



## *Benefits of the OSD Corrosion Projects*

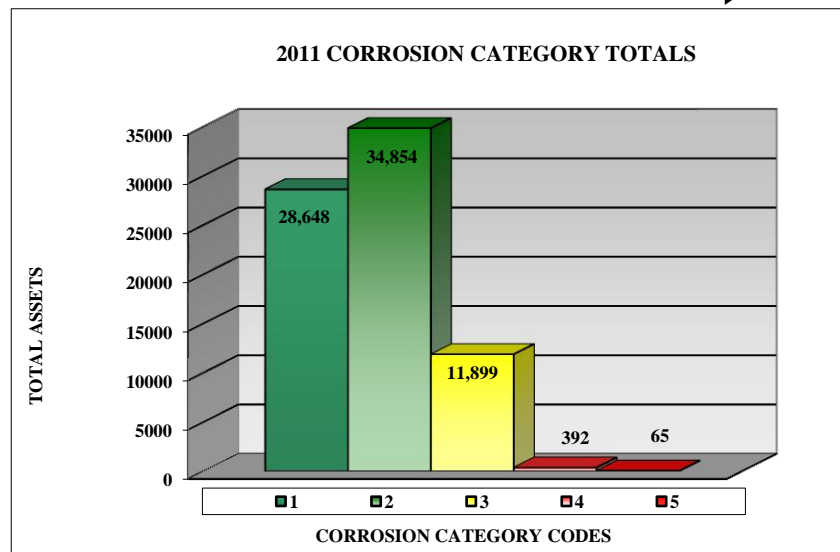
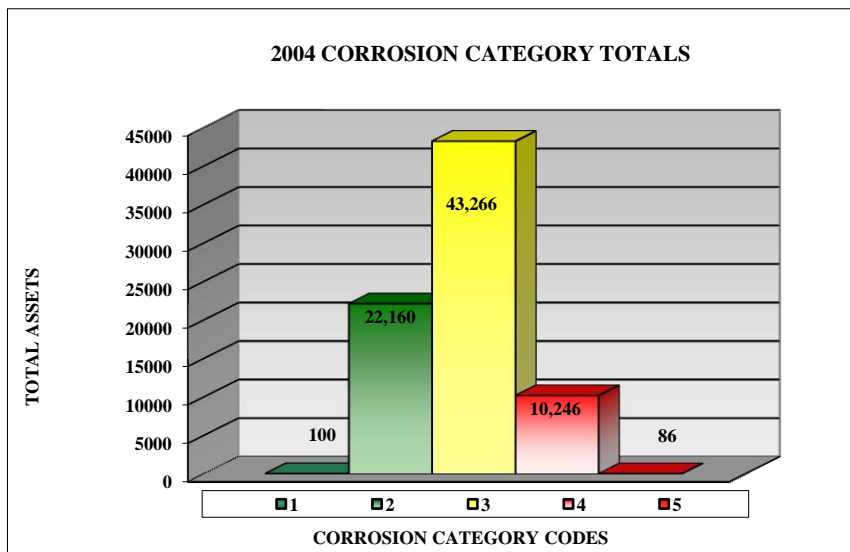
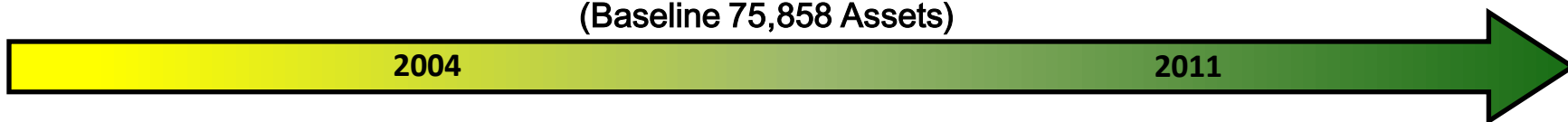


*Presented to:*  
*DoD Maintenance Corrosion Project Panel*  
*November 2011*



## Marine Corps Ground Combat Equipment Corrosion Category Improvement

(Baseline 75,858 Assets)



- OSD Corrosion Projects provide resources and support to the warfighter previously not available
- With improvements in technology and materials Total Ownership Costs are reduced
- OSD Corrosion Projects that have provided long term benefits to USMC :



## Corrosion Service Teams



**Program Description.** CST(s) designed to provide organizational level maintenance in accordance with TM 4795-OR/1A through the completion of surface preparation and touch-up paint procedures; the application of corrosion prevention compounds (CPCs); and the collection of corrosion assessments.

