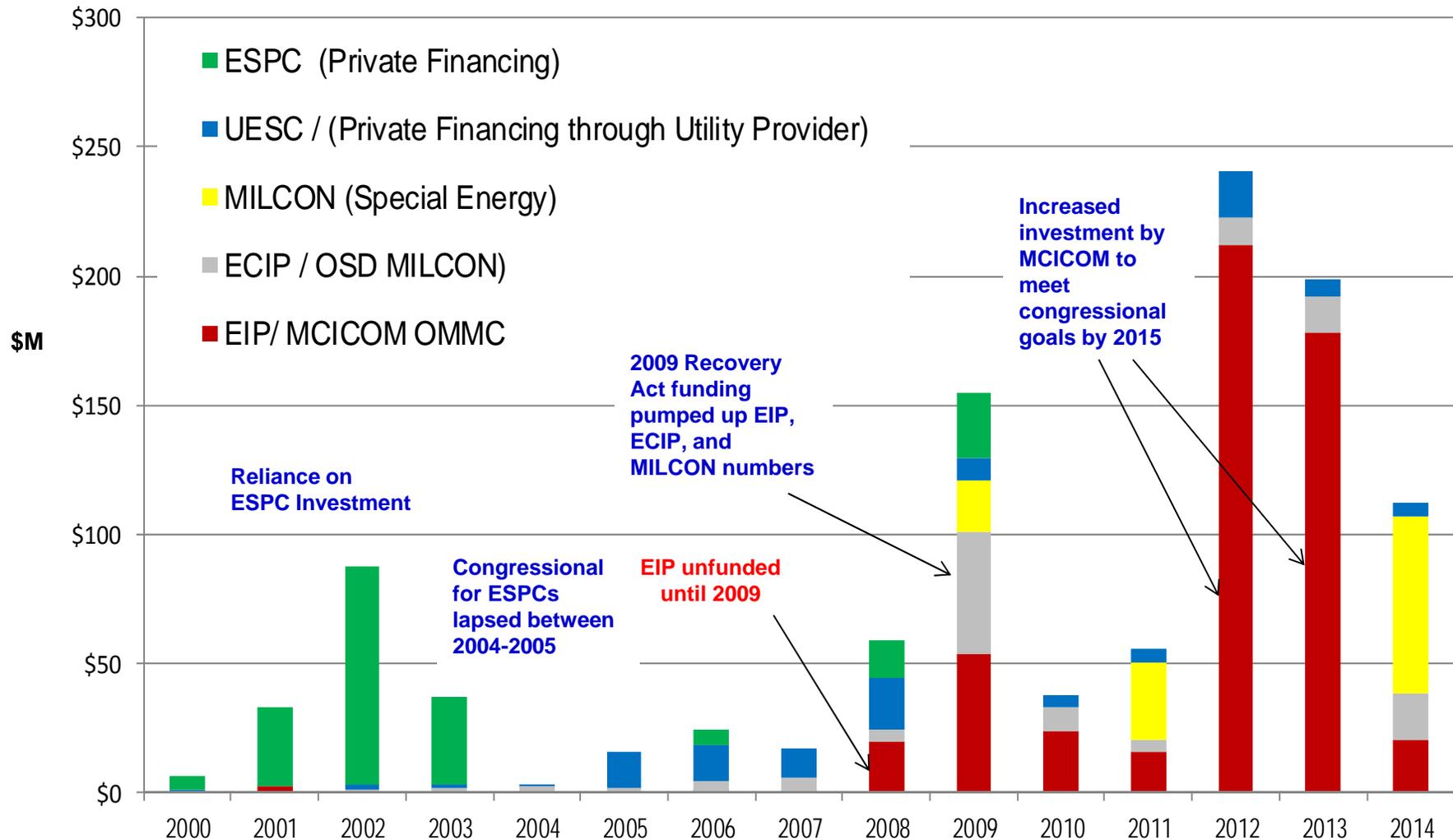


- **Invested \$224M from 2000 to 2007**
 - Appropriated: \$19M
 - Third party Financed: \$205M
- **Invested \$859M from 2008 to 2014**
 - Appropriated: \$750M
 - Third party Financed: \$109M
- **Since 2009 LEED Silver has been construction standard, resulting in over 20% of Facilities are Energy Efficient**
- **Investment estimates for REPO efforts are being developed**

From 2000 to 2020 Marine Corps Energy Investments will total \$1.5B



Annual Energy Investments

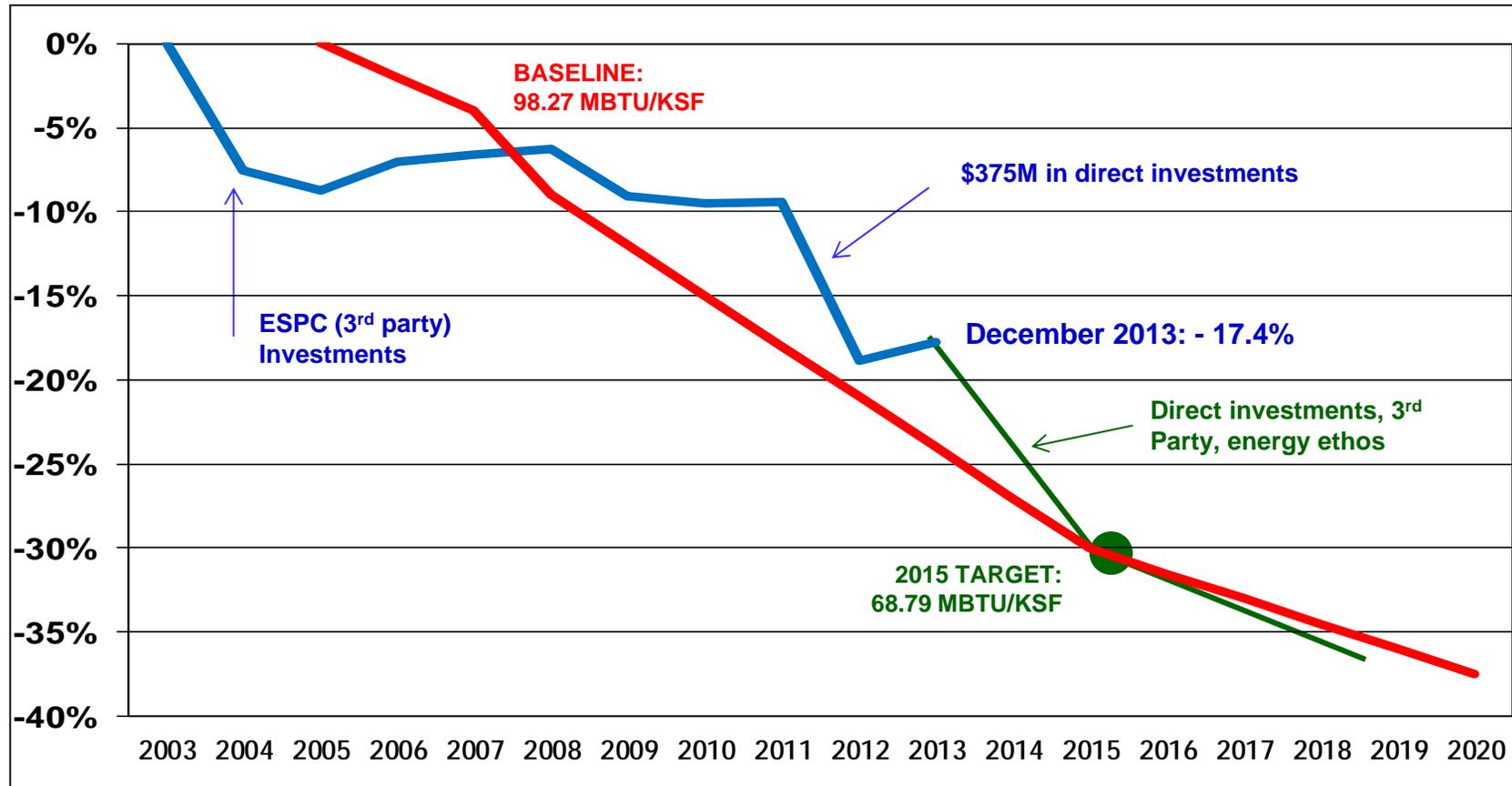




Energy Efficiency Goals



Annual USMC Intensity Reduction vs. 2003 Baseline



- Reduce energy intensity (consumption per square foot) 30% by 2015 relative to 2003 baseline. [Energy Independence and Security Act of 2007]
- Reduce energy intensity 37.5% by 2020 relative to 2003 baseline. [DOD Strategic Sustainability Performance Plan (29 June 2011)]



USMC Commercial Vehicle Energy Investments

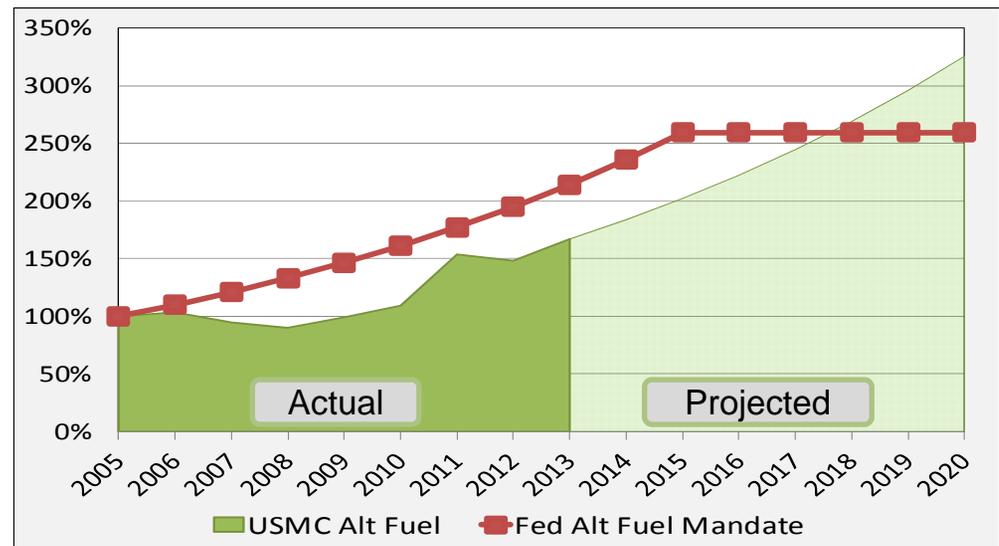
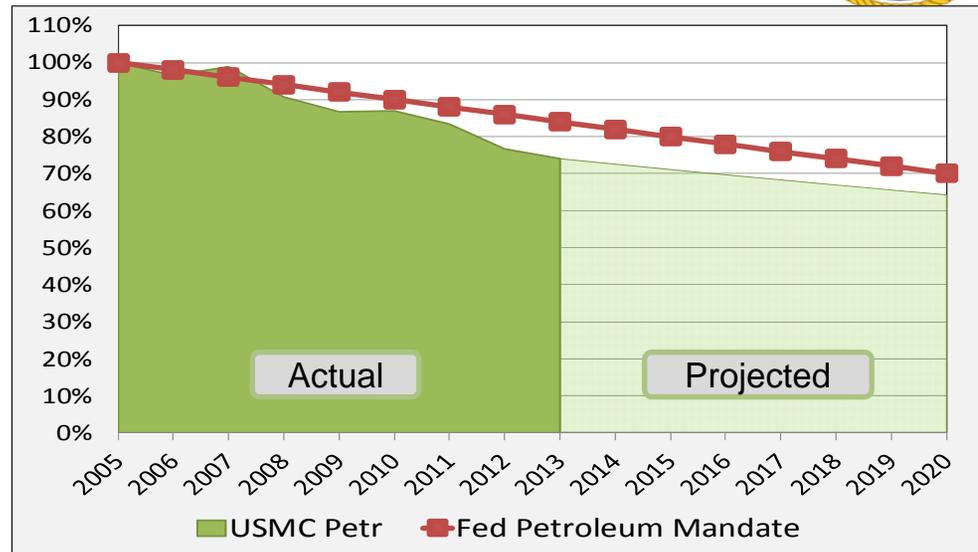


Petroleum

- **Federal – E.O. 13423/13514 Mandate**
- 20% petroleum reduction by 2015 (EISA 2007).
- 30% petroleum reduction by 2020 (E.O. 13514).
- **USMC Status**
- 3.4% reduction against FY2012.
- 26.0% total reduction against FY2005 baseline.

Alternative Fuel

- **Federal – E.O. 13423/13514 Mandate**
- 10% annual alt fuel use increase.
- **USMC Status**
- 67.0% total increase against 2005 baseline.
- 12.7% increase against FY2012.
- Alt Fuel use is now 15.0% of total USMC fuel use





Energy “Ethos” Campaign Plan



Rolling out in October 2014

- **Executes Bases to Battlefield Campaign Plan**
 - Working closely with Expeditionary Energy Office (E2O)
 - Ensure clear message
- **Focus on changing behavior to reduce utilities 10% by 2020**
- **Increases capabilities of Installation Energy Managers**
- **Operational Commanders will join Installations’ Energy Effort**
 - Leadership will oversee efforts and results
 - Assigns Unit Energy Managers (UEM) to include operational units on installations
- **Publish USMC wide energy consumption “dashboard”**
 - 80% of energy consumption is metered with “smart” meters
 - Individuals will see results of efforts
 - Competition between units will influence behavior
- **Ensure personnel are effectively operating and maintaining High-Performance Facilities**
- **Consolidating facility occupants to reduce building footprint**



Dashboard (Example)



2nd Quarter FY15 vs. FY14 Intensity Change

	Electricity	Gas and Fuels	Water	Overall	
	% Change	% Change	% Change	Assessment	Comments
MCIREGION A / MEF	3%	-4%	0%		Decentralized 30% of buildings from steam at Camp Lejeune since last year.
MCIREGION B / IMEF	-3%	1%	-7%		Electricity and water use reduced due to conservation measures, but water costs increased 20% at Miramar (NAVFAC WCF Rate)
MCIREGION C / MEF	-2%	-1%	1%		Active conservation awareness efforts contributed to reduced energy use at all PAC installations
MCIREGION D / MEF	-4%	-3%	-1%		Active conservation awareness efforts supported by CIRCUITS based metering reports for units contributed to reduced energy use

- decrease below 0%
- 0% to 2% increase
- more than 2% increase



USMC Energy Summary



- **Marine Corps is making solid progress toward key goals**
 - Meeting Congressional Mandates for 2015
- **Will continue to aggressively plan & execute energy investment projects**
 - Using both appropriated and 3rd Party funds
- **Pursuing large-scale, cost-effective Renewable Energy Opportunities**
 - Targeting third-party financing / partnerships through NAVFAC contracts
- **Developing ENERGY ETHOS for Unit Commanders and ALL Personnel**
 - Greater visibility at all Command levels supports resource conscious actions





QUESTIONS

Marine Corps Base Quantico
Environmental and Energy (E2) Summit
17 July 2014



Thomas A. Faha
Director, Northern Regional Office

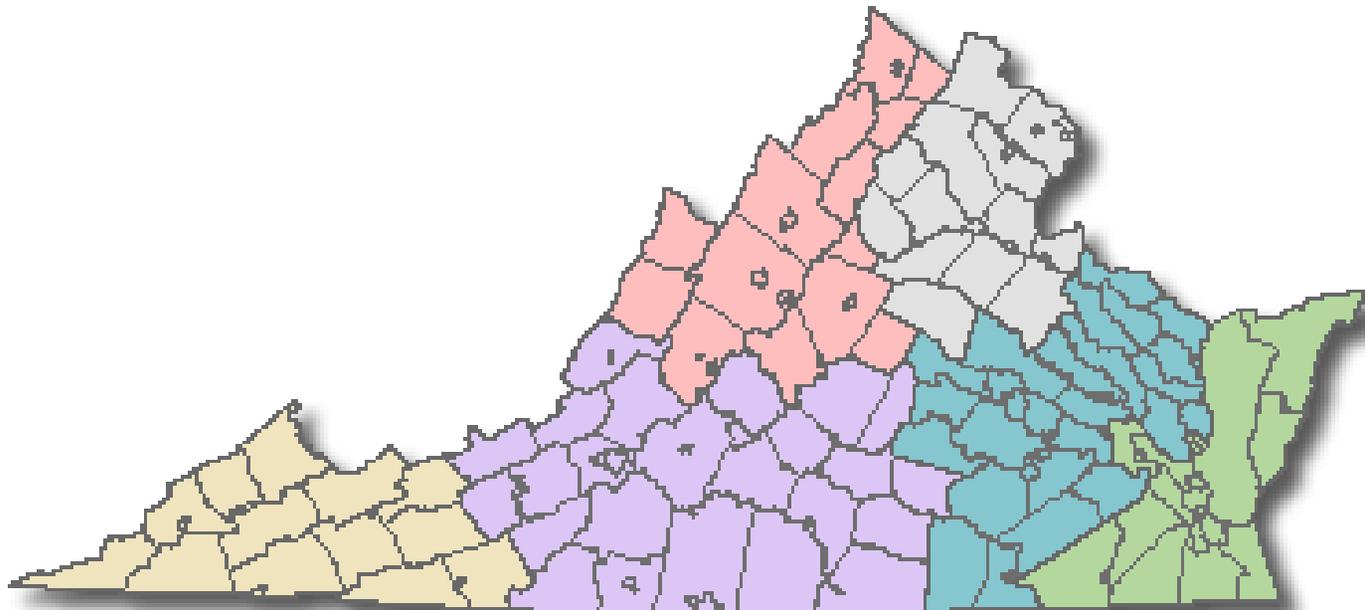


DEQ Vision Statement

By the end of the decade, Virginians will enjoy:

- Cleaner water available for all uses
- Improved air quality that supports communities and ecosystems
- The productive re-use of contaminated land

DEQ Regional Boundaries





Stormwater Regulations

- Why important
- Why now



2013 Consolidation Bill

Stormwater regulations transferred

- Soil and Water Conservation Board to State Water Control Board
- DCR to DEQ



Stormwater Regulations

- Chesapeake Bay Preservation Area Designation and Management 9VAC 25-830
- Erosion and Sediment Control 9 VAC 25-840
- Erosion and Sediment Control and Stormwater Certification 9 VAC 25-850
- Virginia Stormwater Management Program 9 VAC 25-870
- General Permit for Discharges of Stormwater from Construction Activities 9 VAC 25-880
- General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems 9 VAC 25-890



Stormwater Regulations

- Virginia Pollutant Discharge Elimination System Permit 9 VAC 25-31
- General Permit for Stormwater Discharges Associated with Industrial Activities 9 VAC 25-151



Background

- 1972 Clean Water Act
- 1992 NPDES Permit Regulations



Why Important Chesapeake Bay

Preamble 2014 Agreement

The Chesapeake Bay watershed is one of the most extraordinary places in America spanning six states and the District of Columbia. As the nation's largest and most productive estuary, the Chesapeake Bay and its vast network of more than 180,000 miles of streams, creeks and rivers, hold tremendous ecological, cultural, economic, historic and recreational value for the nearly 18 million people who live, work and play in the region.



