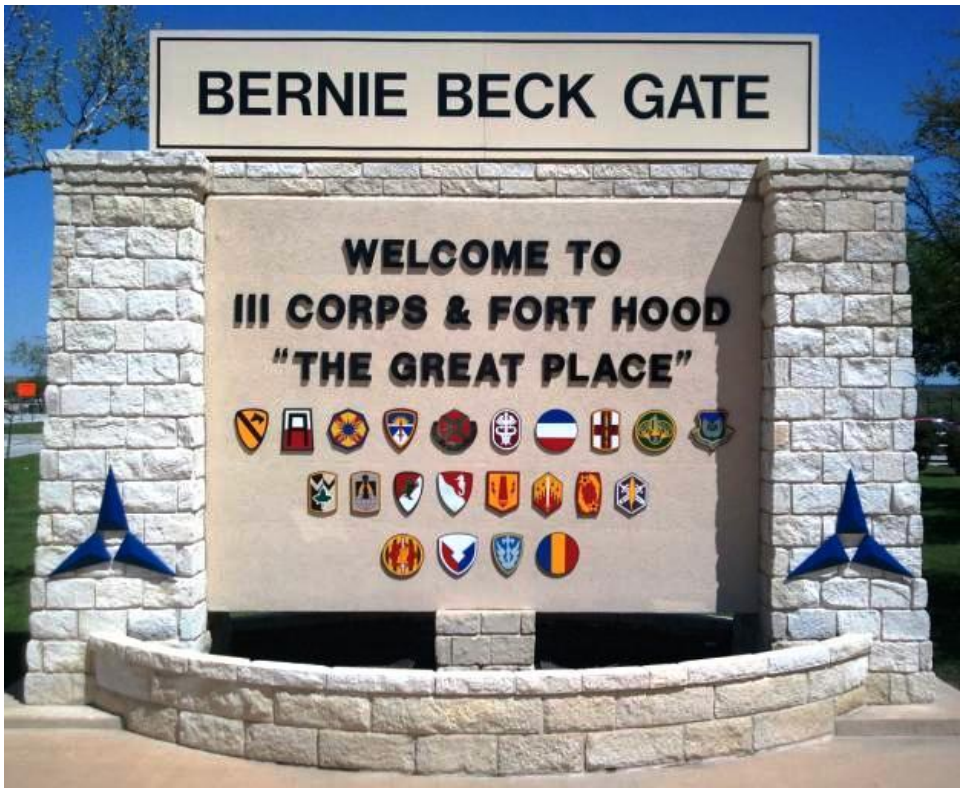
Fort Hood Second Annual
Net Zero Waste Conference



Outcomes for the Day

- Review NZW Background and 2012 Progress
- Share Success Stories and Best Practices
- Assess Opportunities for Improvement
- Develop Strategies to Reach Net Zero Waste
- Out-brief 2013 Objectives to CG and GC
- Focus on what the individual Unit or Organization can accomplish in their footprint

Agenda

1000 Introductions and NZW Overview
1020 City of Austin
1030 GC Welcoming remarks
1040 CG Opening remarks

Short Break

1100 NZW Progress Report
1140 1st Cavalry Division
1150 Division West
1200 13th Sustainment Command
1210 Operational Test Command

1220-1320 - Lunch

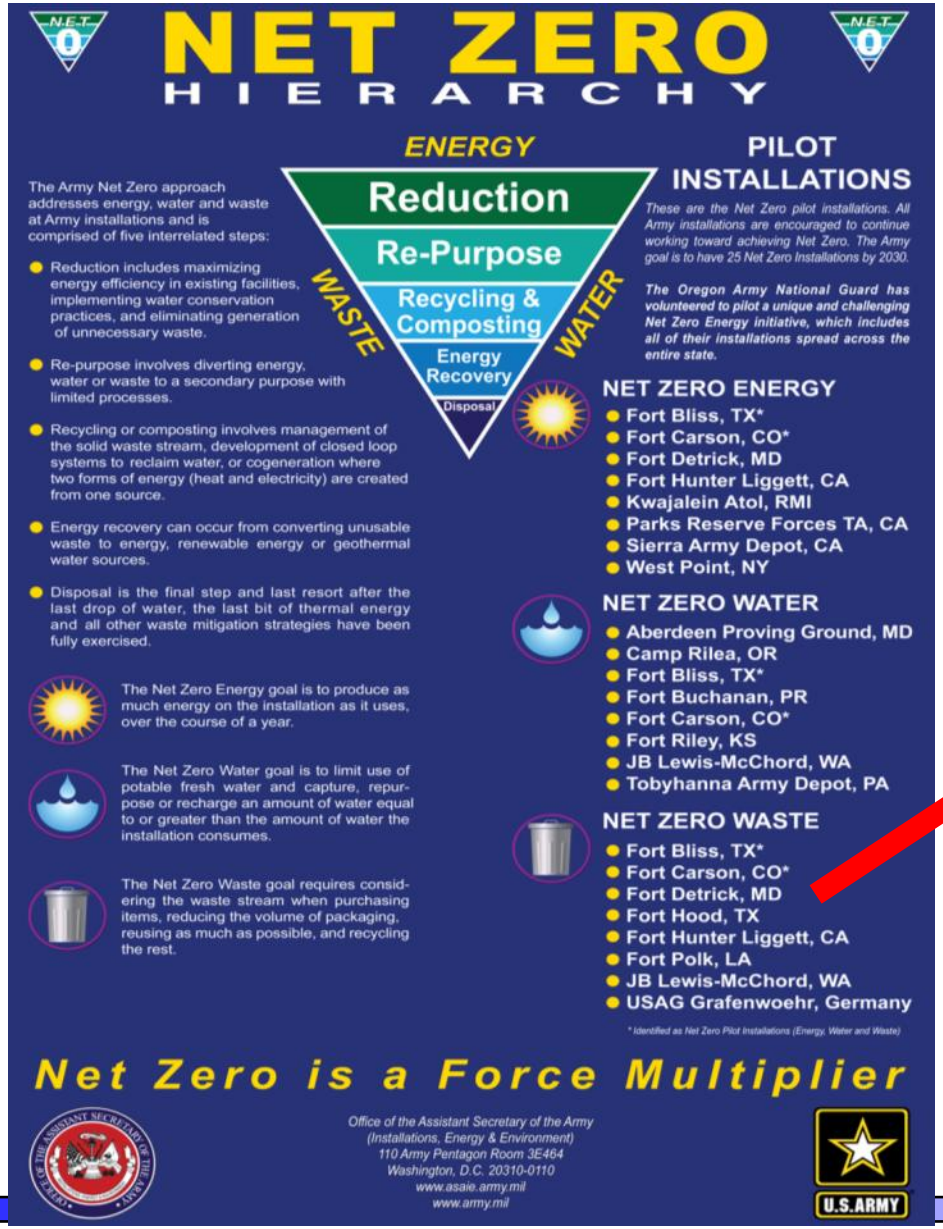
1330 Recycle 101
1410 Unit Success Story
1420 DECA Success Story
1430 Workgroup Objective Exercise