Considered a 'Best Practice' by Defense Science Board 2005

OSD Corrosion Project 2005 – Fully implemented

**ROI: 16:1**

CST Service Cost: \$250.00

CCC 3 Repair Cost: \$4,000.00

CCC 4 Repair Cost: \$5,000.00

**Benefits-**

- Increased Equipment Readiness/Availability
- Increased Equipment Service Life
- Reduced Ownership/ Rehabilitation Costs
- Means of implementing standardized corrosion control practices and procedures across USMC
- Repeatable process used on all equipment
- Means of improving corrosion prevention processes and procedures
- Means to incorporate best practices and best value products
- Reduction in unit man-hours required to perform corrosion related tasks



## Corrosion Prevention Products & Materials Program (CPPMP)



**Program Description.** Developed in 2005, a standard process of testing and authorizing products for use on USMC Ground Combat and Combat Support Equipment which continually compares currently authorized products with new emerging technologies.

New technologies and Materials submitted as OSD Corrosion Project – enables sharing across the DoD and improves USMC equipment.



### **Benefits:**

- Centralized Program--support to the Marine
- Allows testing of new technologies
- Approved use of Bed Liner Jan 2009
- Approved use of Zinc-Rich Coatings Nov 2007
- Touch-Up Paint Kits – 2005
- Undercoating products - 2011
- Centralized Program Management at the CPAC Program Office



## Automated Washdown Systems



**Program Description.** The automated wash down systems provide a fast and efficient method to perform maintenance wash downs that significantly reduce time and cost while enhancing corrosion control on equipment.

Annual sustainment costs \$18K

OSD supported project completed 2005/2006

- Presently evaluating new sites for 2012

### ROI 4:1 Automated vs. Manual

Throughput Per Hour		1	Vehicle/Hour
Number of Personnel		3	Personnel
Labor Rate of Personnel	\$	20	Per Hour
Cost of Washdown for Each Vehicle (other than labor cost)	\$	5	Per Vehicle
Cost per Vehicle Washed	\$	65	Per Vehicle

Throughput Per Hour		8	Vehicle/Hour
Number of Personnel		3	Personnel
Labor Rate of Personnel	\$	20	Per Hour
Cost of Washdown for Each Vehicle (other than labor)	\$	8	Per Vehicle
Cost per Vehicle Washed	\$	16	Per Vehicle

### Benefits:

- Enhanced corrosion control and protection
- Increased effectiveness and standardization of wash down procedures
- Compliance with environmental laws and regulations through wash water recycling
- Increased time for training
- Improved QOL for Marines
- Reduction in man-hour requirements
- Improvements in care and maintenance of equipment



## Controlled Humidity Protection



**Program Description:** Develop an Administrative Storage Program (ASP) that will extend the life of Tactical Ground and Ground Support Equipment, while reducing maintenance requirements and associated costs.

Open air facilities and warehouses in an uncontrolled environment deteriorate ground combat equipment, lengthen the restoration time for combat readiness and increases maintenance related costs.

**ROI:** 9:1 minimum reported by GOA

**Benefits:**

- Increased Operational Availability of assets
- Decrease in associated maintenance costs
- Increased self-life
- Decreased intervals in calibration requirements
- Deferred maintenance authorized
- Ownership of Unit Commander
- Total Ownership Cost reductions



## Summary

- USMC CPAC Program is a comprehensive program that covers all aspects over the life cycle including:
  - Preservation (CST)
  - Repair (CRF)
  - Protection (CHP & VCI Covers)
  - New Acquisition (Contracts & Testing)
  - Research and Development (Materials & Processes)
  - Technical guidance/support to Acquisition Program Offices on corrosion control early in the acquisition cycle to maximize cost savings
  - Development of Corrosion Prevention Advisory Team (CPAT) Charter / act as technical lead
  - Development of Government Corrosion Prevention Control Plan (CPCP)
  - Production audits of vendor facilities
- The CPAC Program has improved the readiness of USMC equipment and significantly reduced the cost of corrosion

***We are making a difference***