Chesapeake Bay TMDL

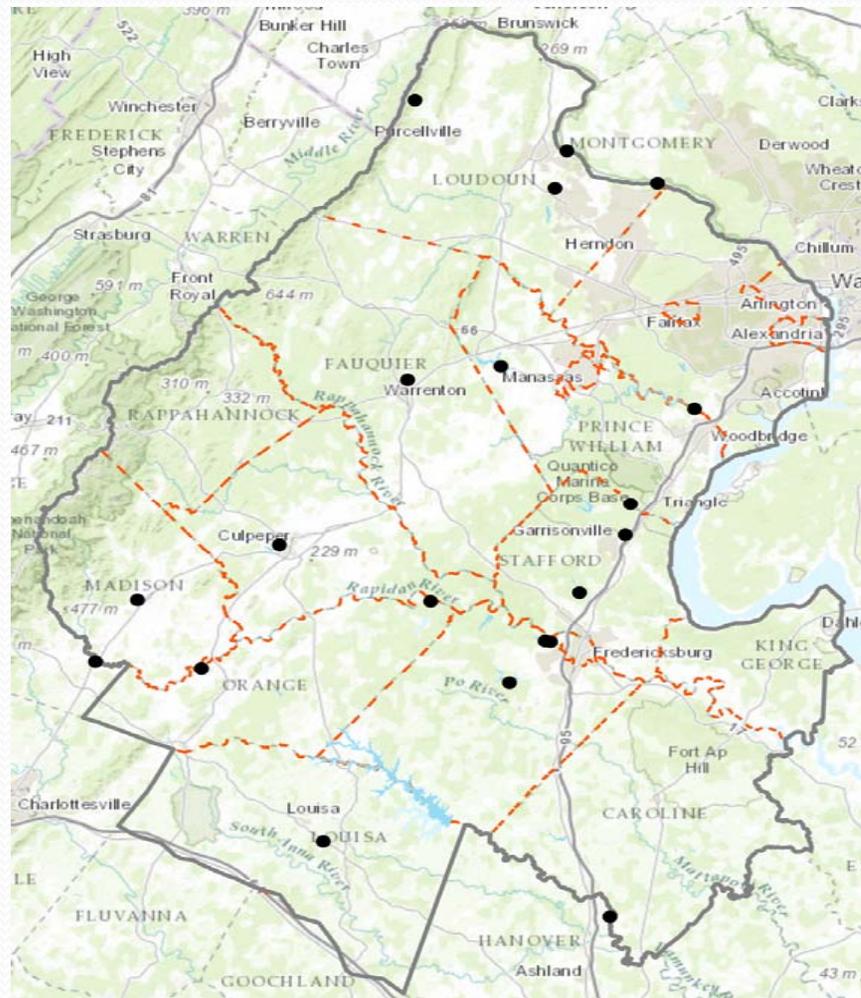
- Watershed Implementation Plan Phase I and II
 - 2017 Interim Target loads
 - Many stormwater provisions
- Watershed Implementation Plan Phase III
 - 2025 Loadings
 - Adjusted stormwater provisions



Why Important

- Drinking water resources
- Majority of intakes in waterbodies subject to urban/agriculture runoff

Drinking Water Intakes



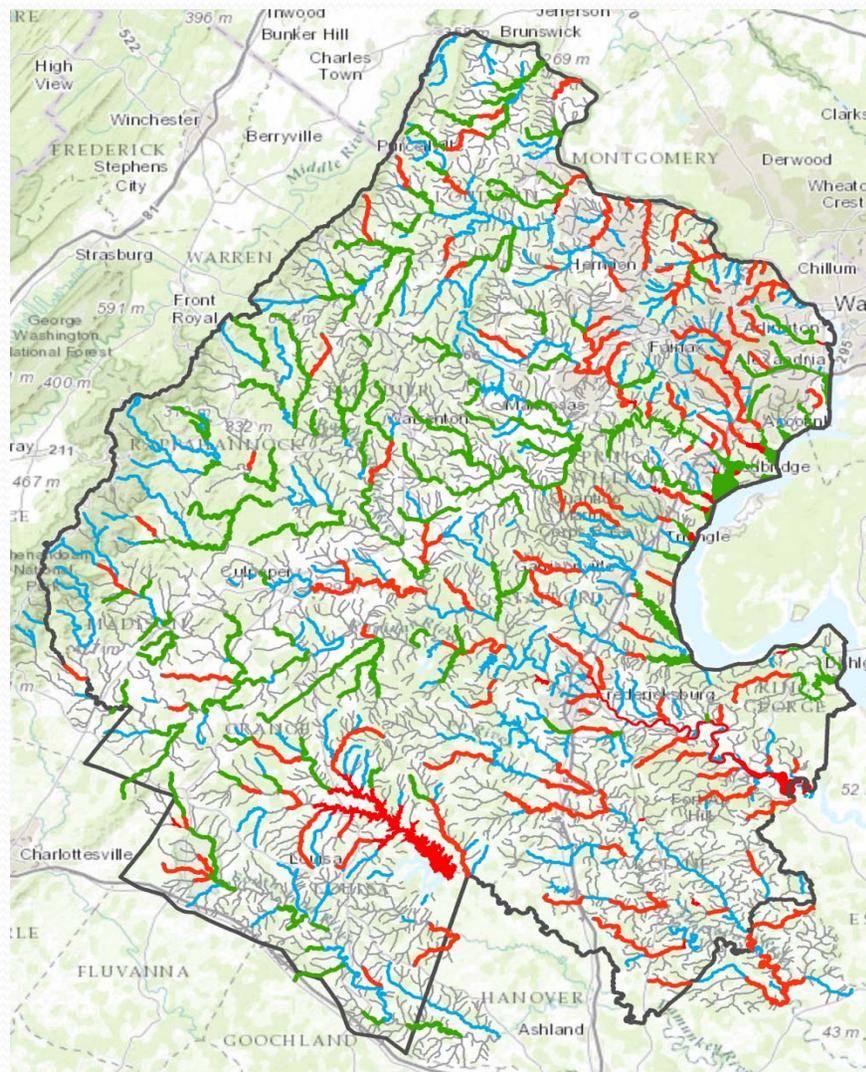


Why Important

Local Water Quality/Beneficial Uses

- Aquatic Life
- Swimming
- Fishing
- Off-Stream uses

2012 Impaired Waters





Why Now

- Chesapeake Bay TMDL
- Point sources have been largely addressed
- Worthy challenge



Questions?

- Bryant Thomas, Water Permit/Planning Manager
- Kelly Vanover, Stormwater Manager
- Thomas Faha, Regional Director



Environment and Energy Summit
17 July 2014

0915 – 0930 Break



DEPARTMENT OF DEFENSE CHESAPEAKE BAY PROGRAM

DoD Regional Environmental Coordination Office
Navy Region, Mid-Atlantic
Sarah Diebel

Environment and Energy Summit
USMC Base Quantico
17 July 2014



Overview



- DoD Chesapeake Bay Program (CBP)
- DoD Watershed Footprint
- DoD Accomplishments
- Challenges
- Future Initiatives
- Questions





DoD Chesapeake Bay Program



The VISION of the DoD Chesapeake Bay Program is to protect the Chesapeake Bay for military readiness, for our community and for future generations



The MISSION of the DoD Chesapeake Bay Program is to incorporate restoration, pollution prevention, and stewardship initiatives for the Chesapeake Bay into DoD's daily mission of providing the military forces that are needed to deter war and to protect the security of the United States; to partner with federal, state and local governments and organizations and citizen groups to maximize resources and strengthen Bay restoration and protection efforts; and to engage all levels of DoD military, civilians, and their families to be environmental stewards of the watershed where they live.

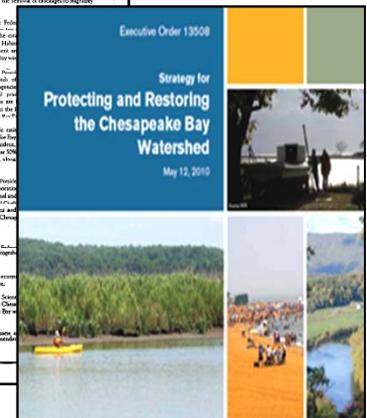
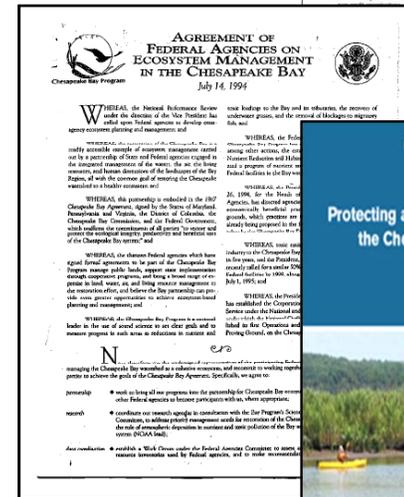
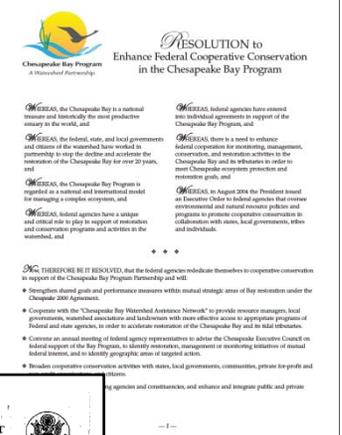
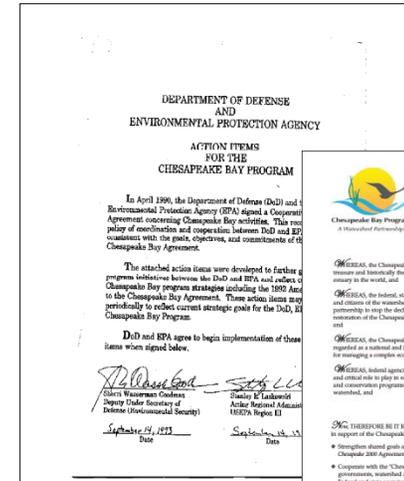




DoD Chesapeake Bay Program



- 1984 DoD formal partner in CBP
- Dept. Navy Executive Lead
- Navy Region Mid-Atlantic (NRMA) manages program
- Each service has its own CBP lead
- Executive Order 13508
 - Restoring Clean Water
 - Recovering Habitat
 - Sustaining Fish and Wildlife
 - Land Conservation and Public Access
 - Environmental Stewardship



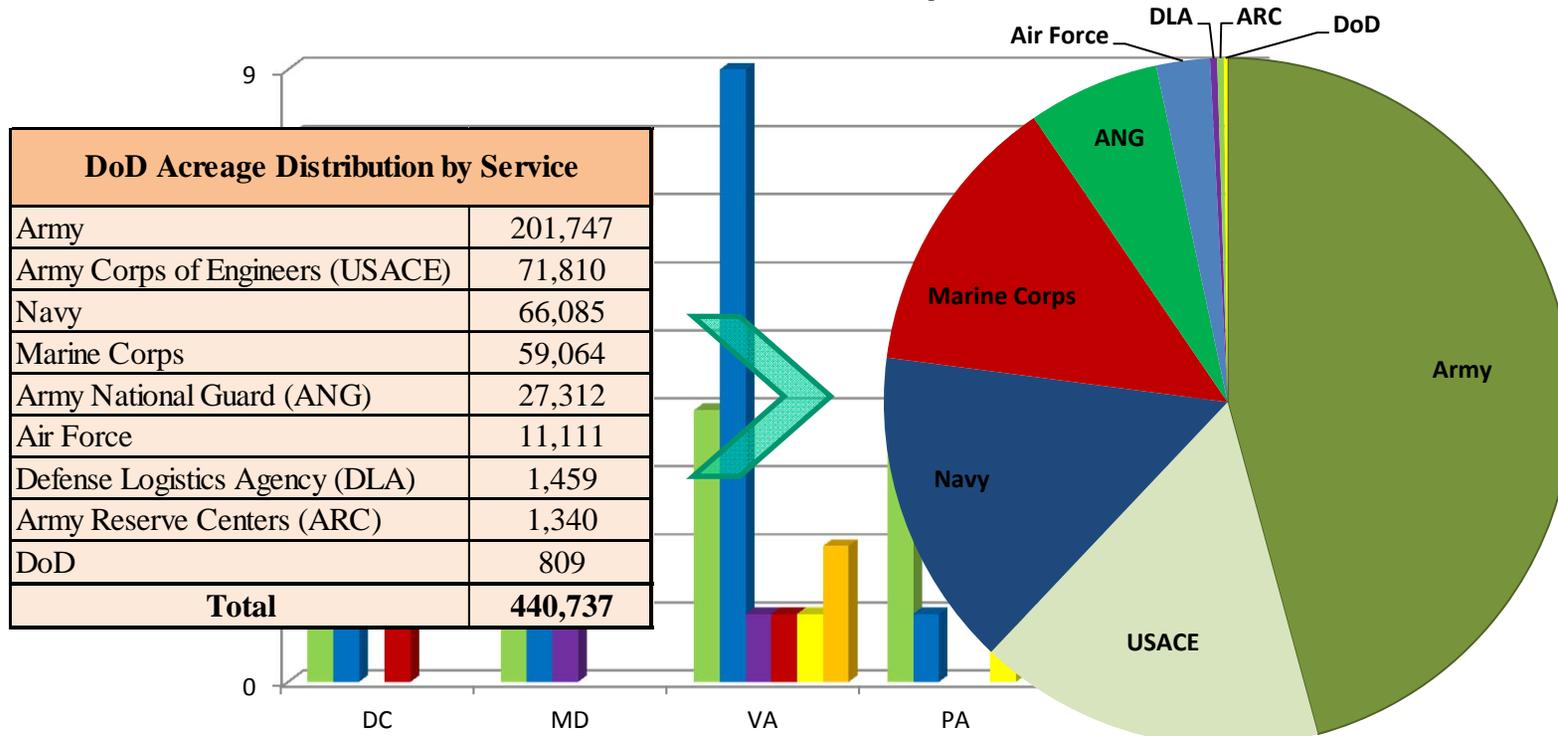


DoD Watershed Footprint



- DoD manages 38 installations and 440,737 acres
 - 1% of watershed
 - 20% of Federal footprint

DoD Installations by Jurisdiction





DoD Accomplishments Restoring Clean Water



- \$64M in 2013
 - Wastewater treatment plant upgrades
 - Sanitary sewer improvements
 - Stormwater programs
 - Air quality improvements
 - Best management practices (BMPs)
 - Impervious surface reduction
 - Water conservation

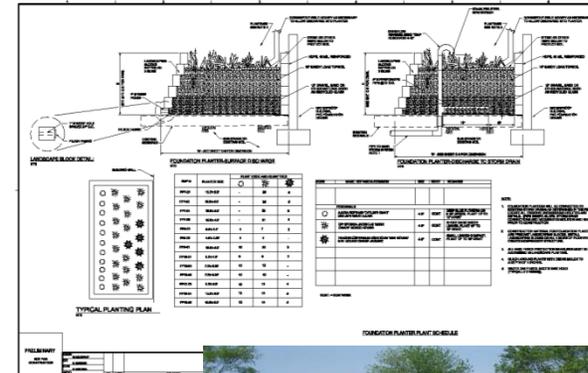




DoD Accomplishments Restoring Clean Water cont.



- Water Quality Milestones
 - Watershed implementation plan (WIP) support
 - Communicate new requirements
- Bay TMDL Implementation
 - Inventory current practices
 - Assess opportunities
 - Determine baseline loads and load reduction scenarios
 - Draft concept designs
 - Construct
 - Report





DoD Accomplishments Recovering Habitat



- \$3.8M in 2013
 - Integrated natural resources
 - Protect and enhance wetlands
 - Protect and enhance habitat for Bay species
 - Combat invasive species
 - Support living shorelines
 - Enhance riparian forest buffers
 - Restore fish passage





DoD Accomplishments Sustaining Fish and Wildlife



- \$600K in 2013
 - Enhance native oyster populations
 - Species surveys and assessments
 - Wildlife management
 - Construct, repair and install nest platforms for wildlife



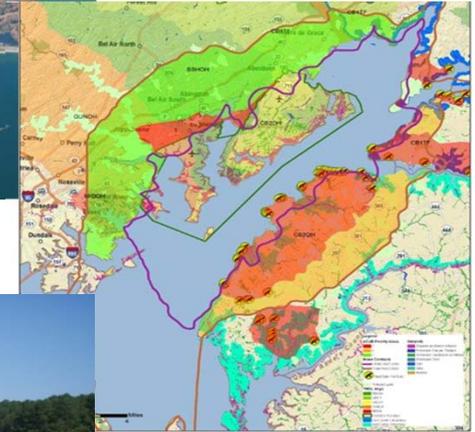


DoD Accomplishments

Land Conservation and Public Access



- \$1.5M in 2013
 - Readiness and Environmental Protection Integration (REPI)
 - 178 acres in 2013
 - 14,193 acres at 9 installations
 - Hunting and fishing programs
 - Protection and maintenance of trail systems
 - Upgrade and enhance marinas and boat ramps





DoD Accomplishments Environmental Stewardship



- \$145K in 2013
- Promote partner collaboration
 - Clean the Bay Day (CTBD)
- Promote education and outreach
 - Earth Day
 - NPL Day
 - Tree City USA / Arbor Day



HAMPTON ROADS NAVY 2013 CTBD STATS
1,127 Volunteers
55 Miles Shoreline Cleaned
818 Bags of Trash
22,995 lbs Collected





Challenges



- Funding
 - Overall DoD budget to sustain mission readiness is going down
 - Difficult to implement projects without regulatory requirement
 - Three to five year lead time to request projects
- Bay TMDL
 - Significant compliance costs projected \$10M-\$20M/yr
 - BMP operation and maintenance projected \$5K/yr/BMP
 - Reporting coordination with Bay jurisdictions



Future Initiatives



- 2014 Agreement participation
- Enhance collaborative efforts within CBP Partnership
 - Updating land use information
 - Support improvement of modeling tools
 - Stewardship opportunities
- Bay TMDL Implementation
 - Support Phase III WIPs
 - Complete inventories, assessments and pollution reduction plans
 - Comply with stormwater permits
 - Report progress and 2-year milestones
- Develop Best Management Plan Operation & Management Policy



Questions





DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



Case Study: Copper Detections in Stormwater Outfalls

17 JULY 2014

WARFIGHTER SUPPORT

STEWARDSHIP EXCELLENCE

WORKFORCE DEVELOPMENT



Case Study: Copper @ DFSP Tampa

Steve Clark - DLA Energy





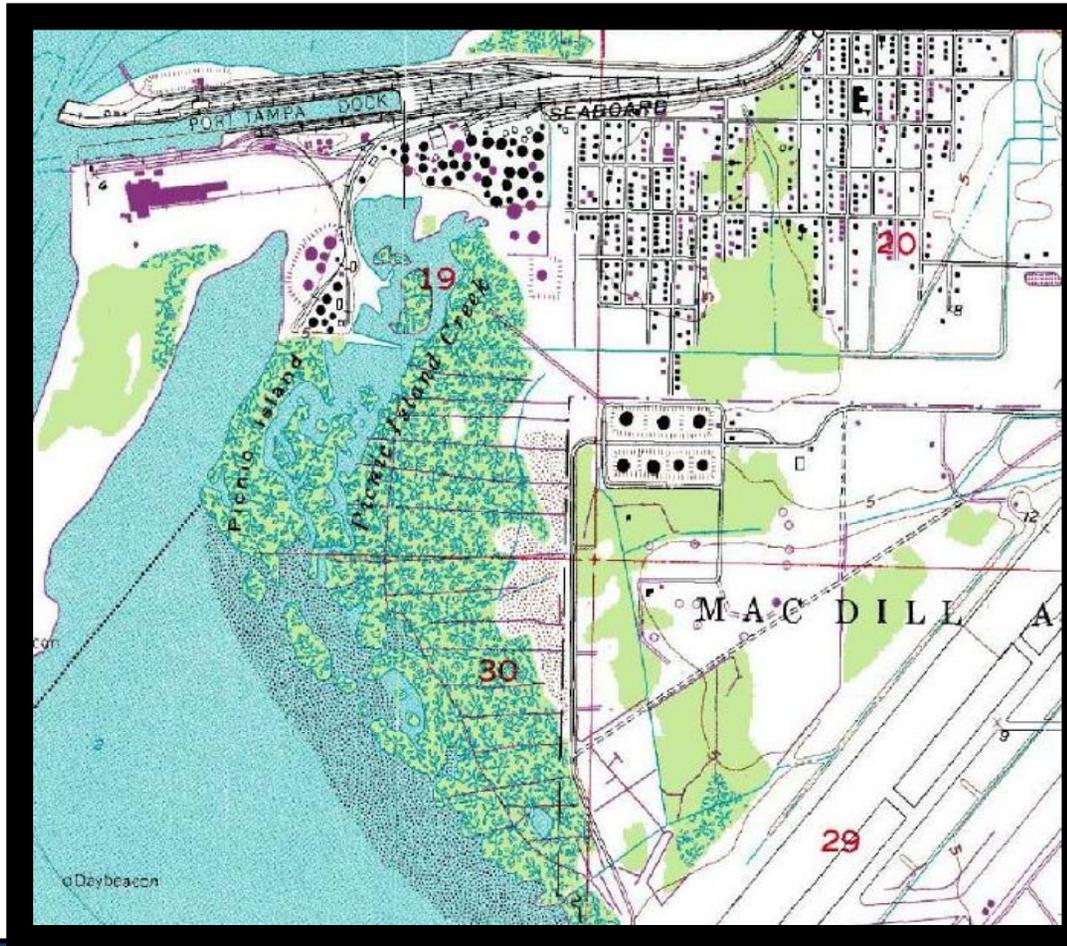
AGENDA

- **DFSP Tampa**
- **Current SW Permits**
- **Contaminants Detected**
- **Study & Findings**
- **Source Identified**