Short Break

1500 Workgroup Break-out rooms
1630 Finish Out-brief slides
1700 Out-brief to CG and GC
1740 CG and GC closing remarks

Net Zero Waste Background

The Army's Net Zero Program



Net Zero Installation Initiative

Definition

A Net Zero Waste Installation is an installation that reduces, reuses, and recovers waste streams, converting them to resource values with zero landfill over the course of a year.

Net Zero Waste Strategy

Goal: Change culture at Fort Hood to achieve NZW

Key Tasks:

- Reduce amount of solid waste generated
- Re-purpose whenever possible
- Expand Recycle; increase diversion rate
- Use Waste to Energy to eliminate remaining waste
- Identify alternative disposal methods
- Employ aggressive strategic communications campaign

End State: Ft Hood Community has embraced NZW and is actively supporting the effort

Net Zero Waste Workgroups

- Kick-off meeting Dec 8th with over 100 people in attendance

- Four NZW Workgroups met monthly and reported progress quarterly at the EQCC to Fort Hood leadership.

- Each group develop project ideas, objectives, and targets

AUSTIN RESOURCE RECOVERY

Partnering with the City of Austin on Zero Waste efforts

Net Zero Waste Workgroups

Goal 1: REDUCTION: Reduce the amount of solid waste generated on Fort Hood	Goal 2: REPURPOSE: Repurpose whenever possible	Goal 3: RECYCLE & COMPOST: Expand recycling and increase diversion rate	Goal 4: MARKETING & OUTREACH: Employ aggressive strategic communications campaign
Goal Leader: DHR	**Goal Leader: PAIO**	**Goal Leader: DPTMS**	**Goal Leader: DFMWR**
Mike Engen, DHR (Goal Leader)	Jim Bondi, PAIO (Goal Leader)	Lee Stockland, DPTMS (Goal Leader)	Nick Johnsen, DFMWR (Goal Leader)
Wade Utley (Team Leader)	Shannon Sauter (Team Leader)	MAJ Shupe (Team Leader)	Tracy Thomas (Team Leader)

NZW Execution Timeline

Plan & Organize	Initial Implementation	Assess & Adjust	Full Implementation

	PHASE I 2011-2012	PHASE II 2012-2015	PHASE III 2015-2018	PHASE IV 2018-2020
Diversion Goal:	**45%**	**60%**	**75%**	**85%**
Reduce	• Mass balance survey • Contract language • Stakeholder meetings	• Performance objectives • Supply discipline • Reusable Tote Bags	• Reduce unit purchases • Life-Cycle standard • Vendor support	• 100% C&D Diversion
Re-Purpose	• Partner with charities • Renovate buildings • Compostable products	• ReStore Program • Improve DLADS • Installation garage sales	• Re-use online program • Deconstruction Design • Buy back programs	• 100% Electronics Diversion
Recycle/ Compost	• ORCA machines • Expand recycle • Regional recycling • Recycle Councils	• Expand recycle center • Food waste compost • Metrics to measure • Award Program	• Recycle Automation • Pay as you Throw • Single stream recycle • IMPACT credit card	• ~80% Recycle MSW