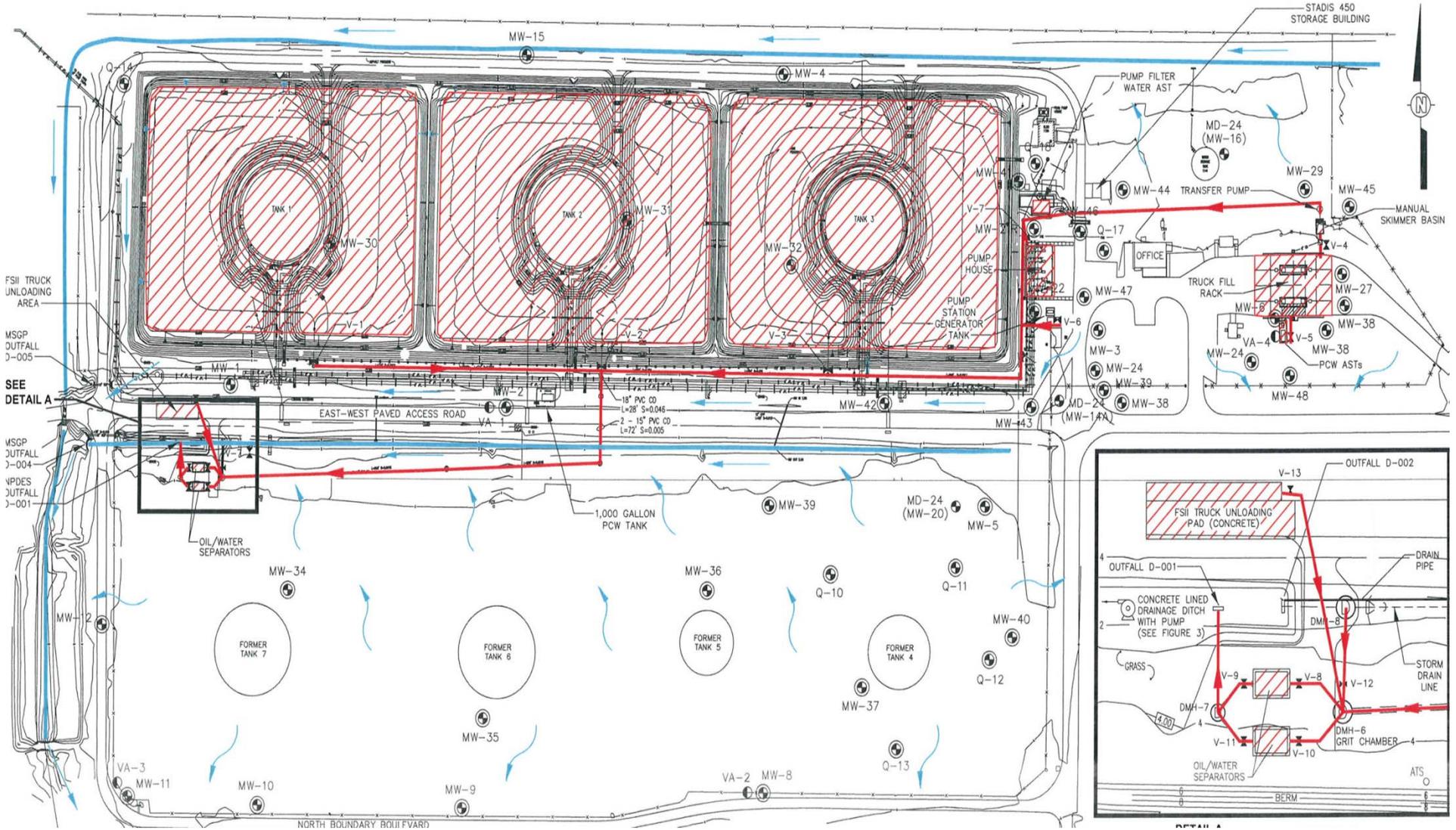


Defense Fuel Support Point (DFSP) Tampa MacDill AFB, Tampa, Florida





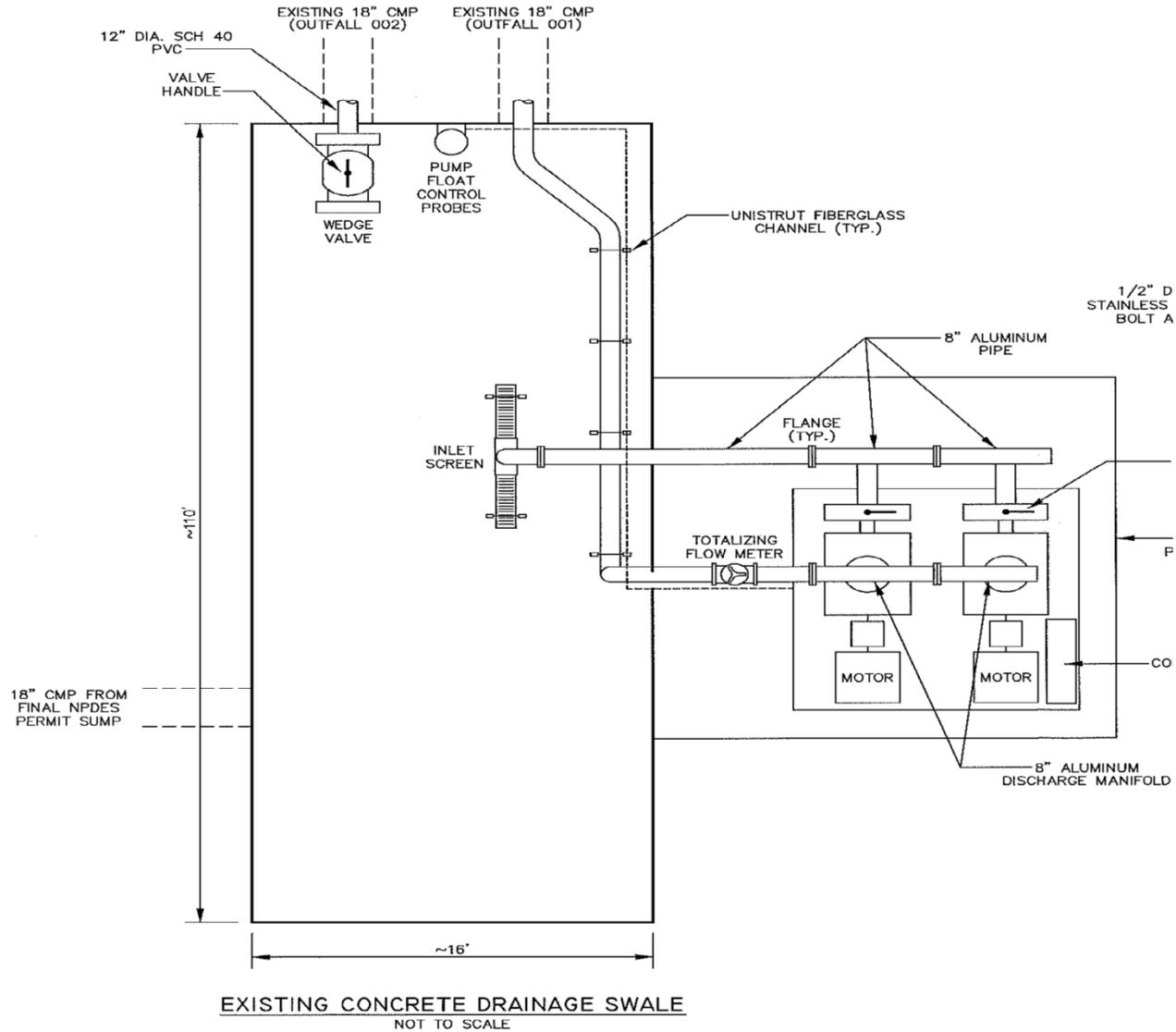
DFSP TAMPA







SW Collection Basin





Current Permit Requirements

MSGP Permit

**Visual Inspection
Log- looking for
“Oily Sheen”**

Industrial SW Permit

**Monthly and Annual Sampling
Once per discharge month**

O&G	Total N as Ammonia
TSS	Arsenic
Total Copper	Nickel
Total Mercury	Turbidity
Benzene	Phosphorus
DO	Xylene
Total N	Toluene

*Based on SIC Code



Detected Permit Exceedances: 2006-2007

pH, Copper, and Mercury detected above permit limits

MONTHLY MONITORING DETECTIONS

DATE	pH (standard units)	Copper (ug/L)	Mercury (ug/L)
PERMIT LIMIT	6.5 - 8.5 (within this range)	3.7	0.025
JUNE 2006	6.72	4.90	0.034
JULY 2006	7.56	5.31	<1.0
JULY 2007	8.75	2.9	0.0024
JANUARY 2008	8.94	2.9	0.0002



First Thoughts:

- Find and eliminate the sources

NO KNOWN SOURCES of copper or mercury on site that could even remotely cause this issue.



First Thoughts:

- Lab Error??

SPLIT SAMPLING & LAB TESTING RESULTS

<u>DATE</u>	<u>COPPER (ug/L)</u>	<u>MERCURY(ug/L)</u>
PERMIT LIMIT	3.7	0.02
ENCO LAB	2.27 (EPA 220.2)	0.00014 (EPA 1631-E)
STL LAB	<2.9 (EPA 200.7)	0.00027 (EPA 1631-E)



First Thoughts:

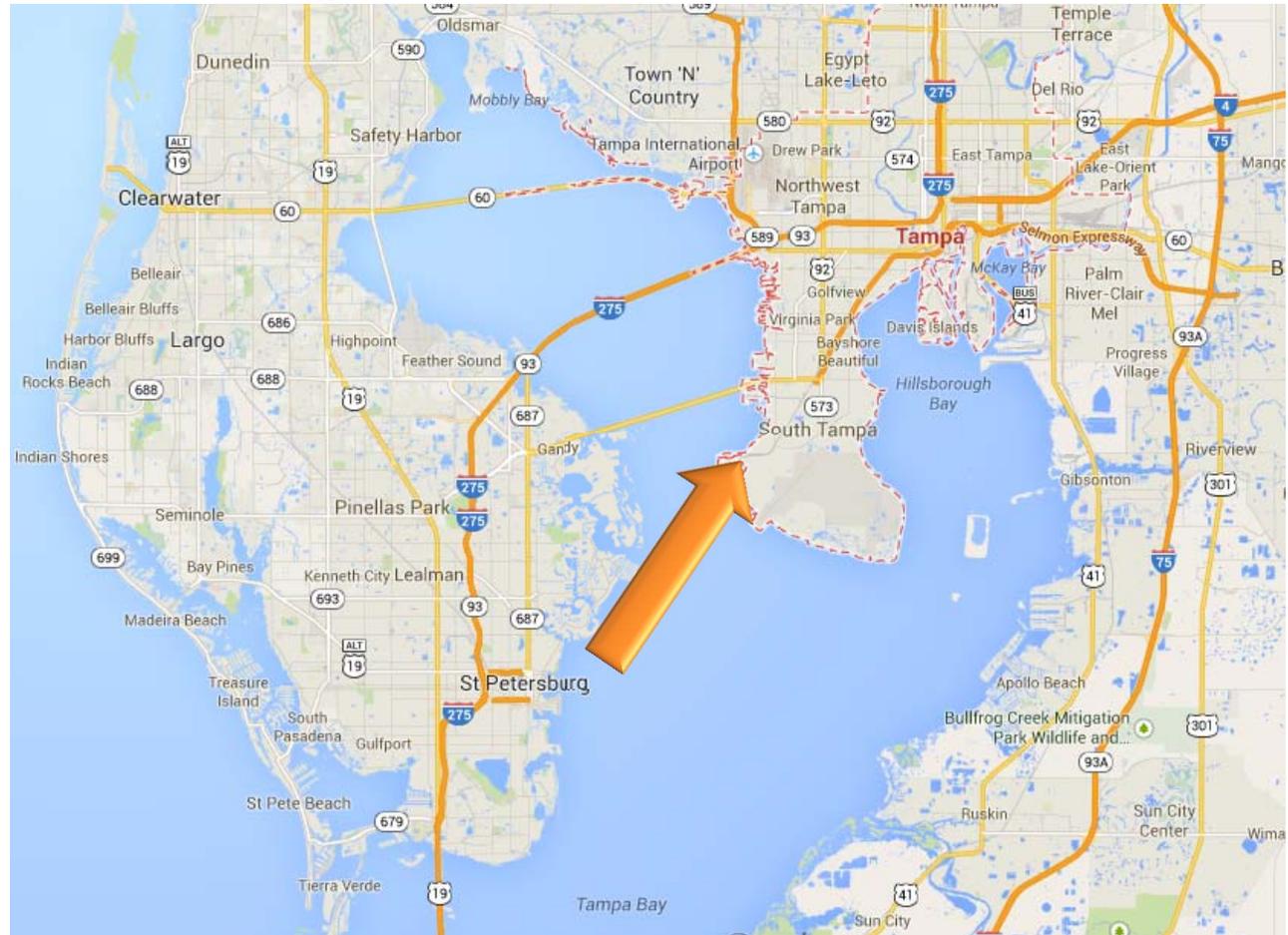
- Naturally Occurring or Contaminated?





Immediate Neighbors Influencing Site?

- Port of Tampa
 - Numerous Fuel Terminals
 - Neighbors are Housing, Marsh and Several Manufacturing Companies





Rainfall Sampling

- Conducted on 2 separate dates
- Concentrations were in range of detection
- Results were not in exceedance of permit limits





Sample Timing

- Sample results varied and were inconsistent except when wind direction was from the SE



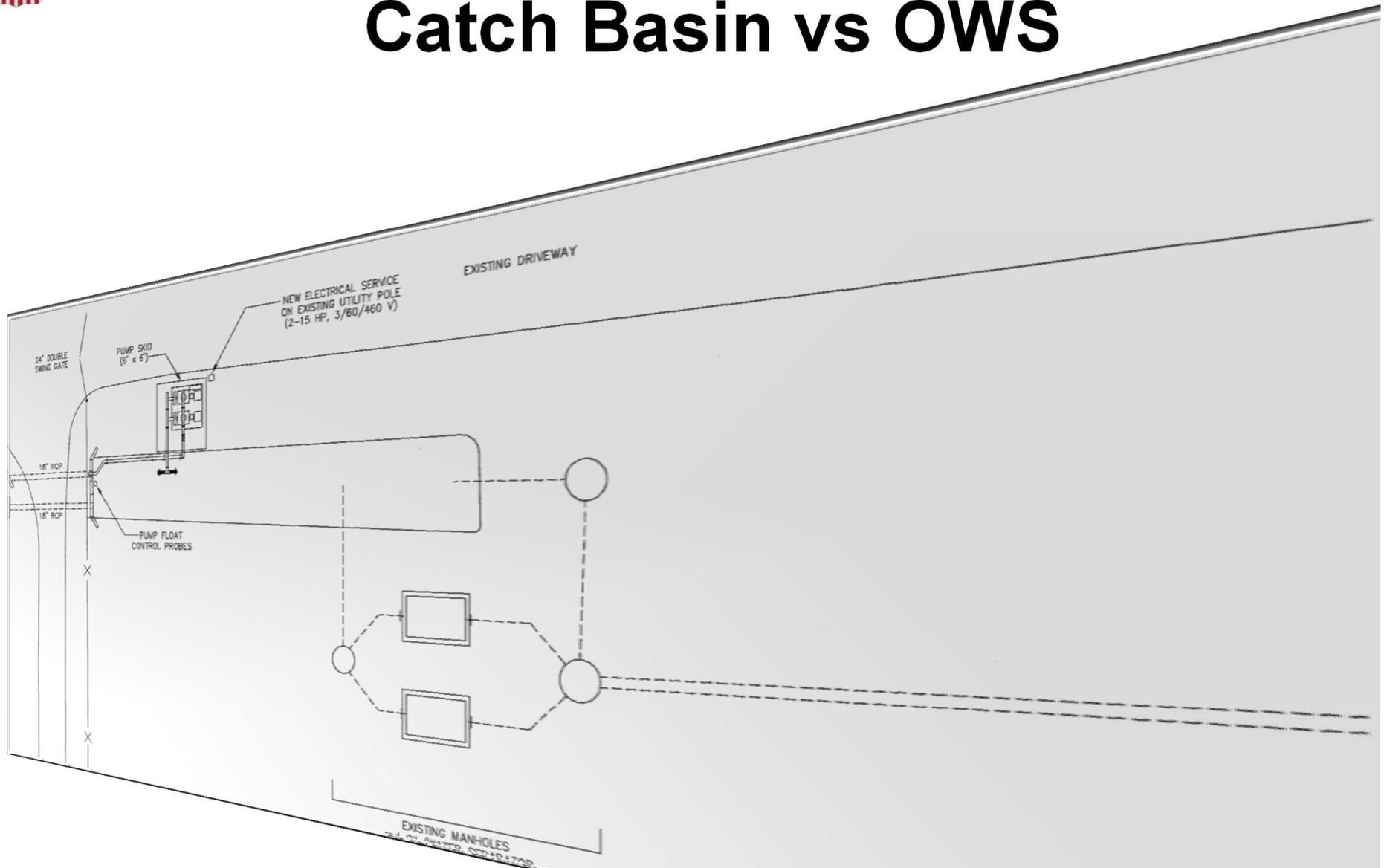


To “Catch a Copper Bird”





Catch Basin vs OWS



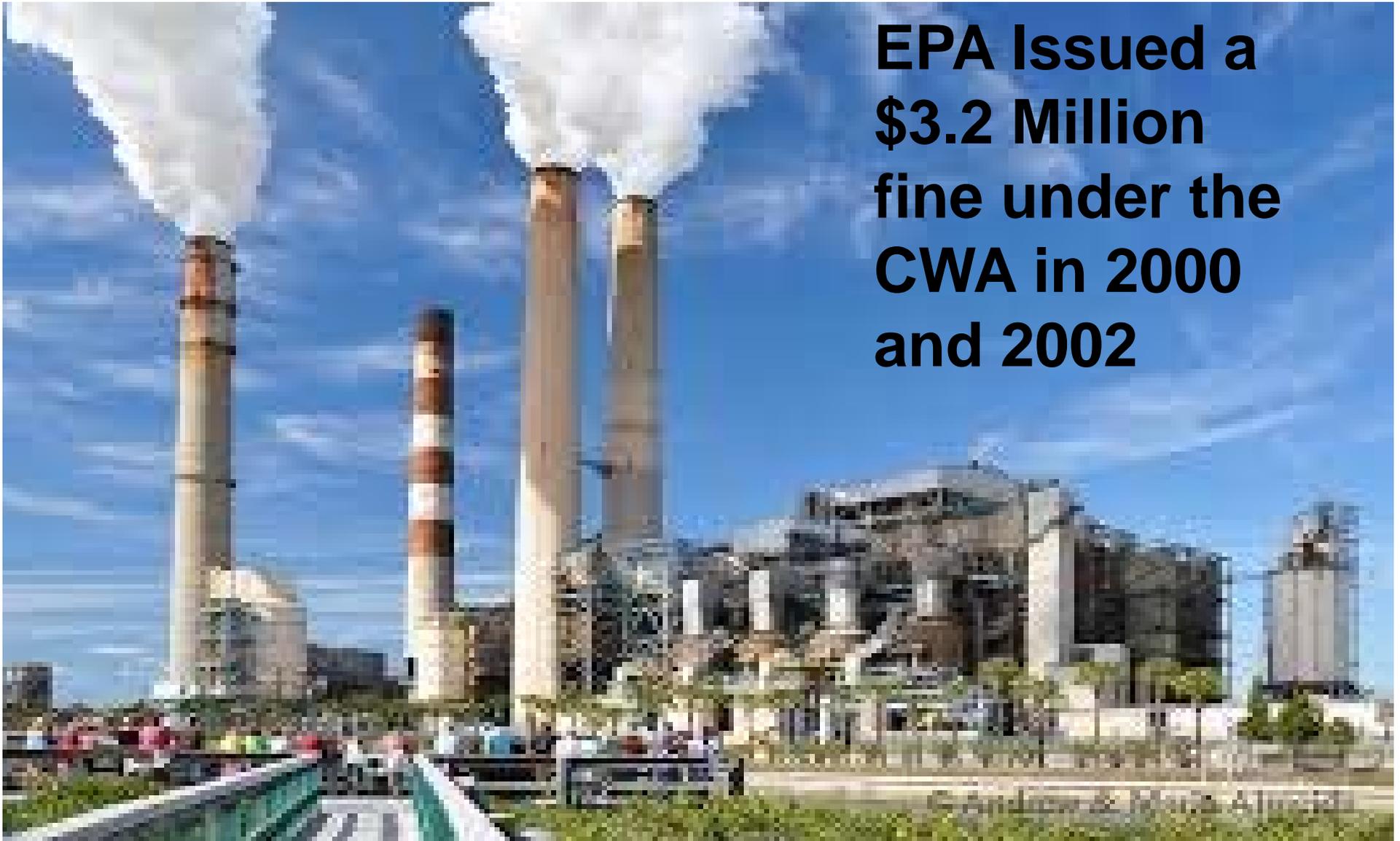


THE STING





We set up grab sample collection once every few days after a rainfall event. We found the longer between rainfall events – the higher the copper concentration.



**EPA Issued a
\$3.2 Million
fine under the
CWA in 2000
and 2002**



The Source-

- In 2000, the EPA filed noncompliance findings against the local power plant.
- In 2006, it was time to change their 5-yr filters according to their consent order with EPA.
- They changed them out in October 2007.



Sampling Procedure Modification





Over the years- the study was filed away





UNTIL.....

- February & March 2014- Copper samples again detected above permit limits.
- The importance and requirement of the procedure for not taking the first flush sample was lost in time.



February rain was not to be.....

- Resulted inCopper exceedance again. This time higher than before.



**Investigation uncovered the same results
aside from the study.**

**The study was dusted off and re-
evaluated.**

Results were very similar





Next Steps

- Reinitiate the delayed sample collection process
- Request modification of our permit to reflect the other outfalls MSG Permit and it's requirements.
- Hold our breadth when in Tampa





QUESTIONS



DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



WARFIGHTER SUPPORT

STEWARDSHIP EXCELLENCE

WORKFORCE DEVELOPMENT



Environment and Energy Summit

17 July 2014

1015 – 1115

Roundtable: Stormwater Management/LID

NAVFAC WASH	Mr. Bob Williams	Regional Water Program Manager
Prince William County	Mr. Thomas Dombrowski	Environmental Engineer
Stafford County	Mr. Steven L. Hubble	Assistant Director of Public Works
Unv. Mary Washington	Ms. Joni Wilson	Director of Landscape and Grounds
DLA	Mr. Mathew Young	DLA Installation Support for Energy Environmental Compliance Branch Chief
USACE, Baltimore Dist.	Mr. Marco Ciarla	Environmental Engineer
MCBQ	Ms. Amy Denn	NREA, Branch Head



Environment and Energy Summit

17 July 2014

1115 – 1230 Lunch



CREATING AN ENERGY AWARE CULTURE IN THE UNITED STATES ARMY RESERVE

17 July 14

Paul G. Wirt
Energy and Sustainability Team Lead
HQ Department of the Army
Office of the Chief, Army Reserve
Army Reserve Installation
Management Directorate (ARIMD)



DA Guidance and Direction



General Order 2012-01:

“The Assistant Secretary of the Army for Installations, Energy and the Environment (ASA(IE&E)) shall provide strategic guidance and supervision for policies, plans and programs for... energy security, operational energy, water security, contingency bases and environmental initiatives...”

Senior Energy and Security Council (SESC):

- In 2011, “the Army established the SESC to provide strategic direction to integrate energy and sustainability into Army plans, programs, policies and regulations to meet the Army’s missions and objectives...”
- “The DASA(E&S) serves as the SESC’s Executive Secretary and facilitates the conduct of all SESC meetings.”

Army Campaign Plan (ACP):

In 2012, the SecArmy added Campaign Objective 8.0 – Achieve Energy Security & Sustainability Objectives – to institutionalize the Army’s commitment to being energy secure and sustainable; and to bring visibility on progress to Senior Leaders.

“Improving our energy security directly translates to improving our national security.”

General Martin E. Dempsey

Chairman of the Joint Chiefs of Staff, 18 October 2011

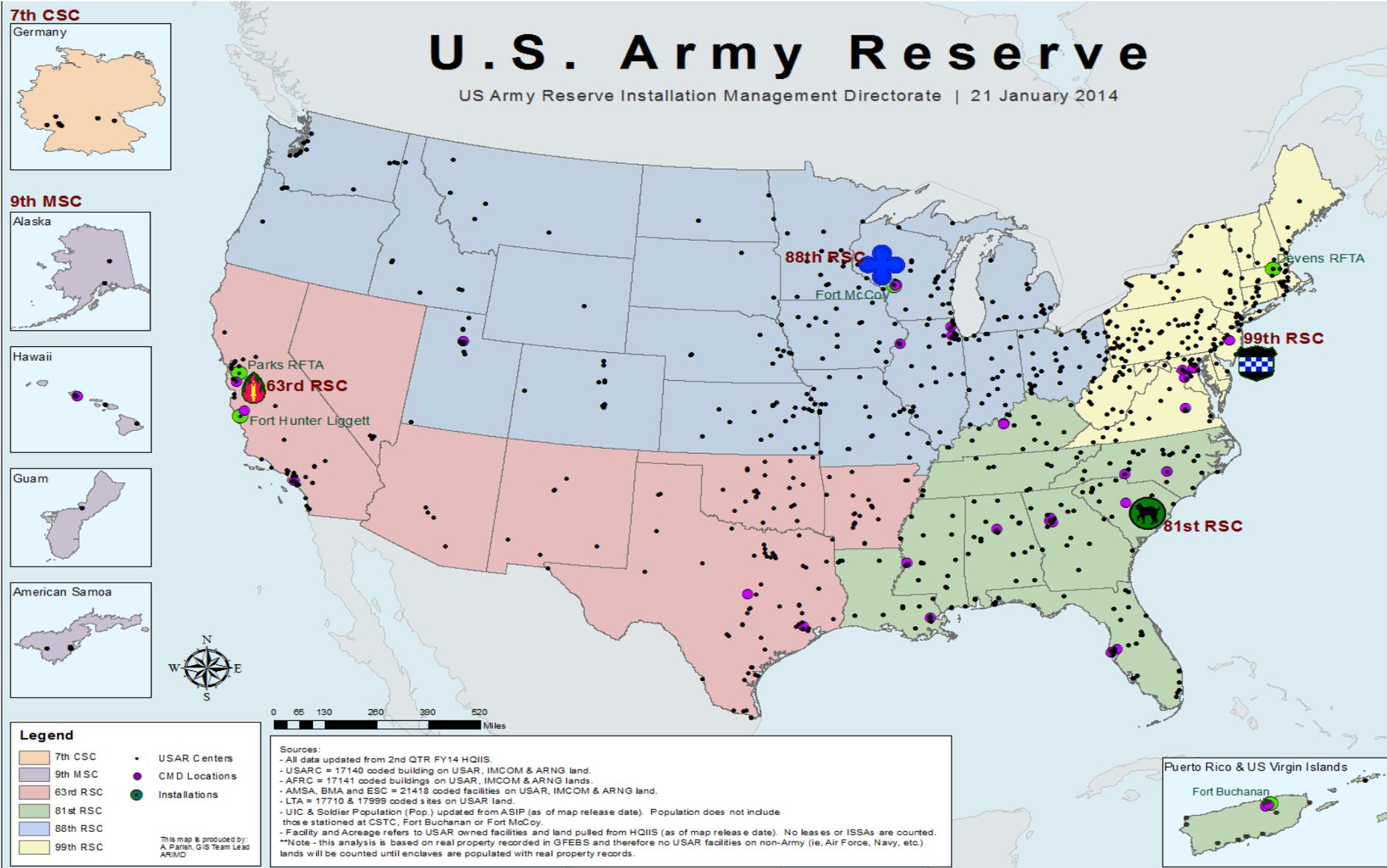
The Army Chief of Staff has articulated the requirement for a versatile mix of capabilities, optimized with the reach, endurance, protection, and staying power needed to meet and exceed future security threats and challenges ... *all of which depend on energy.*

Army Vision: The Nation's Force of Decisive Action - Ready Today, Prepared for Tomorrow								
Army Outcomes	An All-Volunteer Force of High Quality Soldiers, Civilians, and Leaders		Trained and Ready Units Providing Depth and Versatility to the Joint Force		Soldiers, Equipment, and Units Restored and Reconstituted for 21 st Century Operations		A Force that Provides Flexibility for National Security Decision Makers in Defense of the Nation, At Home and Abroad	
Overarching Requirement	An Adaptive Institutional Army that Successfully Prioritizes, Balances and Integrates Army Capabilities in the Present and Postures for Success in the Future							
Campaign Objectives	Man the Army & Preserve the All-Volunteer Force ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Deliver Services and Infrastructure to Enable Global Operations ASA (IE&E) Start Coordinate: 01-11 End Coordinate: 01-11	Support Global Operations with Ready Land Power ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Train the Army for 21 st Century Operations ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Equip the Army for 21 st Century Operations ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Sustain the Army for 21 st Century Operations ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Shape the Army ASA (IA&A) Start Coordinate: 01-11 End Coordinate: 01-11	Achieve Energy Security and Sustainability Objectives ASA (IE&E) Start Coordinate: 01-11 End Coordinate: 01-11
Major Objectives	1-1 Adapt Processes to Acquire & Retain Best Qualified Soldiers G-1 1-2 Synchronize Delivery of Soldiers to the Total Army Mission G-1 1-3 Develop a Sustainable and Attributable Force G-1 1-4 Enable Critical Work Force Transformation G-1 1-5 Integrate Strategies to Sustain Manpower and Family Readiness ASA (IA&A)	2-1 Deliver Services to Support the Total Force ACSM 2-2 Sustain the Army Family Covenant ACSM 2-3 Provide Infrastructure to Support the Total Force ACSM 2-4 Implement Environmental Stewardship ASA (IE&E) 2-5 Provide a Safe, Healthy Working and Living Environment ASA (IE&E) 2-6 Protect Installations and Facilities G-5S7 2-7 Ensure Medical Support for the Total Force MEDCOM 2-8 Institutionalize Contingency Basing Processes G-4	3-1 Provide Ready Force to Meet Operational Requirements FORSCOM 3-2 Add Army Force Generation to Meet the Combatant Commanders' Changing Needs FORSCOM 3-3 Provide an Effective Protection Capabilities for Soldiers, Civilians, and Units G-5S7 3-4 Operationalize Building Partner Capabilities G-5S7 3-5 Identify and Master Fundamentals G-5S7 3-7 Ensure home Station Training G-5S7 3-8 Institutionalize the Army Profession TRADOC 3-9 Train Units for Unleashed Land Operations G-5S7	4-1 Implement the Army Learning Model TRADOC 4-2 Implement Army Leader Development TRADOC 4-3 Provide 21 st Century Training Support G-5S7 4-4 Develop Resilient Soldiers, Civilians, and Units G-5S7 4-5 Implement the Critical Training and Leader Development Strategic Action Plan G-5S7 4-7 Realize home Station Training Enterprise to Support Army Acquisition and Unleashed Land Operations G-5S7 4-8 Institutionalize the Army Profession TRADOC	5-1 Transform the Acquisition Workforce Enterprise ASA (ALT) 5-2 Provide Updated and Approved Material Requirements G-5S7 5-3 Modernize and Equip the Army to Increase Strategic Support ASA (ALT) 5-4 Branch APS to Increase Army Responsiveness G-6 5-5 Protect Weapon Systems Program and Technology to Enhance Warfighter Performance ASA (ALT) 5-7 Create a Robust and Create T&E Enterprise to Support Army Acquisition and Unleashed Land Operations G-4 5-8 Decade Material Integration NIC	6-1 Enhance Army Readiness G-4 6-2 Institutionalize Post-Drawdown Readiness Requirements G-4 6-3 Refine and Optimize Capabilities for the Force G-5S7 6-4 Branch Capabilities to Support the Army's 21 st Century Requirements ASA (ALT) 6-5 Assess and Optimize Science and Technology to Support the Army's 21 st Century Operations NIC 6-7 Assess the Army's Logistics Enterprise G-4	7-1 Design the Army of 2020 TRADOC 7-2 Accrete Force to Meet the Army's Strategic Strength to Meet the Joint Force's Requirements for the 21 st Century G-5S7 7-3 Powering America's Army through LANDWARLET CIGS-3 7-4 Implement the Army Doctrine 2015 Campaign TRADOC	8-1 Adapt & Evolve Installation Energy Security and Sustainability Strategies G-5S7 8-2 Achieve Energy Informed Operations G-4 8-3 Enhance Water Security ASA (REQ) 8-4 Integrate and Optimize Sustainability across the Entire Scope of the CW Portfolio ASA (ENV) 8-5 Strengthen Financial Management ASA (F&C) 8-6 Improve Business Processes OBT 8-7 Improve the Strategic Planning Process to Support Force Management OBT 8-8 Monitor and Report on Implementation of Army Efforts G-5
Foundations	Trust Between the Army and American People		Soldiers and Leaders with Moral and Ethical Courage – Physical and Mental Toughness		Adaptable, Flexible and Nimble Organizations		Responsible and Sustainable Stewardship of National Resources	





Army Reserve Global Footprint





Army Reserve Universe – FY14



<u>Locations</u>	<u>Installations</u>	<u># Buildings</u>		<u>Bldg (SF)</u>		<u>Land (Acres)</u>	
		<u>Owned</u>	<u>Leased</u>	<u>Owned</u>	<u>Leased</u>	<u>Owned</u>	<u>Leased</u>
• U.S. & Territories -	10	7,018	221	49M	1.62M	322.1K	265.1K
• Europe (Germany, Italy)	Tenants	20*	0	356K	0	0	0
• Asia (Korea, Japan)	Tenants	1*	0	K	0	0	0

(* AR occupies but does not own these buildings)

Army Reserve Installations & Support

Commands

- Fort Buchanan
- Fort Hunter Liggett
- Parks Reserve Forces Training Area
- Fort McCoy
- Devens Reserve Forces Training Area
- 9th Mission Support Command
- 63rd Regional Support Command
- 81st Regional Support Command
- 88th Regional Support Command
- 99th Regional Support Command
- 7th Civil Support Command

Command Energy & Water Overview

-25.8% Energy Efficiency
 -60% Water Efficiency
 25 % Energy & Water Assessments Initiated

SELRES Authorized Strength

(FY12)

- TPU - 186,692
- AGR - 16,085
- IMA - 3,264
- Total = 206,041

Railroads

10 Miles

Airfields

- 5 Fixed Wing
- 29 Helicopters

Family Housing Units

- Owned – 109
- Leased – 80
- Privately Owned - 432

Roads

840 Paved Miles
 510 Unpaved Miles

Non-Tactical Vehicles

1086 Alternative/1370
 Total (76%)

Full Time Energy Managers

- Total Requirements 30
- # Civ Assigned 8
- # REM or contractor 6
- # Military 0

Utility Lines

Electric, gas, water and sewer
 • 1,780 Total Miles
 • 31 Miles ISR Rated Red
 • 30 Miles ISR Rated Black

Reserve Centers

1105

AMSAs

116

ECSs

30

LTAs

56

PRV

\$13.2B

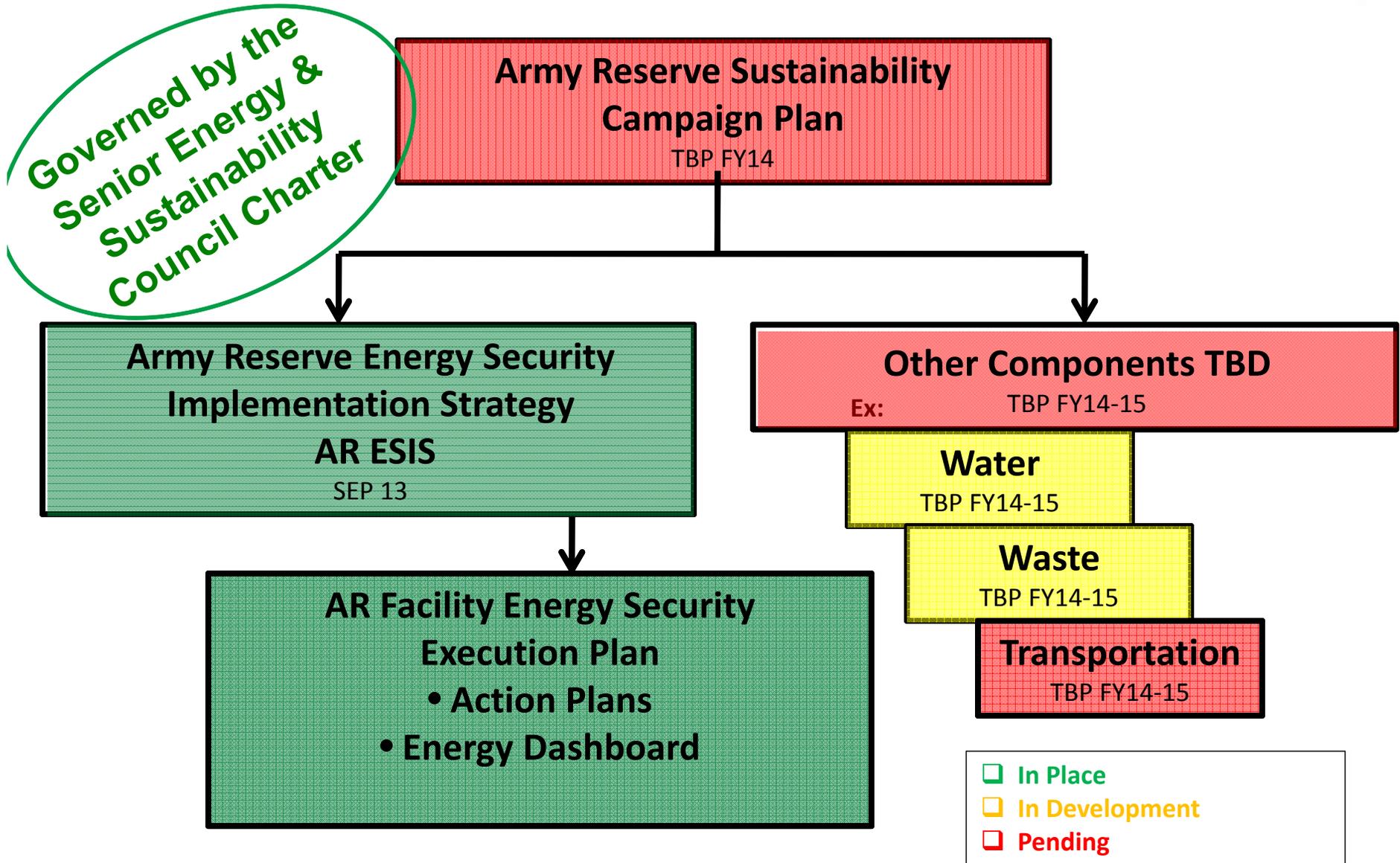
Bldg Age

39.2 years

FY 14 OMAR Base Support Resources = \$864M

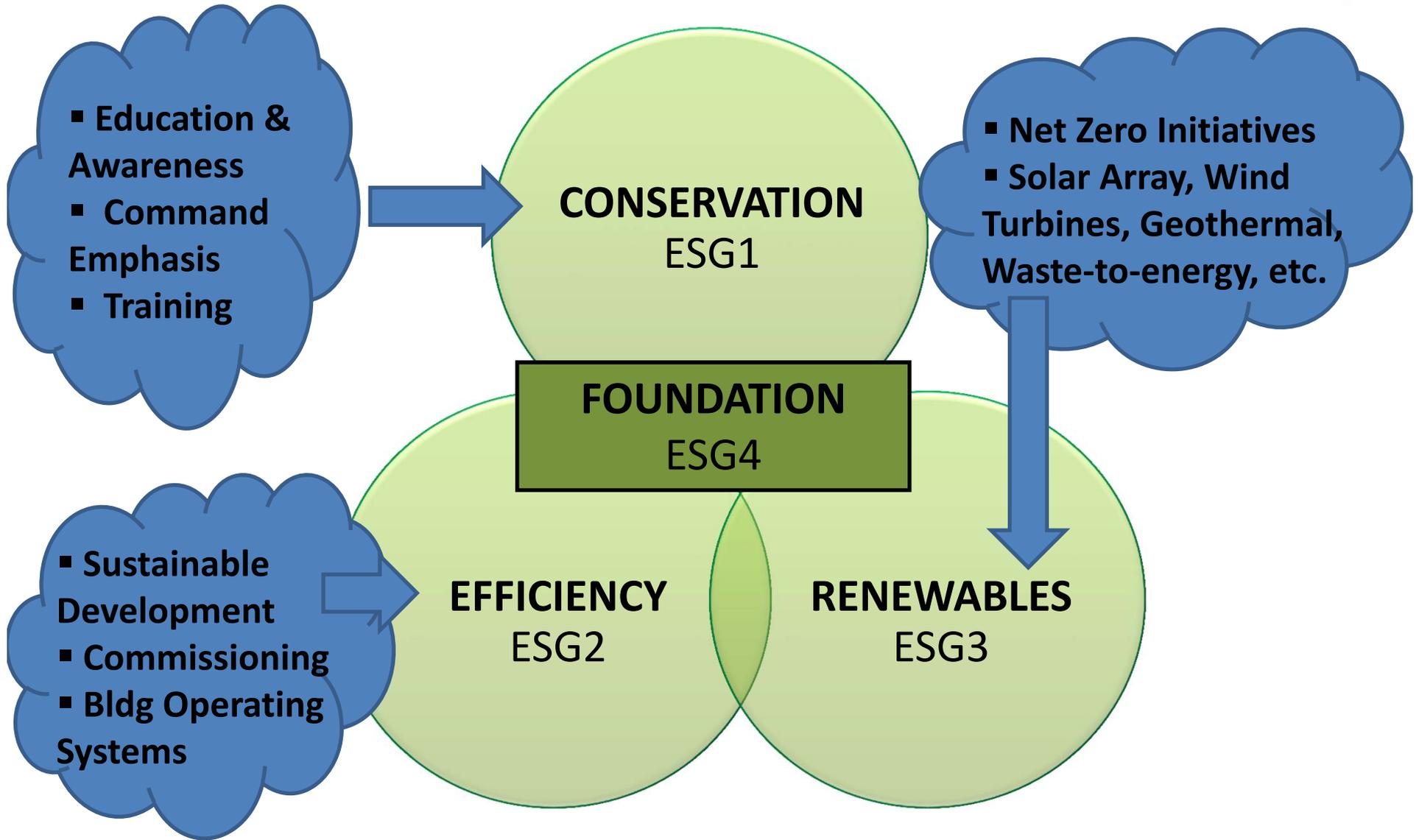


AR Energy & Sustainability Governing Documents





Four AR Energy Security Goals





Energy Strategy Execution Plan



30% reduction in EUI 2003-2015
25% of energy use from renewable sources by 2025

ESG #1: Energy Conservation

- 1.1 Establish Mission Command Structure
- 1.2 Establish BEM Program
- 1.3 Deploy AR Energy and Sustainability Communications Plan
- 1.4 Provide Energy Conservation Training

ESG #2: Energy Efficiency

- 2.1 Champion New Designs / Construction
- 2.2 Ensure Efficient Building Operations
- 2.3 Upgrade Existing Buildings
- 2.4 Optimize Decommissioning Process
- 2.5 Modernize transportation equip't and portable power

ESG #3: Renewable & Alternative (R&A) Energy

- 3.1 Track R&A Energy
- 3.2 Develop Comprehensive Portfolio of R&A Opportunities
- 3.3 Implement R&A Projects
- 3.4 Operate, Maintain, and Enhance R&A Infrastructure
- 3.5 Support Net Zero Energy, Water, and Waste Initiative

ESG #4: Energy Program Foundation

- 4.1 Develop Energy Program Investment Strategy
- 4.2 Man the Energy Program
- 4.3 Collect, Validate, and Analyze Data
- 4.4 Help Shape the AR Sustainability Campaign Plan



Fireworks Over Fort Bragg!