Marketing & Outreach

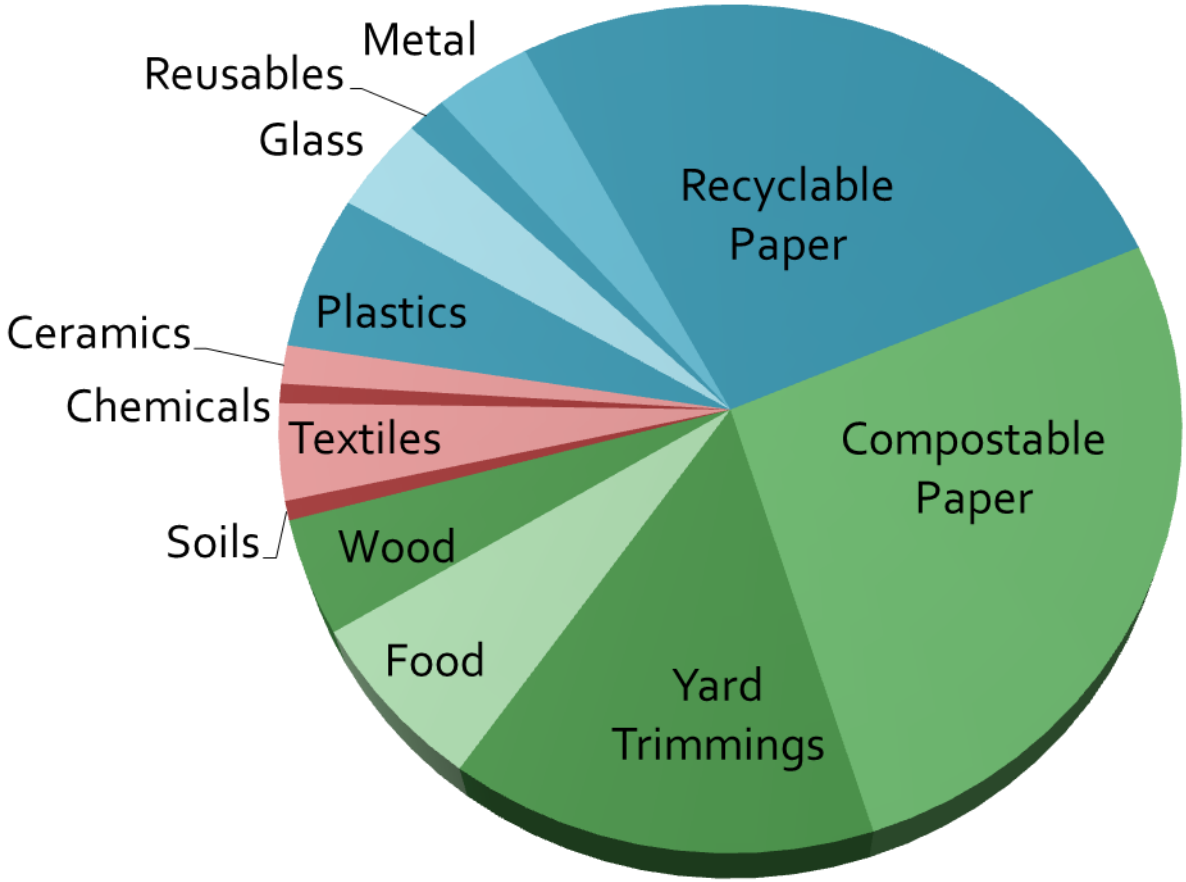
City of Austin

Road to Zero Waste

February 4, 2013

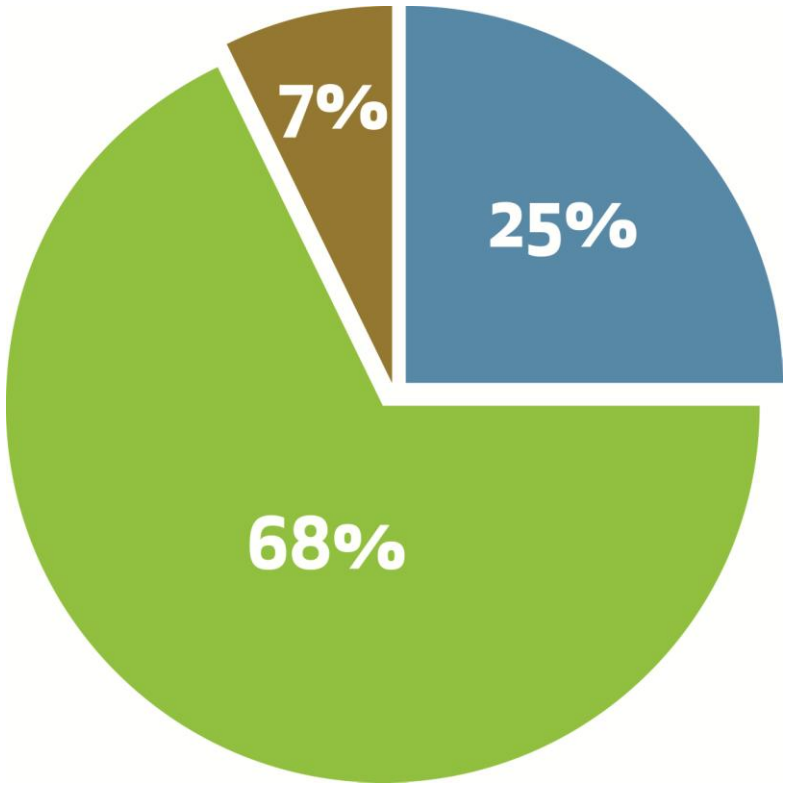
Woody Raine, Waste Diversion Planner
Ron Romero, Division Manager, Collection Services
Austin Resource Recovery | City of Austin
www.AustinRecycles.com

Discards



Based on information from CAPCOG, Regional Solid Waste Management Plan 2002

Whose business is picking up



Hauler	Tons/yr	%
City of Austin	360,500	25%
Private Sector	976,100	68%
Self hauled	108,700	7%
Total	1,445,300	100%

Austin Resource Recovery

Master Plan Keystone Initiatives

1. Efficient Materials Management
2. Expanded Recycling Opportunities
3. Organics Collection & Composting
4. Economic Development Growth

Efficient Materials Management

Several Austin-area Single-Stream MRFs

- Customer: Fewer bins inside & out
- Hauler: streamlined collection
- Economies of scale
- “Right-size” trash service to reduce cost

Efficient Materials Management

Residential Curbside

- 11/2012: Added aluminum foil & pie pans
- What's next?
  - Beverage cartons?
  - Other plastics?
  - Food and other organics

New Cart Sizes and Rates

FY13 Residential Rates	Per Gallon Trash Cart	Monthly Trash	Monthly Recycling	Monthly Organics	Total Monthly Fee	Customer Base
Trash Cart Size						
21 gallon	$0.16 x 21	$3.35	$4.75	$4.75	$12.85	5%
32 gallon	$0.16 x 32	$5.10	$4.75	$4.75	$14.60	20%
64 gallon	$0.16 x 64	$10.25	$4.75	$4.75	$19.75	65%
96 gallon	$0.25 x 96	$24.00	$4.75	$4.75	$33.50	10%

Bundled Rate for all curbside services includes trash, recycling, and organics collection, large brush and bulk collection services.