AR Energy Education/Awareness



Army Reserve Community

- Awards: Association of Energy Engineers, Society of American Military Engineers, Secretary of the Army, etc.
- Events: Earth Day, Energy Awareness Month, America Recycles Day
- General Awareness Training
- Social Outreach Tools: Website, Facebook, Blogs

Senior Leaders

- Sustainability and Energy Security Council
- Senior Leadership Annual Awareness Training
- Senior Leader Calls
- Social Outreach Tools: Website, Facebook, Blogs

Energy Managers

- Building Energy Monitor Training
- Monthly Energy Manager Teleconference
- Annual Energy Manager Workshop
- Energy and Sustainability Resource Library SharePoint (formerly housed on AKO): Templates, BMPs, Policies, etc.
- Social Outreach Tools: Website, Newsletter, Facebook, Blogs
- Awards: Secretary of the Army, Department of Energy, etc.

External Community

- Written Outreach: Local Newspaper Articles, ARIMD Newsletter
- Events: Earth Day, Energy Awareness Month, America Recycles Day
- Community Partnerships: Event Coordination, External Publicity, etc.
- Social Outreach Tools: Website, Facebook, Blogs

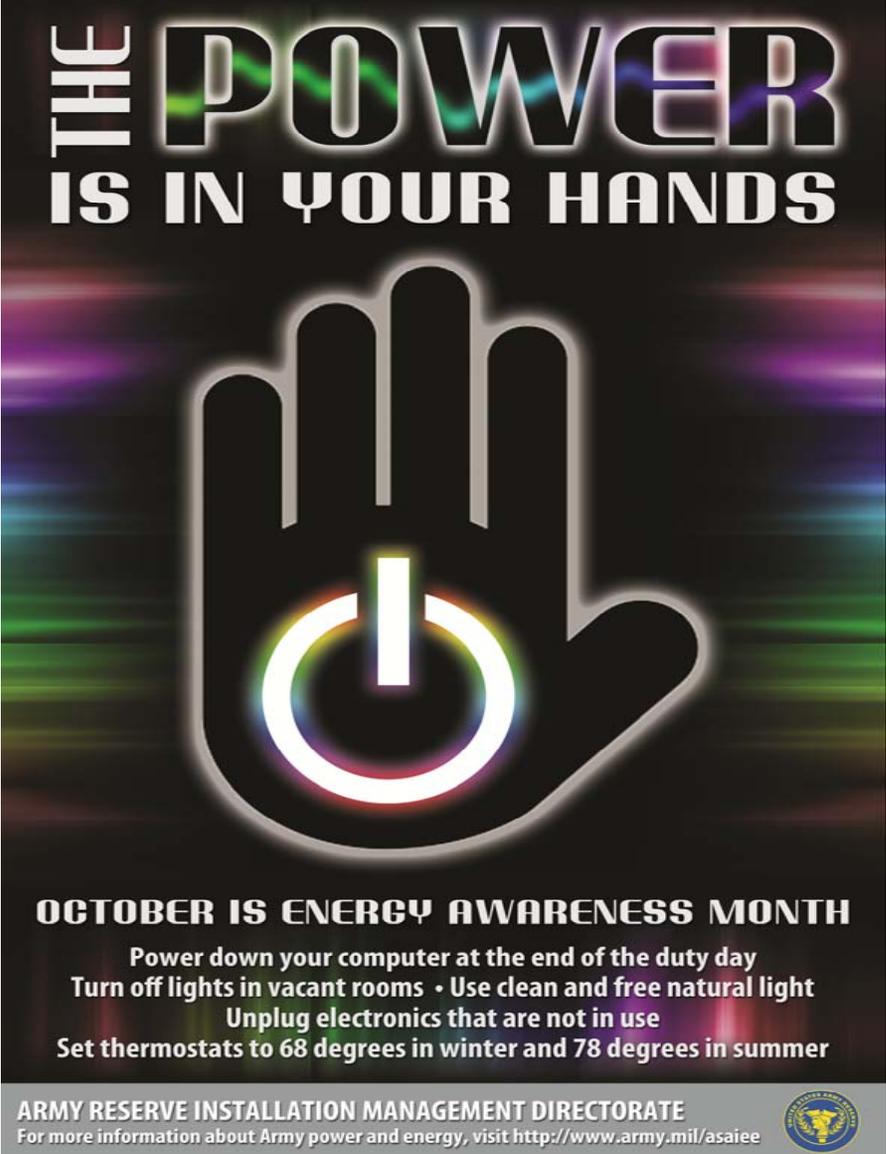
Energy Informed Culture



Education & Awareness



- Senior Energy and Sustainability Council (three tiers of leadership)
- Building Energy Monitor (BEM) Training
- Monthly Energy Manager Teleconferences
- Annual Energy Manager Workshop
- Energy and Sustainability Resource Library
SharePoint: Templates, BMPs, Policies, etc.



THE POWER IS IN YOUR HANDS

OCTOBER IS ENERGY AWARENESS MONTH

Power down your computer at the end of the duty day
Turn off lights in vacant rooms • Use clean and free natural light
Unplug electronics that are not in use
Set thermostats to 68 degrees in winter and 78 degrees in summer

ARMY RESERVE INSTALLATION MANAGEMENT DIRECTORATE
For more information about Army power and energy, visit <http://www.army.mil/asaiee>





Education & Awareness



- Events: Earth Day, America Recycles Day, Energy Awareness Month
- Social Outreach Tools: Website, Newsletter, Facebook, Blogs
- Awards: Secretary of the Army, Department of Energy, White House GreenGov, etc.



THE POWER IS IN YOUR HANDS

IN THIS ISSUE ...

- MESSAGE FROM OCAR: ENERGY MANAGER WORKSHOP A SUCCESS ... page 2
- SECRETARY OF THE ARMY AWARD ... page 4
- MESSAGE FROM THE ASA: ENERGY AWARENESS = ENERGY ACTION ... page 5
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- ENERGY AND SECURITY EXPERTS CONDUCT WORKSHOP ON CRITICAL ENERGY INFRASTRUCTURE IN IRAQ ... page 9
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EARTH DAY MESSAGE FROM THE CHIEF OF THE ARMY RESERVE

*"We do not inherit the Earth from our ancestors. We borrow it from our children."
- Native American Proverb*

"Sustain the Mission; Secure the Future" is the 2014 Army Earth Day theme. This theme speaks to the Army's direct commitment to sustainability in meeting our missions, in the communities where we live, work and serve, to support a better quality of life. Army Reserve environmental programs are integral to our mission and training, while minimizing environmental impacts. This year's theme reminds us all of the need to ensure that future generations will also have the resources they need.

As we strive to attain "Net Zero" operations at all of our locations, efforts are underway to provide our Soldiers, Civilians and Families with the means to save energy, conserve water and better manage our resources. Through the use of cutting edge technologies and sustainability awareness education to ensure an energy informed culture, we are meeting, and in some cases exceeding, Army goals and mandates. We've reduced energy intensity by 25 percent and potable water use by 60 percent over the past ten years.

Our training sites are developing robust recycling, repurposing and reuse programs to reduce and ultimately eliminate waste. This includes a construction debris diversion program and employee and tenant education at Fort Hunter Liggett. By changing contract requirements, 50 percent of the installation's waste is diverted by recycling.

The 88th and 63rd Regional Support Commands are achieving extraordinary results using building automation system technology - a centralized interface that can control mechanical, electrical and plumbing systems remotely, allowing buildings to operate in their most efficient states. An audit of the 63rd's Headquarters building at Moffett Field revealed the building was consuming 65 percent of its energy during periods of non-occupancy. This situation was easily rectified, saving precious resources.

In support of our natural environment, Fort McCoy, Wisconsin has partnered with State and Federal agencies in a collaborative fish habitat restoration project. The removal of barriers along Tarr Creek will improve fish passage and distribution and improve stream habitat.

This month, many of our Reserve Centers across the country and overseas will be partnering with schools, local governments and businesses to host Earth Day events and activities, celebrating our commitment to environmental stewardship and protection. I encourage you to get involved, attend and volunteer at events and activities in your local community.

The smallest changes by a large group of committed Citizens and Soldiers can have significant impacts. I'm calling on you to support the ongoing Army Reserve initiatives and to also make simple changes at home that can result in changes for our environment and the security of this great nation. *Twice the Citizen!*

Lieutenant General Jeffrey W. Talley

THE NEWSLETTER OF THE ARMY RESERVE INSTALLATION MANAGEMENT DIRECTORATE
SPRING 2014 EDITION



Army Reserve Community Events



**Earth Day 2014
Grand Prairie, Texas**



**Earth Day 2014
9th MSC, Oahu,
Hawaii**



Building Energy Monitor Program (BEM)



Purpose/Benefits:

- Energy Conservation through facility maintenance and occupant behavior change
- Energy education and awareness
- Energy team multiplier
- Leadership involvement and awareness (Energy Council)

ARIMD Support:

- Pilot program at three sites (9th MSC, 63rd RSC and Fort Buchanan)
- Additional training planned (Fort Hunter Liggett and Parks Reserve Force Training Area)
- Toolkit:

BEM Training Lessons

BEM Checklist

BEM Hand Book

Sample Memos



Training Exam & Certificate

General Energy Awareness Training

Best Practices Materials

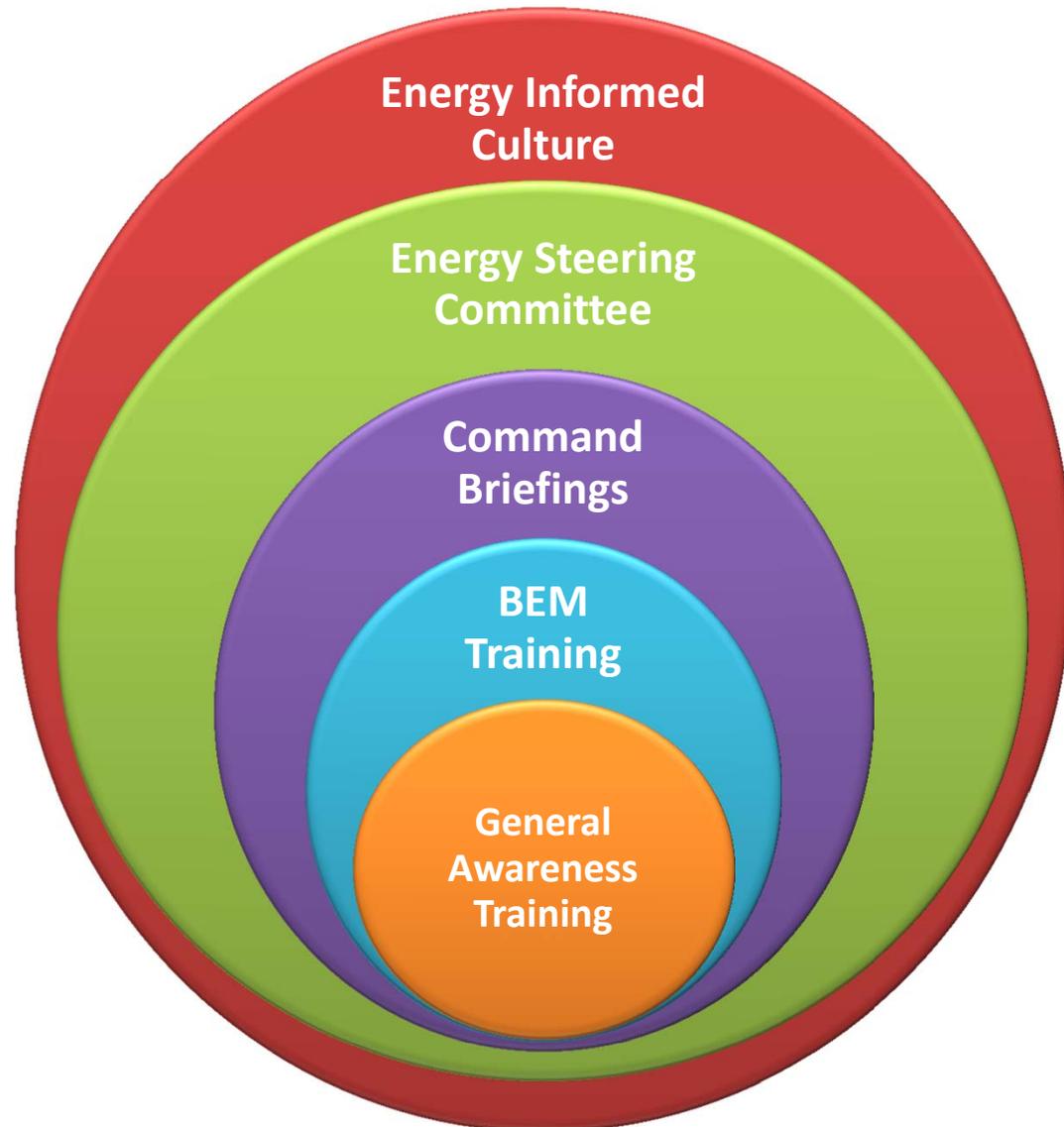


An Integrated Energy Awareness Approach



Four Roadmap Measures:

- Garrison Energy Steering Committee
- Awareness and Training
- Command Briefing
- BEM





Implementation – Energy “Dashboard”



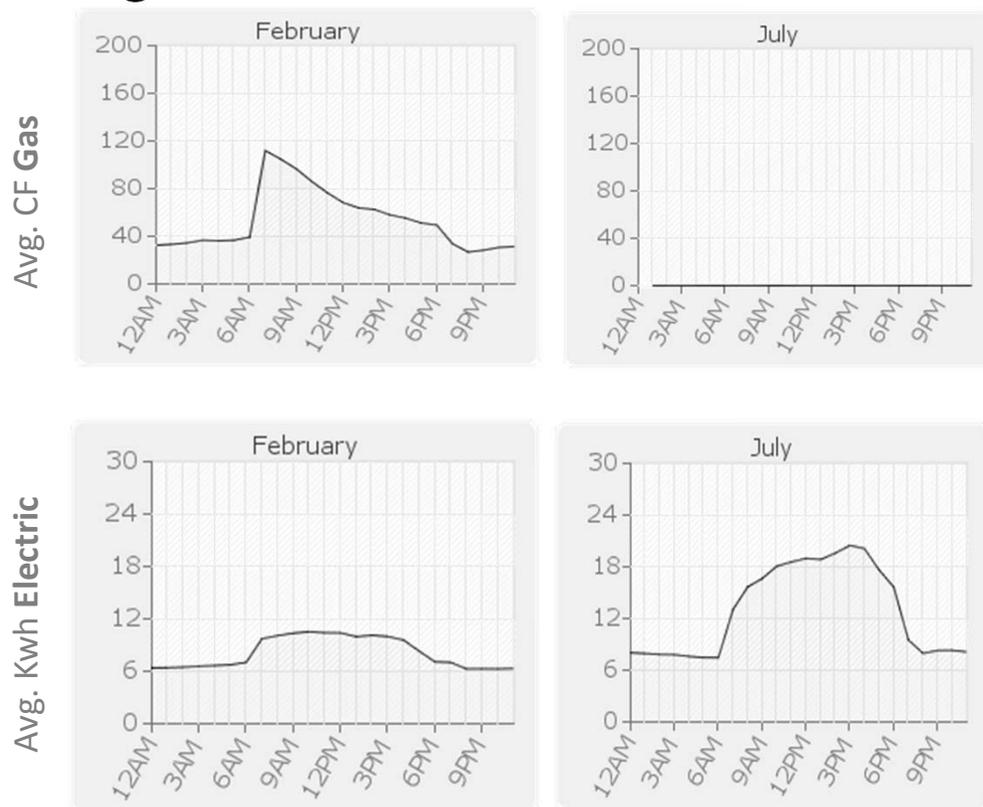
Dash-board Ref #	Measures	Description	9th MSC	63rd RSC	81st RSC	88th RSC	99th RSC	Devens RFTA	Parks RFTA	Fort Buchanan	Hunter Liggett	Fort McCoy
ESG 1 – Promote energy conservation												
1.1	BEM Appointment	BEMs appointed for each Reserve Center, building, or group of buildings, as appropriate	100%	0%	0%	0%	0%	0%	0%	75%	0%	78%
1.2	BEM Training	Annual training completed by each BEM	5%	0%	0%	100%	0%	0%	0%	75%	0%	6%
1.3	BEM Action Plan	Annual energy conservation action plan developed for each building or center	95%	0%	19%	0%	0%	0%	0%	90%	0%	0%
1.4	BEM Inspection Checklist	BEMs submit completed checklists from facility inspections according to the installation's/RSC's/MSC's BEM program requirements	67%	100%	0%	0%	0%	0%	0%	50%	0%	0%
1.5	Plug Loads: Computer Shutdown	Computers and monitors should be turned off each day	50%	0%	0%	100%	10%	0%	40%	90%	40%	100%
1.6	Plug Loads: Appliances & Equipment	Eliminate all personal refrigerators, microwaves, coffee pots and other appliances and use shared appliances provided for the facility	50%	0%	0%	25%	0%	80%	40%	90%	40%	0%
1.7	Plug Loads: Efficient Office Equipment	Use only Energy Star electronic equipment, including scanners, printers, copy machines, and fax machines and ensure sleep mode settings are programmed	25%	50%	100%	100%	50%	100%	50%	100%	50%	100%
1.8	Windows/Doors Use and Maintenance	Check use and condition of windows and doors in conditioned spaces	60%	50%	19%	100%	90%	50%	65%	100%	75%	100%
1.9	Entryway Heating and Cooling	Do not heat or cool entryways	50%	60%	100%	50%	0%	80%	30%	100%	30%	0%
1.1	Energy Awards	Nominate projects, individuals, and teams for energy awards	50%	0%	100%	50%	0%	0%	0%	75%	0%	0%
1.11	External Communications	Communicate with families and members of the Reserve's extended communities regarding energy and water conservation	50%	50%	100%	0%	0%	0%	75%	100%	60%	100%
1.12	Energy Conservation Training	Provide annual energy conservation training for all installation/RSC/MSC personnel	20%	10%	100%	25%	0%	0%	0%	80%	0%	85%
ESG 2 - Increase energy efficiency												
2.1	Energy Checklist	Use an Energy Checklist during the project design process	0%	0%	75%	100%		25%	70%	100%	60%	100%
2.2	LEED	All new construction and major repair and renovation greater than \$7.5M must incorporate sustainable design principles to achieve a minimum of the LEED-Silver Certification	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%
2.3	Beyond ASHRAE	All procurement bids and evaluations for new federal buildings must include energy efficiency specifications to achieve a minimum reduction of 40% below the ASHRAE standard 90.1 baseline	15%	25%	100%	100%	100%	30%	0%	100%	0%	100%



Awareness through Metering



SEASONAL VARIATION: Compare loads in the cooling and heating seasons to assess if there is simultaneous heating & cooling occurring.



Heating Season

Cooling Season

Observation: Good Example

No heating in summer, low nighttime loads.

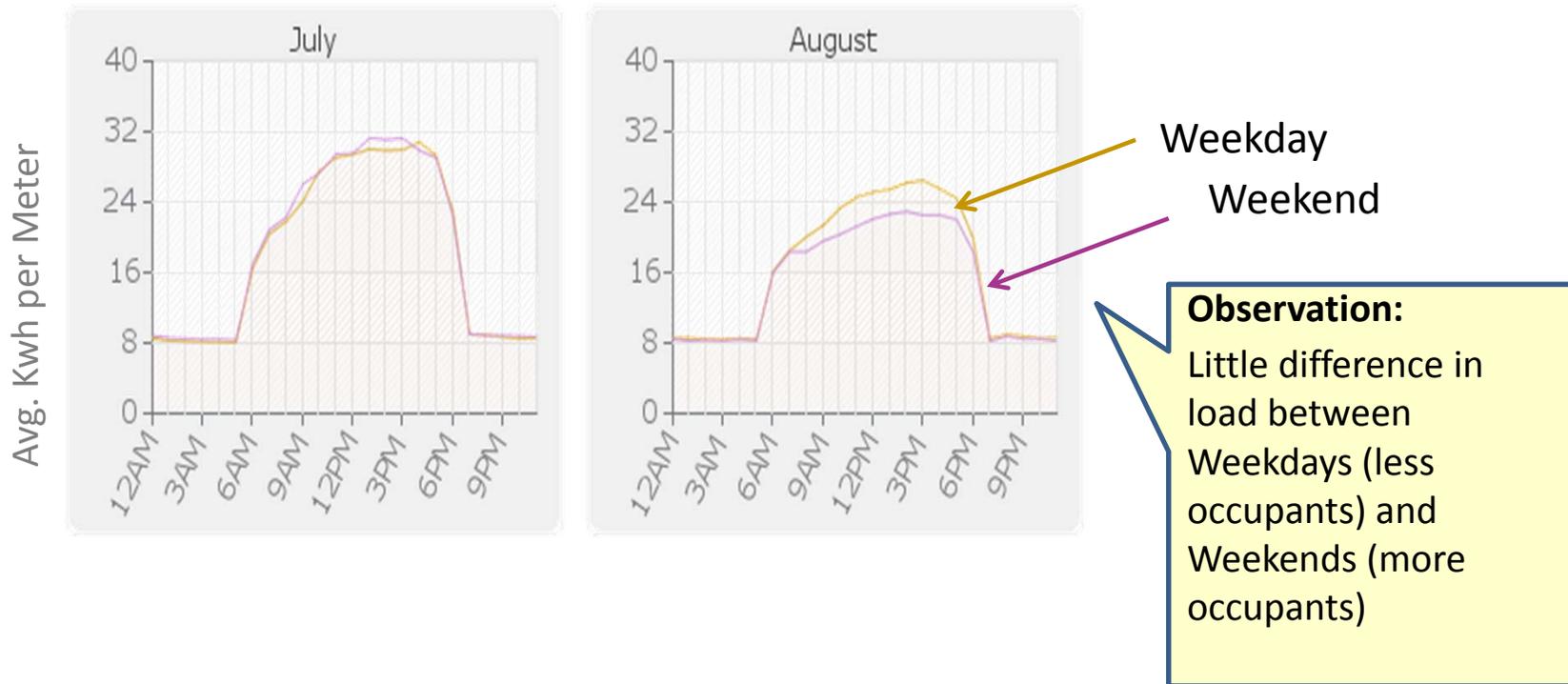
Higher electric load from cooling in summer.



Awareness through Metering



WEEKEND VS WEEKDAY: Compare loads during the weekend to demand during the weekdays to assess if the entire building is “on” during the week when there are few occupants.

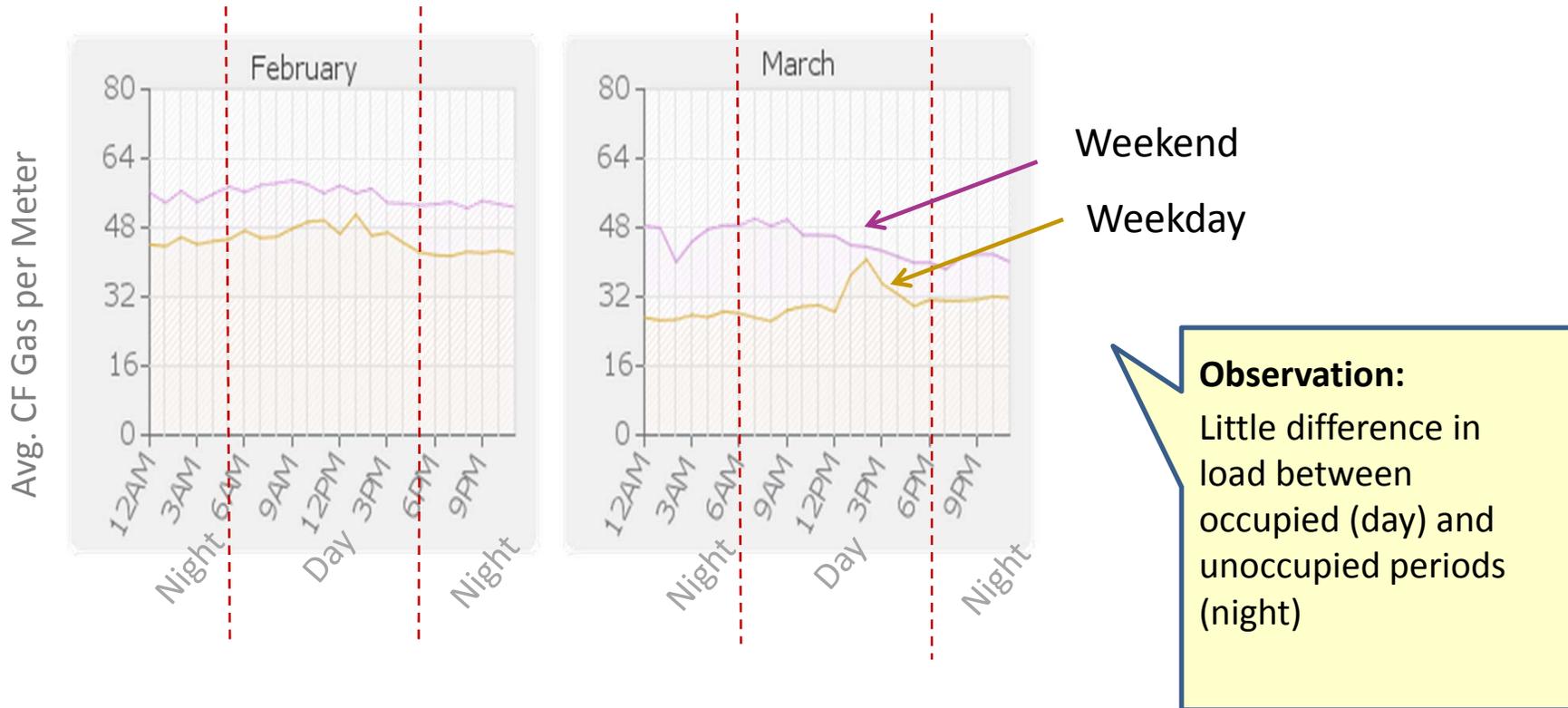




Awareness through Metering



DAY VS NIGHT: Compare demand during the day to demand in the evenings to assess if thermostat set-backs are in place.





AR Energy Path Forward



A Comprehensive, Holistic Approach to Energy Security

- ❑ **Strategy:** A plan that sets Vision, advances ARCP, and charts the path forward
- ❑ **Action Plans:** Detailed implementation plans focused on key Strategic goals
- ❑ **Metrics:** “Energy Dashboard” tracks key energy measures updated semi-annually, input to SMS
- ❑ **Periodic Reviews:** Monthly telecons with Installation/RSC Energy Managers (EMs)
- ❑ **Performance Assessments:** Quarterly reviews with supporting command/DPWS
- ❑ **Command Emphasis:** Semi-annual overview by Senior General Officers
- ❑ **Training:** Annual workshops to build the bench, consolidate gains
- ❑ **Tech Support:** On-call DOE support for project development, analyses, and studies
- ❑ **Reference Library:** Shared site with project templates, training materials, and complete “toolkits” that capture Best Management Practices from across the Reserve Command
- ❑ **Philosophy:** Centralized management and enabling, decentralized execution



Questions?

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MARINE CORPS INSTALLATIONS UTILITIES PROGRAM

**Presented to the MCB Quantico 2nd Annual
Environment and Energy Summit
17 JUL 2014**



Utilities Program



- **Manage \$240M program**
 - Develop POM
 - Yearly POM data Call
 - Manage Utilities program COLS
 - **Manage execution**
 - Execution guidance oversight
 - Pay for REM support
- **Advocate for Utilities issues**
 - Contracts
 - Support from NAVFAC
 - Maintain general understanding of utility assets throughout USMC
- **Support Installations Energy Strategy**



Utilities Program Developments



Utilities Execution Developments

- Utilities Demand Reduction
- Reimbursable Guidance

Energy Information Projects

- **LUMENS** (Logistical Utilities Management & ENergy System)
- ICS accreditation
- Smart Grid Study



Utilities Program Developments



- **Execution guidance:**
 - Utilities Demand Reduction
 - Reimbursable Guidance



UDR



Utilities Demand Reduction



- **10 x 20 (10% reduction by 2020)**
 - Signed by SES David Clifton May 27 2014
- Guidance designed to reduce the cost of operating USMC Utilities.
 - Reduces Utility requirement based on normal EIP reductions for known projects in FY 13, estimated projects for FY 14.
 - Then reduces requirement based upon a fair share of EIP for FY 15 and out, and an equal reduction based upon a standardized % decrease.



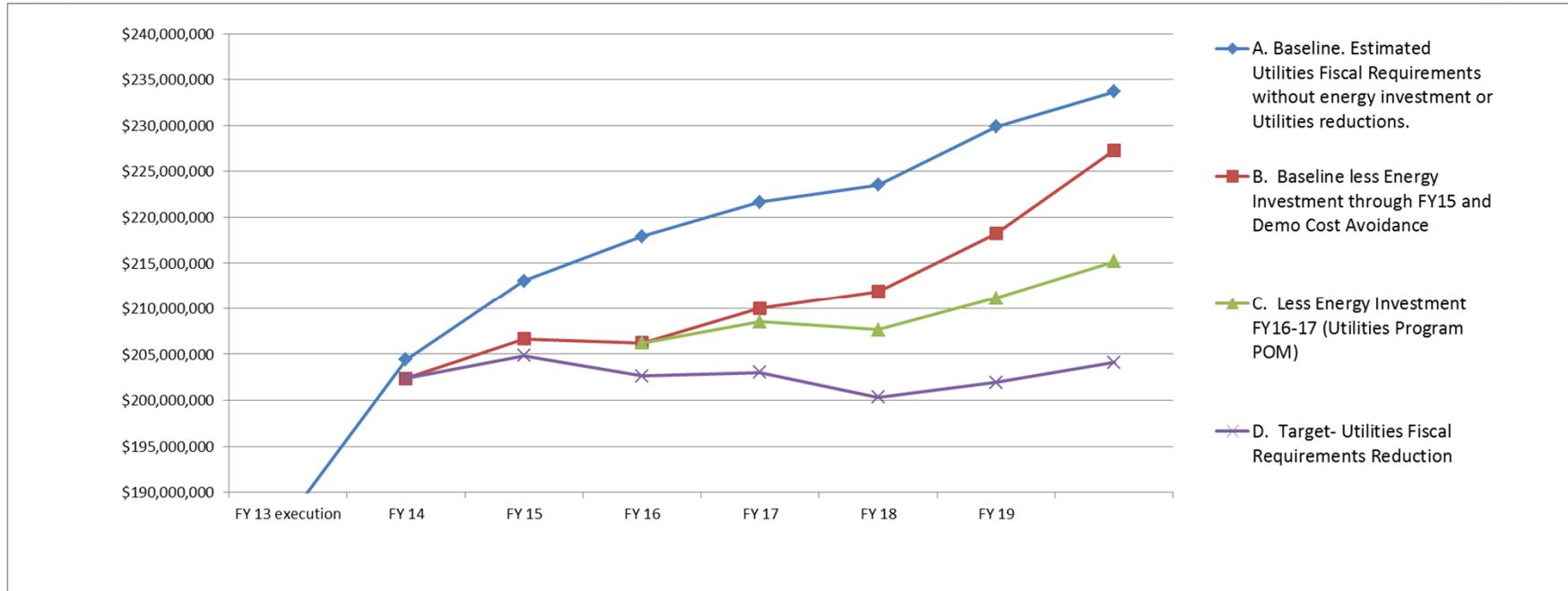
UDR cont.



- **Facts.**
 - Cost reduction will be tracked via Execution.
Execution for this guidance is described as “the net cost of purchasing and operating utilities”.(no Labor)
 - Reduction below EIP savings is currently designed to occur between FY 15 and FY20.
 - By end of FY 20, total yearly cost will be reduced by 10%.
 - \$84 M saved across the FYDP
 - \$20 M saved in FY 20 alone.



UDR cont.



Reduction goal will leverage EIP projects from FY 13, EIP estimates from FY 14, and equal share EIP opportunities from FY15-FY20, and Utilities Execution Reduction Actions. Net result will be 10% reduction in yearly utility execution by end of FY20



UDR cont.



- **Description of Utilities Demand reduction actions**

Broken down into 4 sections

- **Ethos:** describes shared vision of reducing utility use. List methods that individuals can take to reduce utility use. (Current estimates show that this will be the brunt of the load at approx 75% of UDR non EIP actions)
 - Ethos program underway at HQ now. To be rolled out in October
- **Utilities Contract Renegotiations:** encourages installations to ensure that the best rate possible is obtained.
- **Industrial Control systems:** Describes benefits to proper utilization of ICS. Also refers to an **ICS energy strategy** to be released by end of July.
- **Consolidation of Excess Facilities:** Encourages the shuttering or mothballing of unused facilities.



Utilities Reimbursable Guidance



Utilities Reimbursable Guidance



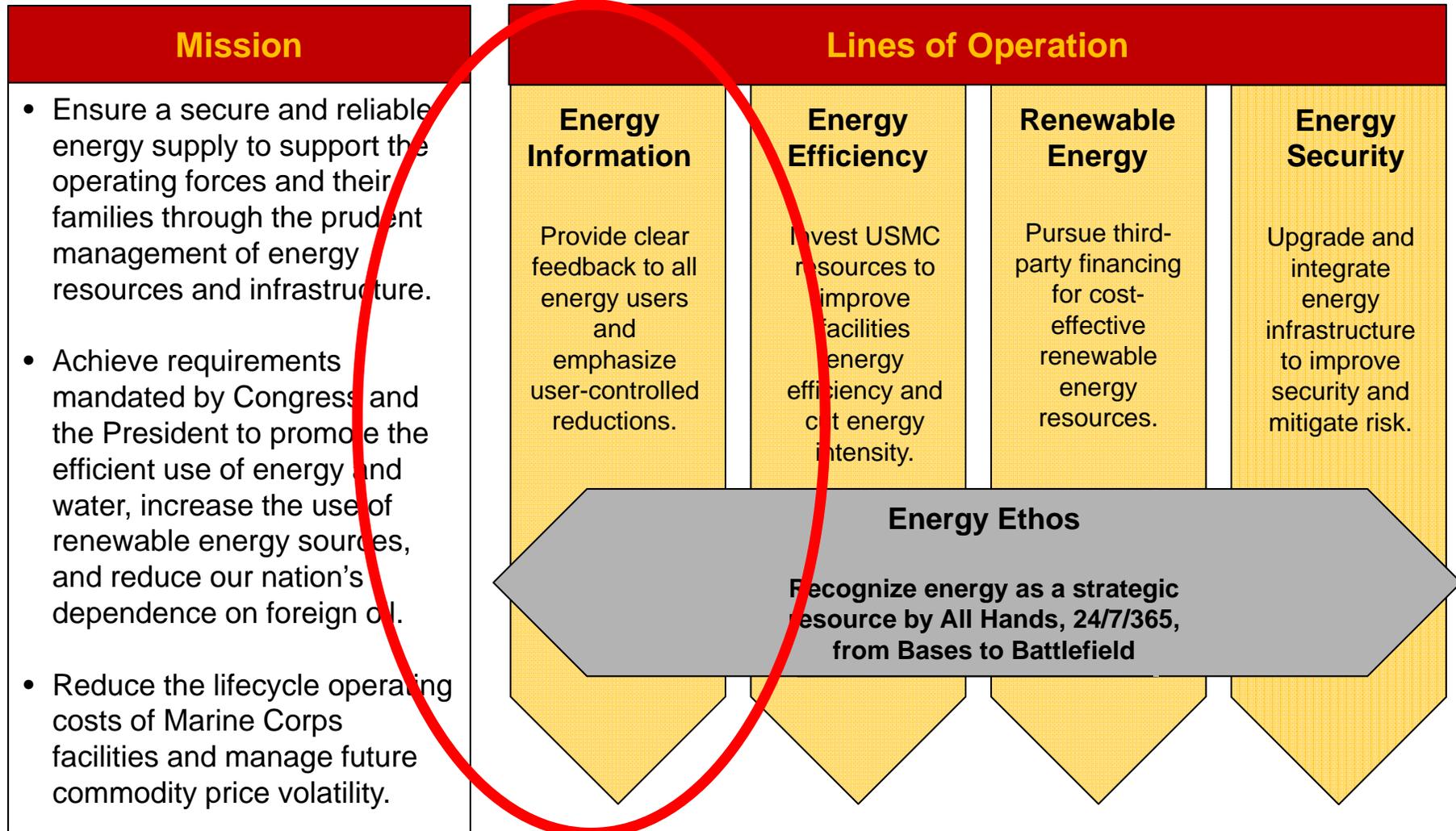
- MCICOM G8/GF Utility Reimbursable Guidance provides procedures to Marine Corps installations to be used in calculating rates for the sale of utilities services to reimbursable customers, reviewing and processing utilities acquisition invoices, and issuing of utilities sale invoices and bills.
- Includes an automated tool to help determine proper rates for tenants.



Energy Information



USMC Installations Energy Strategy





Utilities Program Developments



Energy Information projects

- **LUMENS** (Logistical Utilities Management & ENergy System)
- ICS accreditation
- Smart Grid Study



LUMENS



LUMENS



Logistical Utilities Management & ENergy System (LUMENS)

- LUMENS will securely and effectively enable automatic payment of Marine Corps utilities bills, allocate utilities and energy usage to all Marine Corps tenants, and warehouse Marine Corps utilities and energy data.



LUMENS cont.