Efficient Materials Management

Single-Use Carryout Bags

Approximately **17,500 affected businesses** in Austin

After March 1, businesses will be able to offer these bags with handles:

1. **Plastic**, 4mil thick or greater, with handles
2. **Paper**, made of 40% recycled content, with handles
3. **Reusable** bag, made of cloth or other fabric, with handles

Single-Use Carryout Bags

Exemptions

- Laundry, newspaper, and waste bags
- Pharmaceutical and veterinarian bags
- Restaurant bags
- Non-Checkout Bags
- Charity Non-Profits

Expanded Recycling Opportunities

Downtown Trash & Recycling

- **Single-Stream Alley Dumpsters**

Universal Recycling Ordinance

- **Commercial & multifamily recycling**

Universal Recycling Ordinance

URO-Affected Properties

- **Multifamily complexes**
- **Commercial office buildings**
- **Institutions**
  - Private schools
  - Medical facilities
  - Religious buildings
- **Other property types: beginning 2014**

URO-Affected Properties

Effective Date: October 1	Multifamily (Dwelling Units)	Offices, Institutions (Square Feet)
2012	>75	>100,000
2013	>50	>75,000
2014	>25	>50,000
2015	-	>25,000

Universal Recycling Ordinance

Basic Requirements

1. 5 materials
2. Convenience
3. Awareness (education & signage)
4. Minimum Capacity
5. Report

URO Minimum Materials

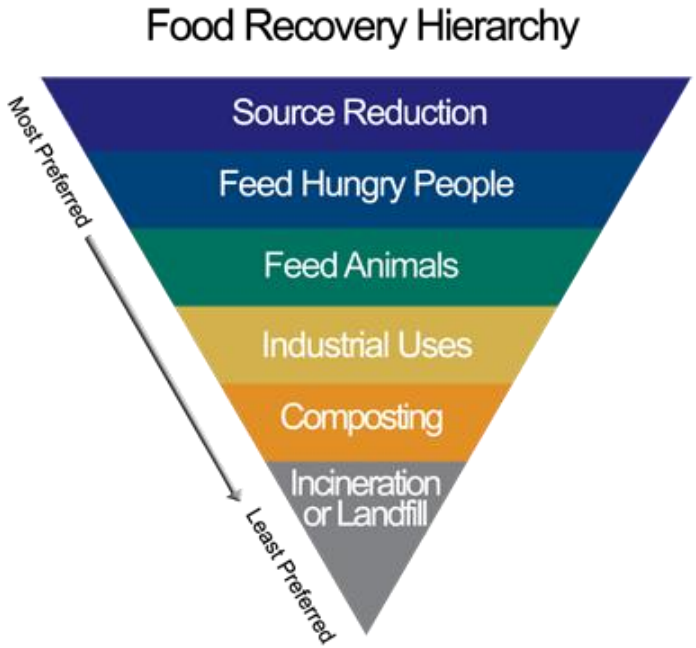
URO-Affected Properties, Phase 2

Effective Date: October 1	Multifamily Properties (dwelling units)	Commercial Properties (occupied square feet)		
		Offices, Institutions	Food Service, Retail, Manufacturing, Hotel/Hospitality, and Industrial	Compostable Materials (next section) from Food Service Businesses**
2012	>75*	>100,000*		
2013	>50*	>75,000*		
2014	>25*	>50,000*	>50,000	
2015	>10	>25,000*	>25,000	
2016	All	>5,000	>5,000	>5,000
2017		All	All	All

*URO Phase 1 affected properties approved by Austin City Council

Compostable Materials

Encourage adherence to the EPA's hierarchy of beneficial use of scrap food



Austin Pilot
Restaurant Recycling
& Composting Project
RECYCLE
COMPOST
LANDFILL

THE COUNTY LINE
BAR-B-Q
WE'VE PARTNERED WITH CITY OF AUSTIN
IN A RECYCLING/COMPOSTING PILOT PROGRAM
TO CREATE ZERO WASTE IN AUSTIN
COMPOST ONLY
BRUTE
BRUTE

Organics Collection & Composting

Organics Collection & Composting

Food Scraps

Food-Soiled Paper

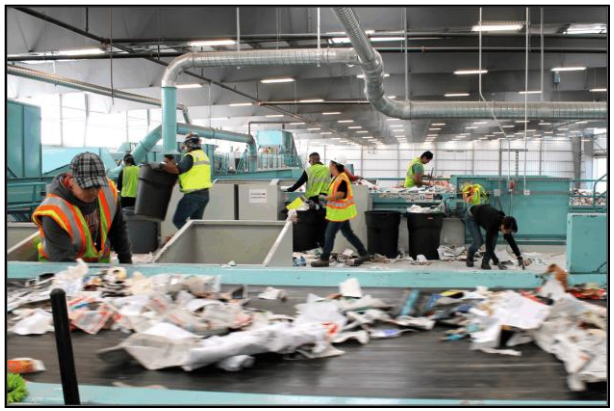
If it Grows, it Goes!

Yard Trimmings

Other

Economic Development

- **Economic Development Liaison – January 2013**
- **1,000 to 5,000 new local green jobs**



AUSTIN RESOURCE RECOVERY
A CITY OF AUSTIN SERVICE

Opening Remarks

10 Minute Break

- **Refreshments in back room**
- **Visit booths**
- **Restrooms around the corner**

FY12 NZW Progress Report

Mr Brian Dosa – DPW Director

Reduce Workgroup

***Reduce** the amount of solid waste generated on Fort Hood*

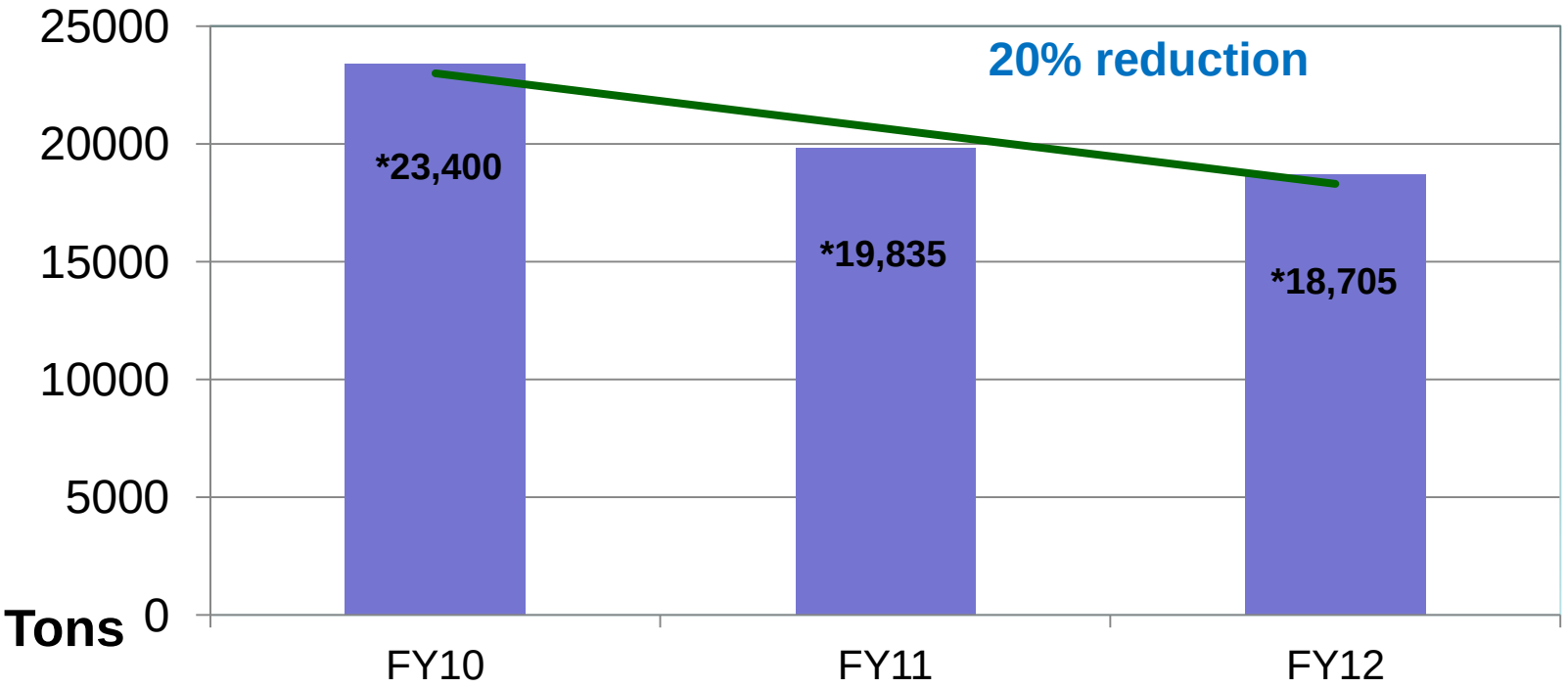
2012 Accomplishments:

- Material flow analysis completed by DPW
- Waste Characterization revealed that **48%** of our waste is recyclable material
- III Corps and Fort Hood NZW OPORD clause
- Garrison OPORD procedures to reduce printed documents (Community Services Council)
- Junk mail opt out and education efforts
- Digital phone books and electronic signatures
- Net Zero Waste Garrison Events

Got Junk Mail?

Its Time to "Opt Out"

Waste in the Landfill



** Does not include C&D*

Highlights from FY11 to FY12:

- Reduced 1,130 tons in the landfill
- Recycled Cardboard up 352 tons
- Recycled Paper up 227 tons
- Recycled Plastic up 143 tons

Repurpose Workgroup

Repurpose whenever possible

2012 Accomplishments:

- DPW redistributed over 2,000 furniture items in WWII buildings during FY12 to various military units
- FHFH conducted 2 installation-wide “yard sales” and donated a total of 6 tons of unsold items to local charities
- CU Yard repurposed over $174,000 of product when the class III(P) warehouse closed.

Recycle & Compost Workgroup

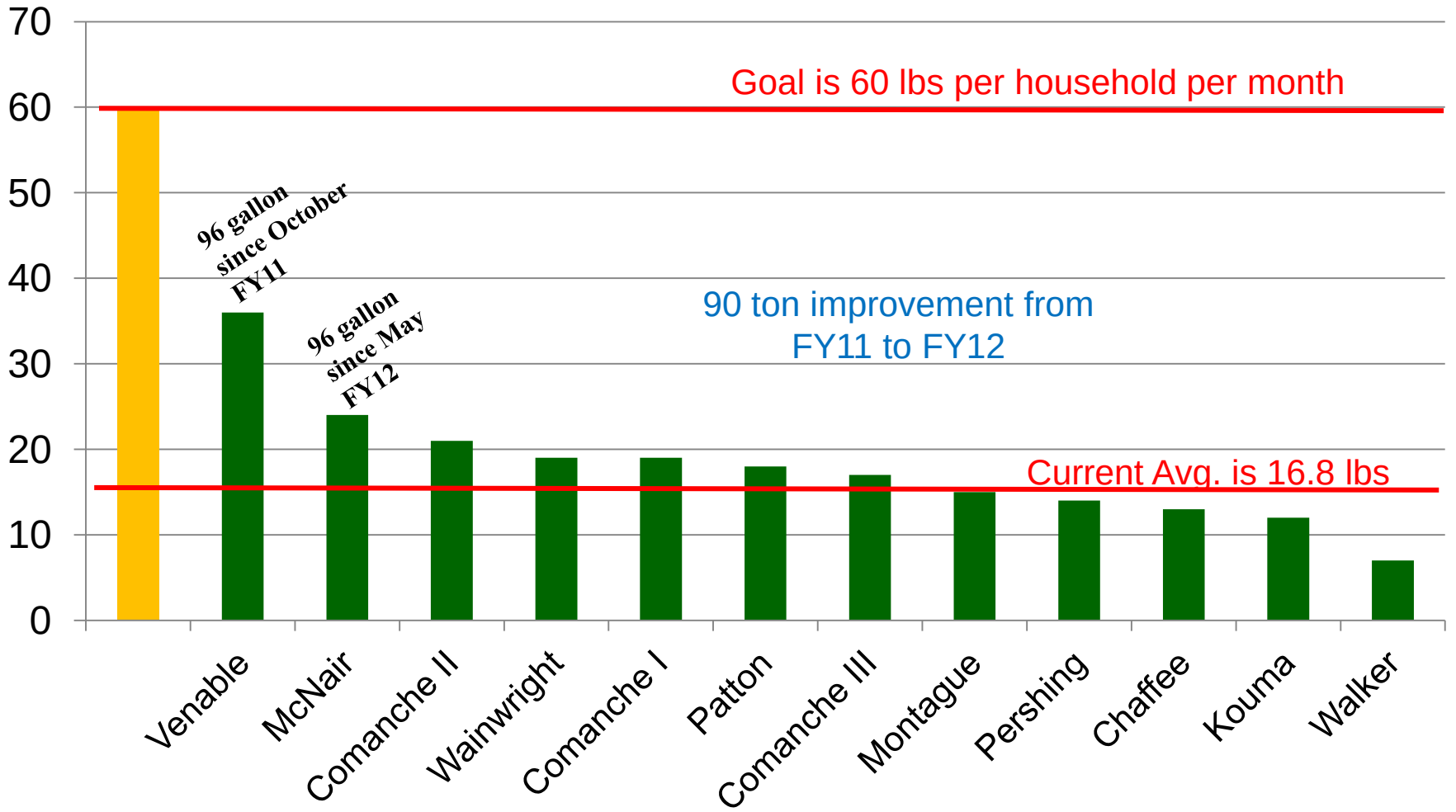
Expand **recycling/composting** and increase diversion rate