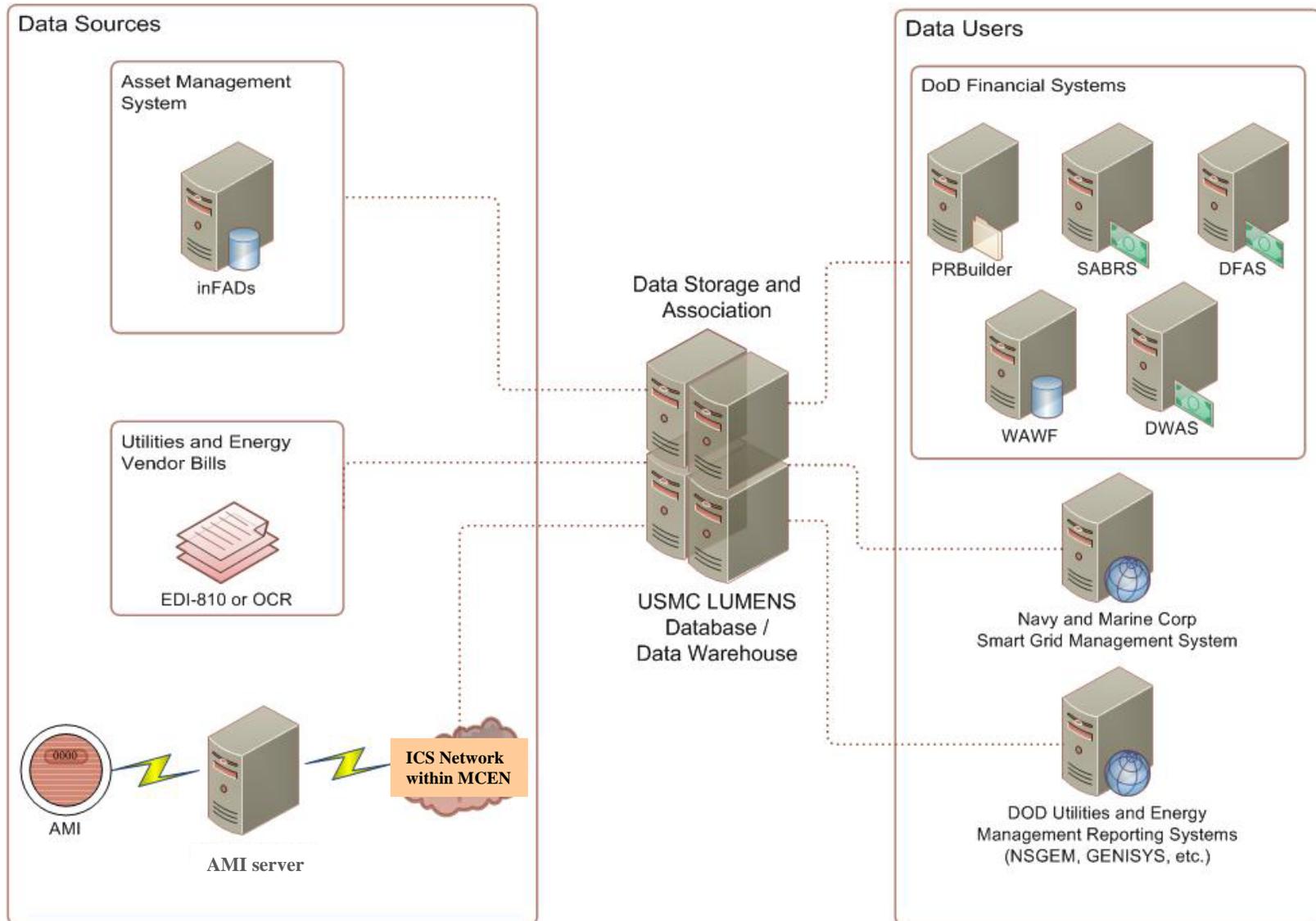


Highlights

- Accepts both electronic and paper utility bills from the provider.
- Allocates utilities and energy usage to all facilities
- Will be a temporal system archiving utilities and energy data for consumption by other utilities and energy tracking and reporting systems.
- Will securely interchange data (input/output) with DoD financial management systems (i.e. DFAS, SABRS, WAWF, and DWAS), utilities and energy provider systems (i.e. EDI 810 billing), asset management systems (i.e. iNFADS), and other utilities and energy management, tracking, and reporting systems (i.e. Navy and Marine Corps Smart Grid and NSGEM).



LUMENS cont.





ICS ACCREDITATION



ICS accreditation



- NAVFAC LANT in partnership with Risk Management Consultants to assist in Accreditation efforts for Utilities and Energy Related ICS

Two efforts in place:

- Technical assistance
- Accreditation Strategy/Enclave development



ICS accreditation Cont.



- Technical assistance
 - Three contractors in place at MCNOSC to assist USMC in site visits and ICS accreditation package development.
 - NAVFAC LANT also has a GS in place to assist in ICS accreditation and Enclave development



ICS accreditation Cont.



- Enclave Development
 - NAVFAC LANT team developing USMC ICS enclave to provide analysis, strategy, Master Plan development, and support to achieve ICS accreditation throughout the USMC.



ICS accreditation Cont.



- **Enclave Development Scope**
 - Identify and define current ICS business requirements.
 - Develop initial operating capability (IOC) at MCB Quantico.
 - Develop final operating capability (FOC)
 - FOC to include deploying and/or extending IOC enclave to support remaining USMC installations.



ICS accreditation Cont.



- **Dedicated ICS network**
 - A dedicate ICS network will be created that utilized existing MCEN, but will be logically separated from MCEN.
 - Current working group composed of MCNOSC, MCICOM G6, HQ C4, NAVFAC LANT, and CDD, currently developing this network.
 - To be tested at Cyber Security Range at Quantico Business Park in October

USMC Industrial Control Systems Past, Current, and Future States

2011-2012 Past State of USMC ICS

- ICS's have a patch work of implemented security controls.
- Most systems do not comply with DOD 8500.01 or 8510.
- Most systems extremely vulnerable to known and basic attack vectors.
- ICS's not audited to determine their security posture.
- G6/S6 had little to no involvement with ICS
- No substantial Support for ICS owners in terms of cyber security or accreditation support specific to ICS.
- Lack of ICS Inventory and no understanding of the breadth or depth of ICS systems.

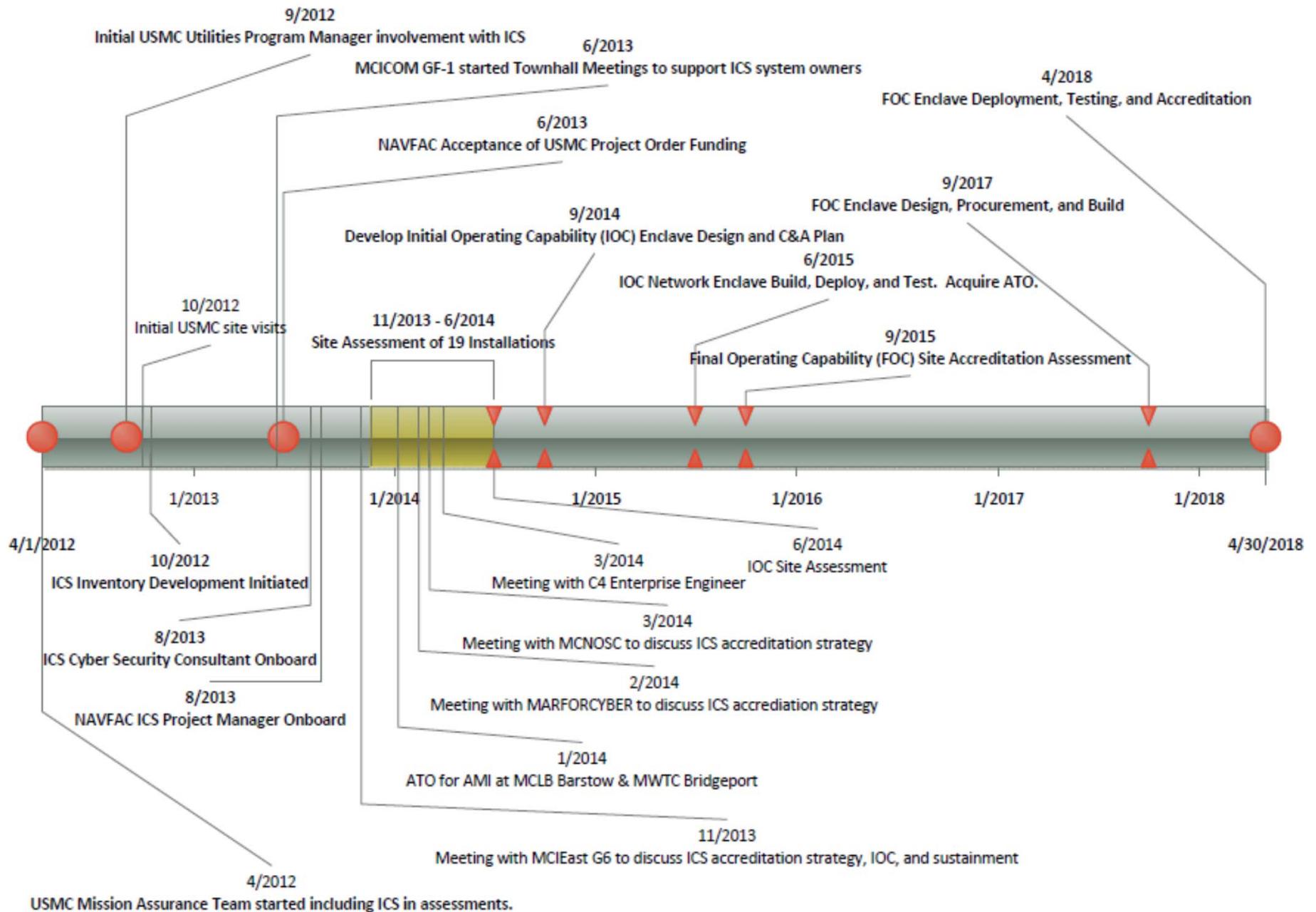
2013-2014 Current State of USMC ICS

- ICS Inventory development.
- ICS owners given a single point of contact for accreditation support.
- Several accreditation packages are moving towards ATO
- Type accreditation packages being built using successfully accredited systems (3 systems with 1 on the verge).
- Cyber Security being implemented on ICS systems via support team visits (2 so far).
- Weekly town hall meetings for ICS owners
- Guiding ICS owners with registering their systems in MCAST.
- Three assist visits to date, assisting ICS owners with ensuring the security of their network and communications. Provided guidance to ensure systems can obtain accreditation.
- Trained 62 USMC personnel at DHS ICS training center in Idaho Falls.
- Training and guidance provided on the upcoming transition to Risk Management Framework (RMF).
- USMC ICS Cyber Security Project Order Funding accepted by NAVFAC.

2015+ Future State of USMC ICS

- Pool of validators available to support ICS owners. Validators will be trained in the nuances of ICS.
- ICS Enclave to provide support and security services to ICS owners to assist with cyber security and accreditation.
- Support teams that can assist ICS owners moving systems to the ICS Enclave or implementing security controls required for secure operation.
- Collaboration between G6/S6 and ICS owners.
- Develop methodology for finding ICS's connected to NIPRNET, Internet, wireless, as well as stand alone systems.
- Develop funding guidance for ICS cyber security requirements.
- Full implementation of RMF, to include clear directions and instruction to ICS owners as well as a location to ask questions about policy.
- ICS integrated with Business Systems.

USMC ICS Enclave Deployment, Certification & Accreditation Timeline





Smart Grid



Smart Grid Study



- **Back Ground**

- The Smart Grid effort is an analysis of the current and future state of Industrial Control Systems (ICS). The major components within ICS involve the communications network; monitoring and/or control of utility plants and distribution systems; monitoring and/or control building level HVAC and lighting control systems; and integration and analysis of this data to provide a holistic view of a base and work towards energy conservation.



Smart Grid Study Cont.



- **Background cont.**
 - The output of the scope will be site specific 1391 projects at 16 Marine Corps bases, where economically viable, and enterprise level funding analysis which will include 8 additional bases for POM17 and POM18 budget submissions.



Smart Grid Study Cont.



- **Key Points**

- Savings to justify the project will come from areas such as retro-commissioning, continuous commissioning, and HVAC and lighting setbacks. Additional benefits are seen from utility system visibility, demand management and reduction, and fault analysis and optimization of equipment.
- Participation from base level subject matter experts is key to the success of the project.
- Information Assurance (IA) compliance costs will be incorporated into the analysis and worked in conjunction with a second scope of work dealing with IA compliance accreditation and Platform Enclave development for the Marine Corps. This effort is led by NAVFAC LANT CIO.



USMC Utilities Summary



- **USMC Utilities program goals**
 - **Reduce Utility demand.**
 - UDR
 - **Improve Utility Execution tracking and practices**
 - Reimbursable Guidance
 - Yearly Execution Guidance
 - COLS development
 - **Improve energy information in support of Installation Energy Strategy.**
 - LUMENS
 - Accreditation
 - ICS Enclave
 - Smart Grid Development





QUESTIONS



**RECP 101:
UNDERSTANDING THE
RESIDENT ENERGY
CONSERVATION PROGRAM**



**PRESENTER:
MS. MARA ZINGG**



WHAT IS THE RESIDENT ENERGY CONSERVATION PROGRAM?

The Office of the Secretary of Defense (OSD) memorandum dated September 8, 1998 sets forth a policy to aggressively pursue conservation initiatives that is consistent with MHPI (Military Housing Privatization Initiatives).

The OSD Policy Objectives:

- Encourage conservation and energy efficiency
- Improve quality of life for service members through re-investment of savings back into housing
- Shift responsibility for payment of utilities to service members



RESIDENT ENERGY CONSERVATION PROGRAM

Is not...

- A Lincoln Military Housing initiative
- A base program
- A program that makes profits for the PPV or the United States Navy

It is ...

- A program to increase awareness of utility use and encourage conservation
- A program that supports the Navy's goals for environmental sustainability and to be good stewards of our Nation's resources



PILOT PROGRAM SITES AND RESULTS

2 Pilot Sites in 2011: Hawaii and Tri-Command (Parris Island, MCAS Beaufort, Beaufort Naval Hospital)

Overall Energy Consumption dropped by 8-9%.

Pilot buffer zone was 20% above or below the average. Our buffer zone is 10%. Pilot sites are also adopting 10% buffer zones.

Many Army sites have had similar programs for several years.



HOW THE PROGRAM WORKS

During initial and live consumption reporting every home will be assigned to a like-type group

Like Type
Group

Homes of similar efficiency levels are grouped together.
Factors considered when profiling:

- Neighborhood
- Bedroom count
- Square footage (variance < 5%)
- Age

The group's average usage will be calculated monthly



HOW THE PROGRAM WORKS

- Once the like type group (LTG) is formed, the average monthly usage is then calculated.
- Homes that are not occupied for a full calendar month are not included.
- Wounded Warriors and EFMP Families* are excluded.
- The highest 5% and lowest 5% of consumers in the LTG are dropped from the calculation, but will still be responsible for their usage and receive a statement for that month.
- The average monthly usage for the LTG is calculated by summing the energy usage of all remaining homes and dividing by their number.
- A 10% buffer will be set above and below the average monthly usage that defines the “normal” usage range or “grace zone.”
- Rolling Average – average usage is calculated each month to allow for changes to weather patterns and seasonal influences.

* Must receive a waiver



HOW THE PROGRAM WORKS

Sample Calculation of Monthly Average

ABC like-type group has 105 homes

1 home is vacant

2 homes are not occupied full calendar month

2 homes are exempt (WW, EFMP)

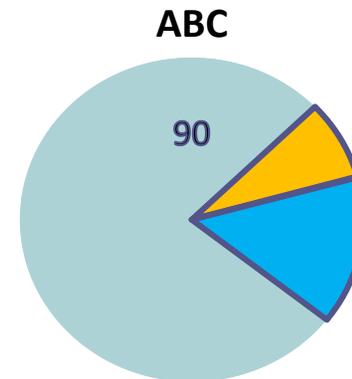
Remove top and bottom 5% - 10 homes total

90 homes are left to calculate monthly average...

Sum up the utility charges for the 90 homes = \$12,150

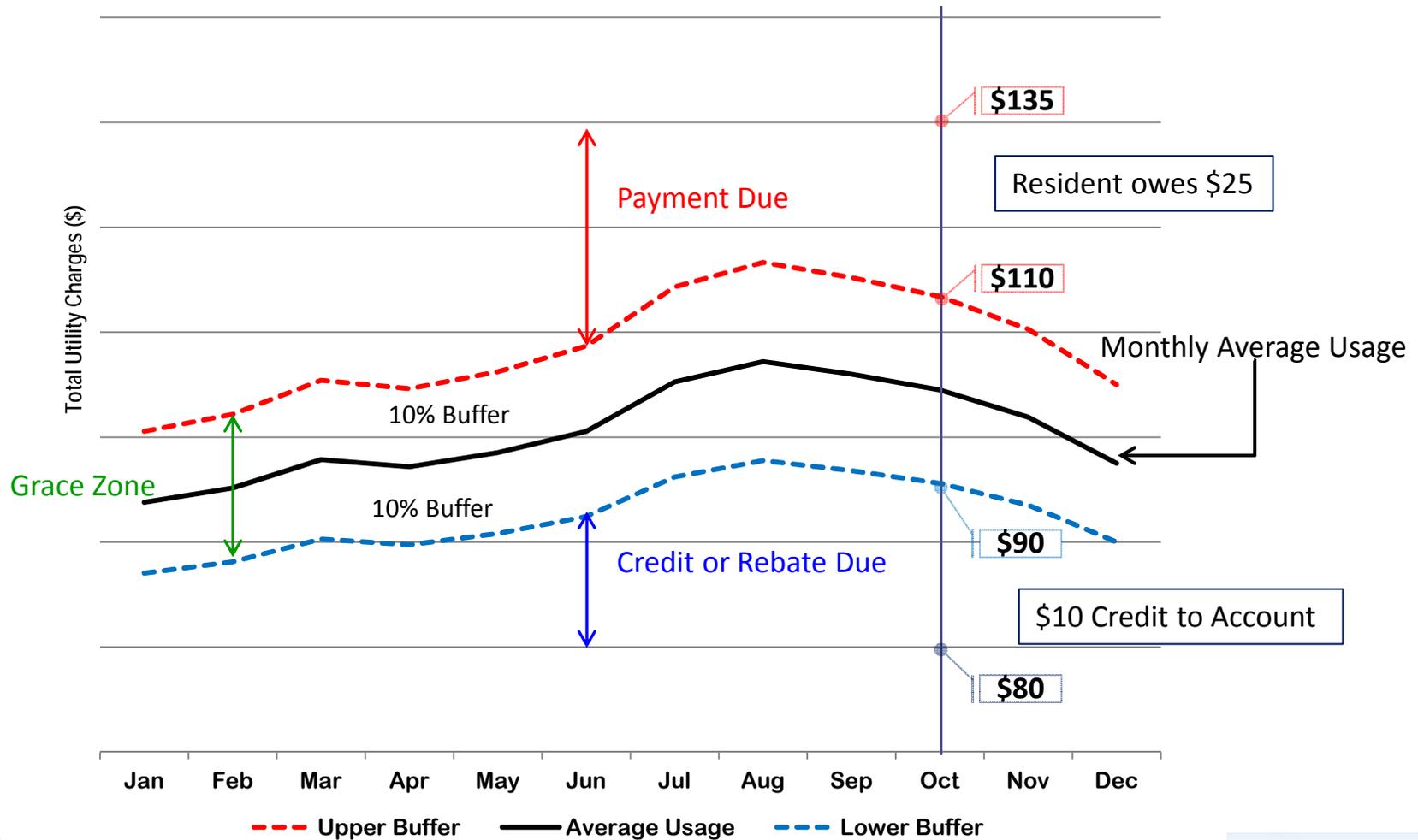
Monthly average = $\$12,150/90 = \135.00

Note: You do not remove top and bottom 5% when the like-type group has less than 20 homes.



THE PAYMENT PROCESS

Rebates and payments are due once the balance in the account is over \$25.00



THE PAYMENT PROCESS

If a family consumes below the grace zone, they will receive a credit for the difference between their bill and 90% of the average usage.

If a family consumes above the grace zone, they will pay the difference between their bill and 110% of the average usage.

If a family consumes within the grace zone they will not pay for their energy usage during that month.

Remember – credits will be issued when the amount accrued exceeds \$25.00 and payments are due when the amount due exceeds \$25.00.