2012 Accomplishments:

- Single Stream 96 gal recycle containers at all Family Housing Villages
- Recycle Center now accepts Plastics #1-7 and increased glass drop off locations
- Established Recycle Coordinators and Recycle Councils at the Company/Branch level
- Hood Hero Recycle Award Program
- Conducted Site Assistance Visits
- Increased number of indoor and outdoor recycle containers around post (AAFES, FHFH, etc.)

Fort Hood Family Housing Recycle Statistics

Monthly Average Pounds Per Home in FY12



All villages will receive 96 gallon single stream recycle containers

Fort Hood Family Housing Recycling

Place ONLY Recyclable Items In This Container.

Paper

Newspapers

Magazines

Office Paper

Junk Mail

Pizza Boxes

Cardboard

Paperboard

Paper Bags

Plastic

Water and Soda Bottles (Plastic #1)

Milk Jugs (Plastic #2)

1 through 7
PETE OTHER
(numbers found on bottom of containers)

Detergent Bottles (Plastic #2)

Plastic Tubs and Jars (Plastic #3- #7)

Glass & Metal

Glass Bottles (Green, Clear, & Brown)

Glass Jars

Aluminum Cans

Tin and Steel Cans

YES

FOR QUESTIONS ABOUT SINGLE - STREAM RECYCLING CALL:
INLAND SERVICES - 254-539-4697

NET ZERO WASTE

DO NOT PLACE THESE ITEMS IN THIS CONTAINER.

No Trash
No Plastic Bags
No Styrofoam
Pyrex
Wax Coated Items
Ceramics
Food Scraps
Yard Waste or Leaves
Garden Hoses
Textiles or Used Clothing
Light Bulbs
Electronics

NO

Container Distribution Schedule

HOUSING VILLAGE	UNITS	18 GAL BIN SET OUT AT CURB	INLAND EXCHANGE	FIRST PICK-UP	1ST BI-WEEKLY PICK-UP	2ND BI-WEEKLY PICK-UP	
PERSHING	698	2-Feb-13	2-Feb-13	7-Feb-13	7-Mar-13	21-Mar-13	WEEK 1
PATTON	298	2-Feb-13	2-Feb-13	8-Feb-13	8-Mar-13	22-Mar-13	
WAINWRIGHT	310	2-Feb-13	2-Feb-13	8-Feb-13	8-Mar-13	22-Mar-13	
MONTAGUE	653	3-Feb-13	3-Feb-13	5-Feb-13	5-Mar-13	19-Mar-13	
COMANCHE II	728	4-Feb-13	4-Feb-13	6-Feb-13	6-Mar-13	20-Mar-13	
VENABLE (LABEL)	200	COMPLETED	N/A	7-Feb-13	7-Mar-13	21-Mar-13	
McNAIR (LABEL)	272	LABEL-1 FEB	N/A	8-Feb-13	8-Mar-13	22-Mar-13	
COMMANCHE III	974	9-Feb-13	9-Feb-13	12-Feb-13	12-Mar-13	26-Mar-13	WEEK 2
COMANCHE IIIC	324	10-Feb-13	10-Feb-13	13-Feb-13	13-Mar-13	27-Mar-13	
KOUMA	517	10-Feb-13	10-Feb-13	14-Feb-13	14-Mar-13	28-Mar-13	
COMANCHE I	262	11-Feb-13	11-Feb-13	14-Feb-13	14-Mar-13	28-Mar-13	
CHAFFEE	674	23-Mar-13	23-Mar-13	29-Mar-13	n/a	12-Apr-13	
WALKER	518	24-Mar-13	24-Mar-13	27-Mar-13	n/a	10-Apr-13	

FHFH will continue with weekly recycle pick up until March 2013. In addition, the delay in Chaffee and Walker are due to the signing of the contract.

Post-wide Recycling

The rest of Fort Hood will continue to place Recyclables into the outdoor blue containers

Cardboard Paper Metal Cans & Plastic

Your organization can get recycle containers at the Recycle Center or purchase them at the HAZMART Building 4406 (254) 532-9861

FRAGO 4 to Operation Order PW 11-11-800,

Net Zero Waste Workgroup, dated 18 Oct 12.

- Establish Recycle Councils and Recycle Coordinators down to Company/Directorate/Office level to address NZW strategies

- Focus on how to Reduce, Reuse, Recycle, and Educate

- Attend Quarterly Workgroup Meetings and EQCC Meetings to report progress towards goals

Recycle Coordinators

Establish Recycle Coordinators at Company/Directorate/Office level

- ECO will no longer be assigned as the Recycle Coordinator (RCs)
- The ECO will work closely with the RCs
- RCs are the first line educators and Commander/Director's tool for implementing Net Zero Waste Strategies
- RCs will organize the Councils and report obstacles to Commander

Recycle Councils

Establish Recycle Councils at Company/Directorate/Office level

- Consist of at least one Recycle Coordinator and at least 4 council members
- Members are chosen for work ethic and drive
- Purpose is to increase awareness, overcome obstacles, share best practices, and teach others how to improve NZW strategies
- Incorporate Recycle Councils into Recycle SOPs

Marketing & Outreach

Employ aggressive strategic **communications** campaign

2012 Accomplishments:

- Developed a logo, slogan, video clips, brochures, website, news articles
- Social Media (Facebook and electronic signs)
- Continuously present NZW at various meetings and training events
- Developed the Net Zero Hero Mascot
- Distributed NZW Surveys and the majority of people are aware of NZW

Net Zero Hero

Net Zero Waste Website

www.hood.army.mil/netzero

Material Flow Analysis Results

Material Flow Survey:

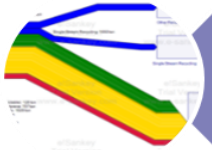
- Initial Data Collection: readily available data
- Installation Survey / Site Visits: obtain more data

Waste Characterization:

- Develop New Data
- Support Material Flow Survey

Material Flow Workbook:

- Compile and Analyze



Material Flow Diagrams:

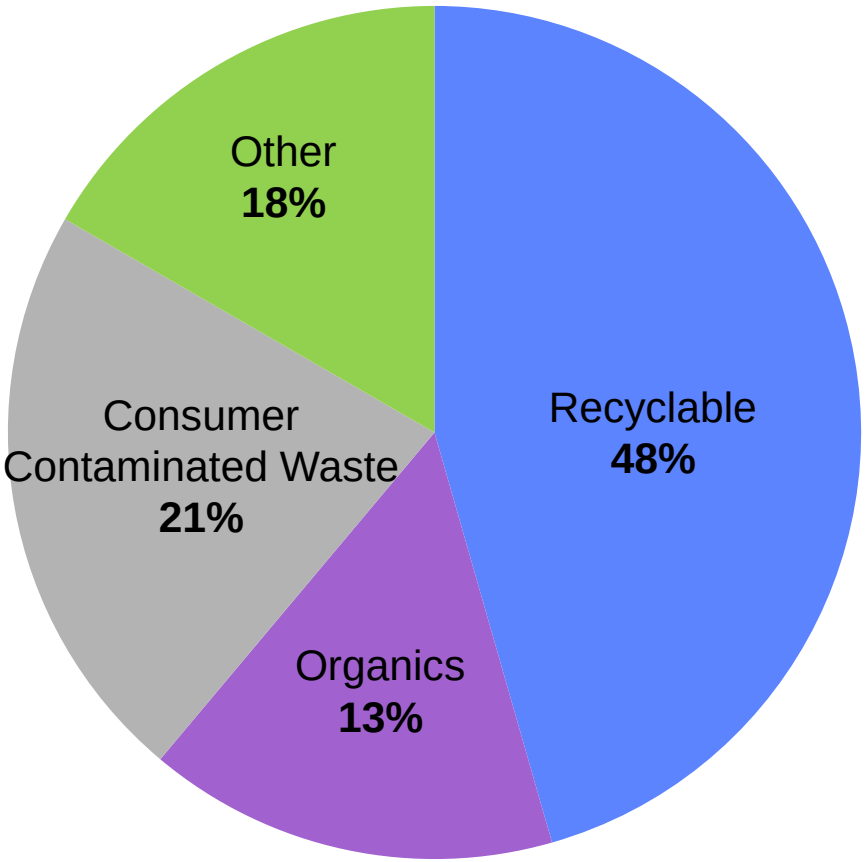
- Support Understanding

Technology / Opportunity Analysis:

- Analyze opportunities

Waste in the Landfill

Combined Residential & Commercial Waste in the Landfill by Weight from Material Flow Analysis Study



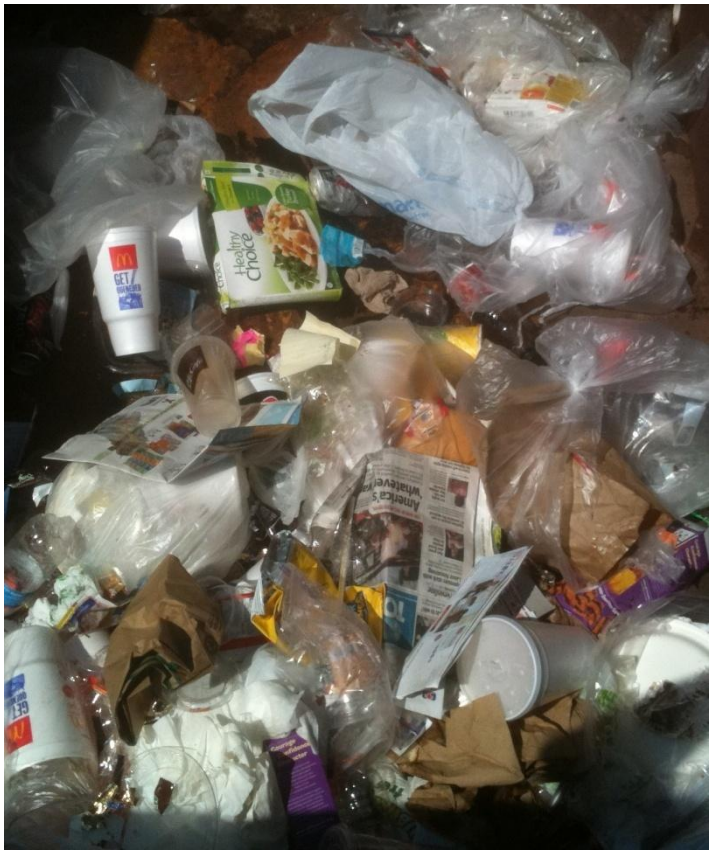
Recyclable Materials in the Fort Hood Landfill