SAMPLE STATEMENT (FRONT)

TOP PORTION OF STATEMENT IS THE TEAR OFF STUB WITH PAYMENT DETAILS

Left hand side contains:

- Customer service contact details
- Portal website address
- Remit to address
- Community Name
- Resident ID and registration code

Main body lists:

- Meter information
- Utilities invoiced
- Average and dollar charges / credits

**Please detach and return this stub with your payment or pay on-line at www.yeslivegreen.com **



**YES ENERGY
MANAGEMENT**

ANDREW SMITH
686 MURRAY DR
ANYWHERE CITY, AB 12345

Resident ID: m0001234
Statement Date: 11/15/2012
Due Date: 12/06/2012
Amount Due: \$0.00
Amount Enclosed: \$ _____

Community Name

YES ENERGY MANAGEMENT
PO BOX 96xx
COLORADO SPRINGS, CO 80932

No payment or credit due at this time

Service Address
686 Murray Drive
Anywhere City, AB 12345

Community Name
Camp X

Like-Type Group
9

Customer Service
Hours of Operation:
24 Hour Service Daily
(888)-123-4567
E-mail: yescs@yesenergymgmt.com

Resident Services Office Contact
123 Pool Street
(777)-987-6543

Resident Portal Website
www.yeslivegreen.com

On Line Payment Registration Code
Resident ID: m0001234

YES System Information
Property ID: 33311444

Remit Payment To
YES ENERGY MANAGEMENT
PO Box 96xx
Colorado Springs, CO 80932

Community Message

Account Detail

Unit Number	Resident Name	Resident ID
0686MURR	Andrew Smith	m0001234
Meter Service Period	Days	Statement Date
10/1/2012 - 10/31/2012	31	11/15/2012

Utility Type	Previous Reading (Kwh)	Current Reading (Kwh)	Your Usage (Kwh)	Rate (\$/Kwh)	Your Usage Amount
ELECTRIC	5,403.00	7,052.00	1,649.00	0.2635	\$434.46

Lower Buffer, \$358.01 Average Home, \$397.79 Upper Buffer, \$437.57

Your Usage, \$434.46

Least Energy Used Grace Zone More Energy Used

Last Month

Previous Balance	\$0.00
Payments Received	\$0.00
Previous Balance Forward	\$0.00

This Month

Current Charges	\$434.46
Allowance	\$434.46
Adjustments & Fees	\$0.00
Payments Received	\$0.00

Total New Charges This Month \$0.00

New Balance \$0.00

Credits will be issued in full when they exceed \$25.00 and payments are due in full when they exceed \$25.00

1



SAMPLE STATEMENT (BACK)

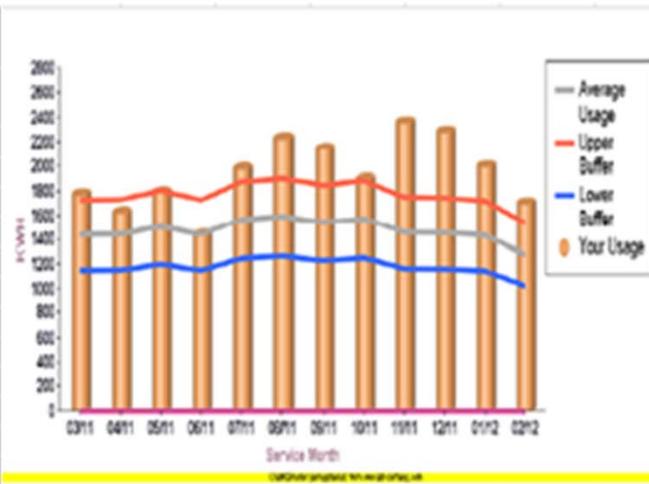
12-MONTH USAGE TABLES:

- Utility consumption
- Dollar charges

12-MONTH GRAPH :

- Residence consumption
- Like type monthly averages
- Grace Zone of +/- 10%

Your Usage Profile							
Month	kWh	Amount	Baseline kWh	Upper Buffer kWh	Lower Buffer kWh	kWh Difference	Your Charge
03/11	1763.00	\$344.87	1425.00	1567.50	1282.50	195.50	\$39.41
04/11	1617.00	\$316.32	1480.00	1628.00	1332.00	0.00	\$0.00
05/11	1785.00	\$349.07	1570.00	1727.00	1413.00	0.00	\$0.00
06/11	1431.00	\$279.85	1400.00	1540.00	1260.00	0.00	\$0.00
07/11	1965.00	\$384.28	1490.00	1639.00	1341.00	326.00	\$65.72
08/11	2220.00	\$434.14	1545.00	1699.50	1390.50	520.50	\$104.93
09/11	2134.00	\$419.33	1505.00	1655.50	1354.50	478.50	\$96.47
10/11	1883.00	\$379.65	1520.00	1672.00	1368.00	211.00	\$42.54
11/11	2353.00	\$474.41	1400.00	1540.00	1260.00	813.00	\$163.90
12/11	2281.00	\$459.90	1390.00	1529.00	1251.00	752.00	\$151.60
01/12	1986.00	\$400.42	1380.00	1518.00	1242.00	468.00	\$94.35
02/12	1694.00	\$341.54	1280.00	1408.00	1152.00	286.00	\$57.64



WOUNDED WARRIORS & EXCEPTIONAL FAMILY MEMBER

Wounded Warriors are automatically exempt from RECP. Residents enrolled in the Exceptional Family Member Program (EFMP) may request a waiver for exemption from the RECP program.

The steps are...

- EFMP Families must submit their request for a waiver to the Housing Installation Program Director (HIPD) in the event a medical condition requires increased energy usage.
- The request is forward to the Regional Property Manager (RPM) of Lincoln Military Housing and the HIPD for approval. Lincoln RPM and HIPD do not have authority to deny a request.
- If HIPD and Lincoln RPM cannot agree, request is sent to Housing Director and Lincoln General Manager for action. The Housing Director and the Lincoln General Manager may consult with CNIC Region in arriving at a decision.

Families waived from the program do not receive monthly utility statements.



NAVY RECP IMPLEMENTATION PLAN

NAVY'S GOAL: All PPV housing on RECP by Oct 2013

MID-ATLANTIC TIMELINE:

- April 2013: Publicity, detailed notifications, town halls, and lease addendum signings
- July 2013: Mock consumption reporting period
- Oct 2013: Live consumption reporting commences



MARKETING & COMMUNICATION

- www.LincolnRECP.com is a web site created by LMH with general information about the program
- Town halls will be scheduled during the Pre-Mock phase to explain how the program works
- Residents will receive letters 30 days before the start of each phase
- Social media will provide updates and provide a forum for residents to ask questions
- Information regarding RECP will be included in community newsletters
- Ener-G Kids' Club – is an outreach program designed to empower kids to save energy at home, details about the club's activities can be found at www.LincolnRECP.com
- Super Savers – is a program created publicly recognize families who save the most energy (similar to Yard of the Quarter)



MOCK CONSUMPTION REPORTING PERIOD

- Transitions residents into the LIVE phase of RECP
- Residents learn about their household electricity consumption
- Residents have time to learn and implement conservation habits
- Residents whose consumption exceeds baseline by more than 20% may request an energy audit



Image source: <http://www.ftlauderdalecc.com/blog/speaking-of-energy-10-easy-conservation-tips/>



LIVE CONSUMPTION REPORTING PERIOD

- Residents receive first live utility statement in Nov 2013 for Oct 2013 usage.
- Residents make payments to YES directly via online, regular mail or phone.
- Residents become responsible for the energy consumption.



Image source: <http://www.xconomy.com/san-diego/2010/05/20/how-to-make-money-from-saving-energy- Tales-of-innovation-at-the-sdgc-energy-showcase/attachment/energy-conservation-dollar-sign/>



LMH HOME ENERGY SURVEY & HOME INSPECTION

- Available online to all LMH residents
- Residents who complete the survey will receive energy savings tips which can be applied at home
- Residents whose usage is 20% above the baseline may be eligible for a home energy inspection.
- The home inspection will primarily focus on typical “energy hogs” – heating/cooling systems, lights, appliances and home electronics.
- Get residents to think **energy** smart!



LMH DISTRICT RESPONSIBILITIES

- Understand the program & answer questions
 - Know the roll out schedule for your communities
 - Explain how the program works
 - Explain the payment process
 - Explain how to read a utility statement
- Know YES' role and encourage residents to contact YES online or by phone
- Learn how to perform home energy inspections
- Be familiar with RECP FAQ
- Promote all LMH “green” events, expos, programs and contests.
- Get residents to sign RECP lease addendums prior to start of Live Billing.



WHAT'S NEXT?

- Now through June 31st (Pre-Mock Phase)
 - Setup Yardi Database
 - Schedule town halls to educate residents about RECP
 - Train LMH district staffs/MHOs on RECP
 - Install meters & collect data
 - RECP lease addendums signed
 - Notify Residents of Mock Phase start

- July through September 2013 (Mock Phase)
 - Mock Billing Phase
 - YES sends monthly mock utility statements
 - RECP lease addendums signed
 - Additional Yardi training for LMH staff
 - District Staff conducts home visits
 - Notify Residents of Live Phase start

- October 2013 (Live Phase)
 - Live Billing begins – residents will receive first statements in November



RECP SUPPORT FOR LMH EMPLOYEES

- Visit www.LincolnRECP.com
- Call YES Customer Service
- Contact your Regional RECP Manager
 - MAMFC North, NDW – Harry Marshall (703) 221-9610



QUESTIONS?





Environment and Energy Summit
17 July 2014

1345 – 1400 Break



DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



DLA Energy Environmental Program

Matt Young
DLA Installation Support for Energy
July 17, 2014

WARFIGHTER SUPPORT

STEWARDSHIP EXCELLENCE

WORKFORCE DEVELOPMENT



DLA Energy Environmental Program

Agenda:

- DLA Energy's Mission and History
- DLA Energy Environmental Program Mission Statement
- DLA Energy Environmental Program Staff
- Authority
- Key Environmental Functions
- Environmental Programs
 - Spill Response, Assessment, Cleanup
 - Recurring Environmental Compliance Costs
 - Centrally Managed Programs





DLA Energy Mission and History

Basic Mission: Support the warfighter and manage the energy resources of the future

- WWII – DOI “Department of Army-Navy Petroleum Board”
- 1945 – War Department “Joint Army-Navy Purchasing Agency”
- 1962 – Became part of Defense Supply Agency (now DLA)
- 1964 – “Defense Fuel Supply Center” – single entity to purchase and manage DoD petroleum and coal
- 1973 – Went from wholesale fuel procurement to “Integrated Materiel Manager” Phase I and Phase II
- 1990 – Mission expanded to natural gas
- 1998 – Became Defense Energy Support Center (DESC) and new mission to build an energy program to move DoD out of the management of energy infrastructure and into the management of energy products.
- 2001 – Acquired mission for space energy
- 2004 – Designation as Executive Agent for fuels
- 2006 – Acquired mission for Aviator’s breathing oxygen and liquid nitrogen
- 2009 – pursue renewable and alternative energy
- 2010 – DLA Energy



Authority

- DoDD 5101.8 designates DLA Energy as the Executive Agent for Bulk Petroleum to acquire, store, and distribute bulk petroleum
- DoDD 4140.25 directs DLA Energy to plan, program, budget and provide funding for environmental compliance as well as provide technical support
- DoD 4140.25M Volume II Chapter 8:
 - Provide Funding and Technical Support to Capitalized Fuel Facilities Worldwide

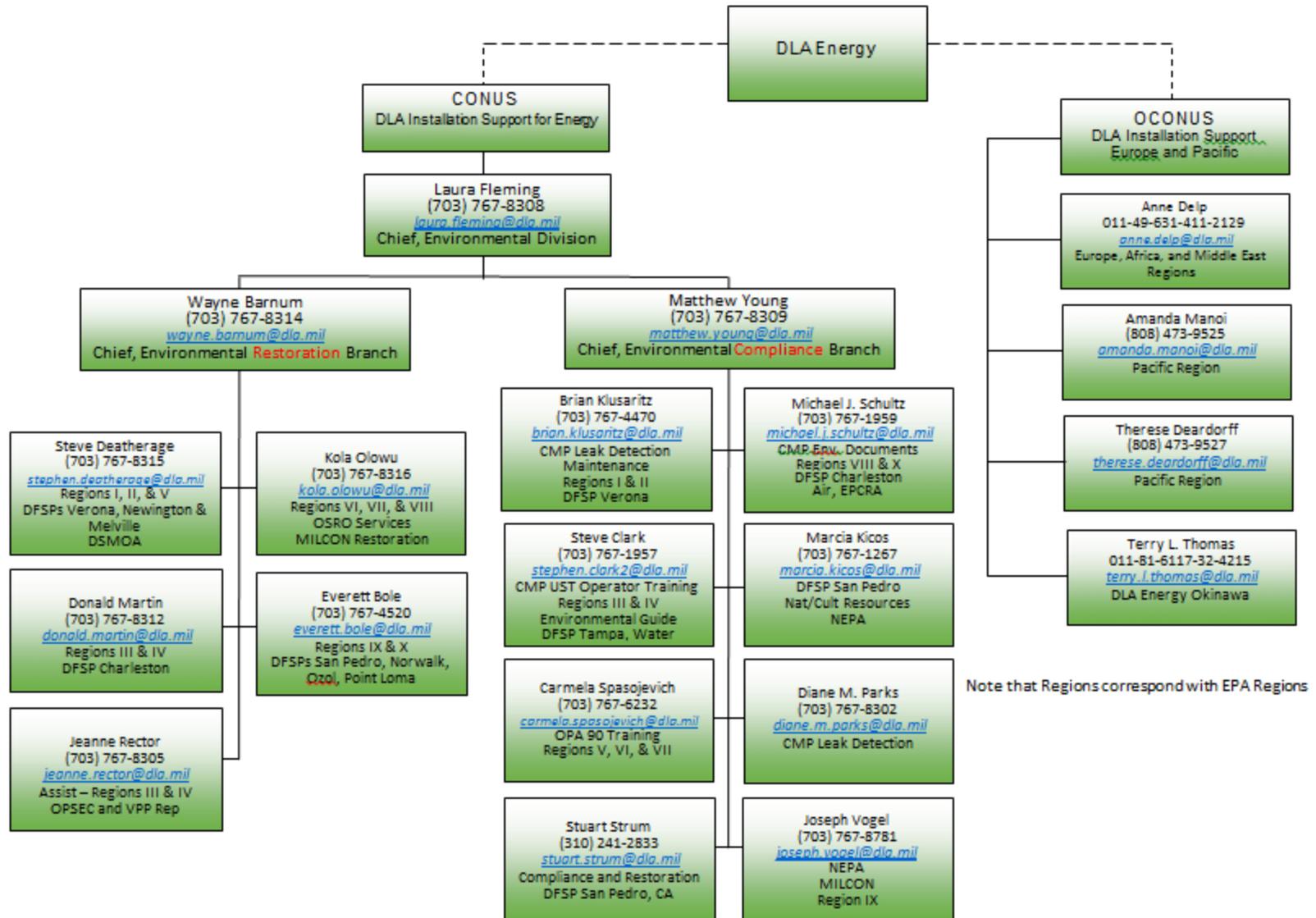


Environmental Program Mission Statement

Provide DLA Energy quality environmental services with technical expertise and funding support to ensure environmental compliance with laws, regulations, and policies thereby maintaining readiness, financial stewardship, and supporting the Warfighter.



DLA Energy Environmental Program Staff



Note that Regions correspond with EPA Regions



Key Environmental Functions

Provide Funding and Technical Support to Capitalized Fuel Facilities Worldwide:

- Recurring Environmental Compliance Requirements
- Spill Response, Assessment and Cleanup
- Advise DLA Energy and DFSP Staff on Environment Issues with SRM, MILCON, and Other Projects/Issues
- 6 Sites with Full Environmental Compliance

Responsibility:

- Current permitted DFSPs include Charleston, San Pedro, Tampa, Verona, DFSP Korea, and DFSP Okinawa (aka permitted GOCO facilities)
- Manage all aspects of environmental program: air, water, waste, NEPA, EMS, etc.
- Approximately 550 Capitalized Sites Worldwide



Restoration Branch

- Spill Response, Assessment, Cleanup
- FY13 - 98 CTC sites
- Responsibility to fund cleanup of DLA Energy capitalized fuel
- Provide technical support
- Coordinate with Installation PM to validate appropriate technologies and funding and capture costs in CTC process
- Installation has lead with regulator for non-permitted DFSPs
- DS Energy has lead with regulatory requirements and overall compliance for permitted DFSPs





Compliance Branch

- Technical & Funding Support to DFSPs Worldwide – AS REQUESTED
- Funding for Environmental Costs:
 - Sampling & testing of fuel emissions & discharges
 - Removal & disposal of fuel wastes
 - Operational permits & fees for fuel facilities
 - Spill Prevention, Control and Countermeasure (SPCC) plans, Facility Response Plans (FRP)
 - Spill cooperative fees for fuel facilities
- Centrally Managed Programs

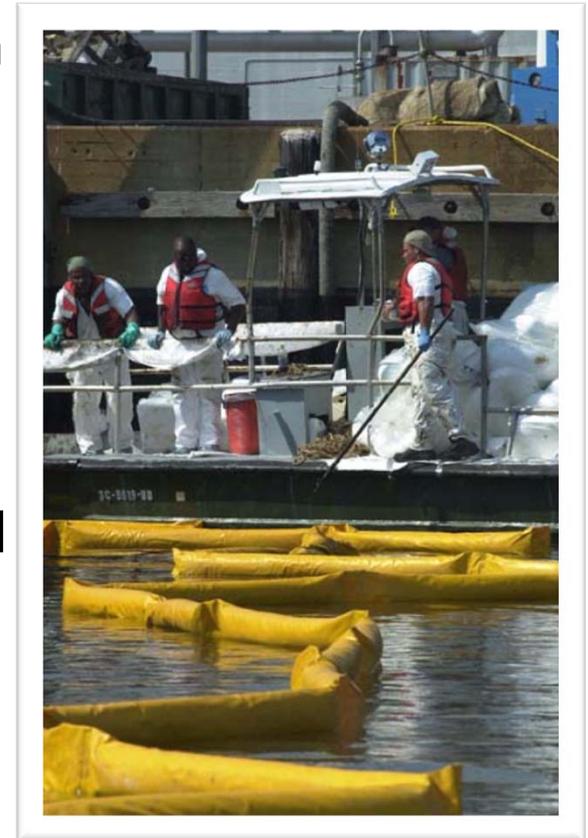


Fines & Penalties on a case-by-case basis



Spill Response Training

- Facility Response Plan (FRP) facilities must provide spill response training IAW Oil Pollution Act of 1990 (OPA 90)
- National Preparedness for Response Exercise Program (PREP)
- Conduct annual spill response training at all DFSPs operated by DLA Energy as well as Navy FLCs – 69 sites in 2013
- Oil spill removal organization (OSRO) deployed
- Three year cycle exercises and tests all components of spill response capability including small, medium and worst case discharges scenarios
- Unified Federal effort that satisfies USCG, EPA and DOT exercise requirements pursuant to OPA 90





UST Operator Training

- USEPA Operator Guidelines – August 2007
 - 3 classes of operators
 - Class A – Managers
 - Class B – Supervisors
 - Class C – Front Line Operators
- States Implementation – Target August 2012
 - 44 states have requirement posted
 - 6 states are working toward requirements
- DLA Energy offers classroom training for 40 DLA Energy operated sites and Navy FLCs
- Computer based training developed for DoD sites



Leak Detection Program

- Overall DLA Energy leak detection program management
- Annual, biennial and quarterly testing and monthly monitoring for tanks and pipelines
- 2013 program - over 150 installations
- Tightness testing, leak detection monitoring for tanks & pipelines
- Installed Leak detection system certification & maintenance program
- Leak confirmation and location
- Anticipating new UST regulations in Spring 2014





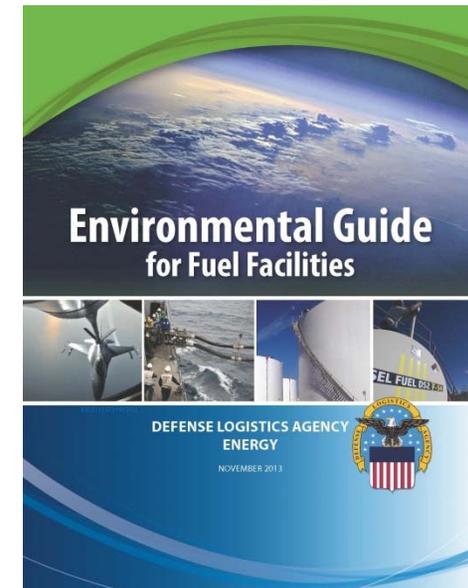
Environmental Documents Program

- In-house contract with DLA Energy
- Requested by Service (except permitted sites)
- Update various environmental documents including SPCC Plans, FRPs, ICPs, SWPPPs, etc. as they relate to capitalized fuel storage
- Multiple Award Contract – allows for competitively bid projects and more cost efficiency
- Cost sharing between DLA Energy and the Service for capitalized and non-capitalized fuel portions
- About 30 projects/year



Environmental Guide for Fuel Terminals

- Developed and published award-winning comprehensive environmental guide for DoD fuel terminals
- Provides concise easy to understand interpretation of pertinent environmental laws and regulations
- 7th EDITION AVAILABLE NOW
- Copies distributed throughout the DoD fuels community
- Available on CD-ROM
- Available on the internet to CAC card users:
<https://east.esps.disa.mil/dod/dla/dlaenergy/Pages/Environmental-Guide-for-Fuels-Facilities.aspx>
- Updated and revised periodically





QUESTIONS?



DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



WARFIGHTER SUPPORT

STEWARDSHIP EXCELLENCE

WORKFORCE DEVELOPMENT



Environment and Energy Summit

17 July 2014

1430 – 1515 Roundtable: Energy Conservation Awareness

Office of the Deputy Assistant Secretary of the Air Force	Ms. Christa L. Gunn	Facilities Energy Engineer
U.S Army, Fort AP Hill	Mr. R. Troy Smith	Energy Manager
Naval Surface Warfare Center Dahlgren Division	Mr. Stephen T. Eckel	Chief Infrastructure Engineer & Strategist
Unv. Mary Washington	Mr. Darryl Jay Sullivan	Dir. Utilities/Energy/Controls
National Park Service - National Capital Region Design and Project Management Branch	Ms. Monta Baskerville	Project Manager, Architect Sustainability Coordinator
MCBQ	Mr. Paul Southwell	Support Contractor



Environment and Energy Summit
17 July 2014

1415 – 1530 Closing Remarks