Recyclables found in the Landfill
Glass (Amber, Brown, Clear, Mixed Glass)
Metals (Aluminum, Copper, Steel)
Paper (Corrugated Cardboard, Mixed Office Paper, Newsprint, Magazines, Mail)
Plastic (#1 - #7, Packaging)
Consumer Contaminated Waste - CCW (Cardboard & Paperboard, Metals)

We could recycle 48% of the waste going to the landfill (8,978 tons in FY12)

What is CCW?

It's all your food and beverage related materials and packaging

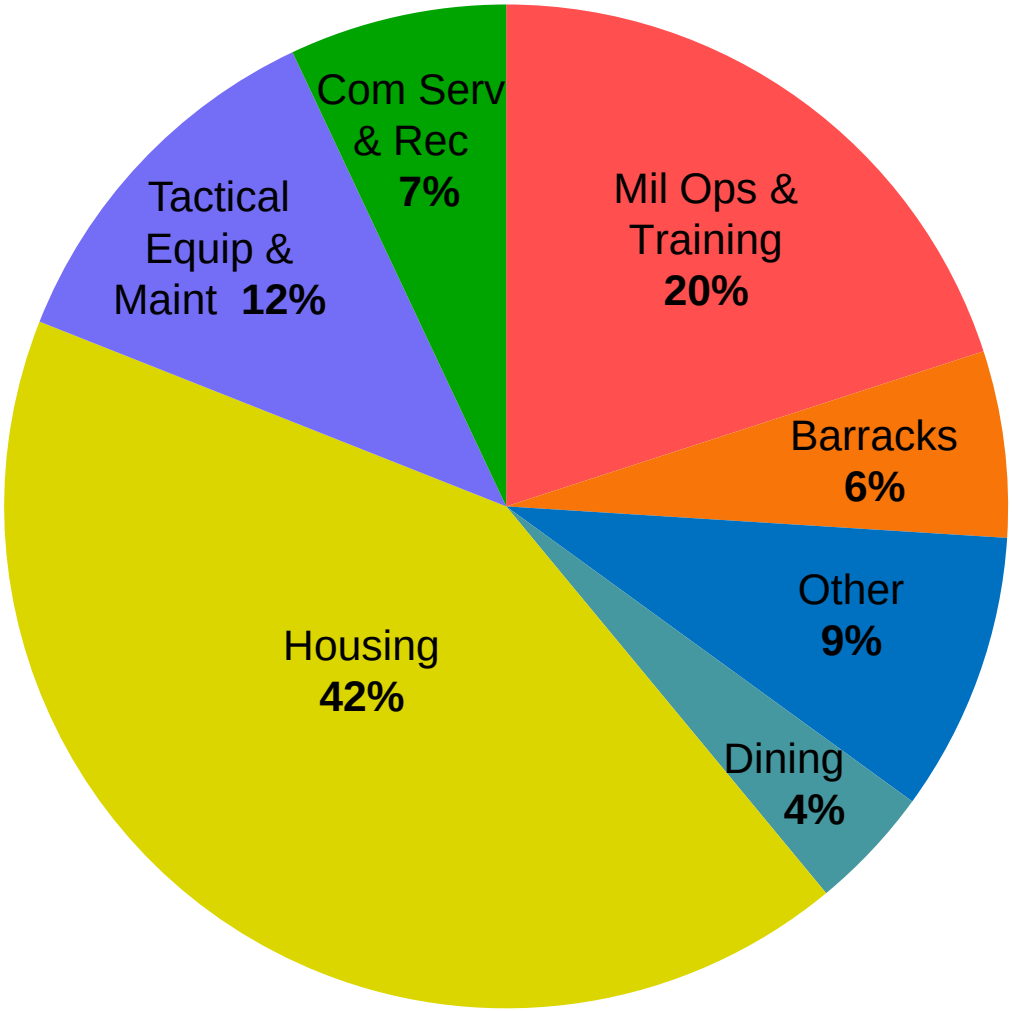


Consumer Contaminated Waste

CCW Categories	Percent by Weight	Materials
Metals and Recyclable Paper	32.5%	Cardboard, paperboard, aluminum and food cans
Waste paper	27.5%	Hand towels, napkins, food packaging
Organics	10%	Pre- & post-consumer food
Plastics and Other	30%	Polystyrene, bags, packaging, utensils; glass, personal hygiene items, etc…

Ask for less packaging when ordering food and bring your own drink container

FY12 Waste in the Landfill by Activity Group



- Mil Ops & Training - 3741 tons
- Barracks - 1122 tons
- Other - 1684 tons
  (Retail, Admin, Hospital)
- Dining - 748 tons
- Housing - 7856 tons
- Tactical Equip & Maint - 2245 tons
- Com Services & Rec - 1309 tons

Net Zero Waste Diversion Glide Path

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Diversion Goal										
40%	42%	45%	50%	55%	60%	65%	70%	75%	80%	85%
Actual Diversion										
42%	39%	44%								

Diversion efforts include

Recycling

DLADS turn-ins

Reuse

Questions/Discussion

NET ZERO WASTE 2020 Fort Hood

2020 "Perfect Vision, Perfect Mission"

Net Zero Waste Project Officer: Jennifer Rawlings (254) 535-8557

1st Cavalry Division
Net Zero Waste Conference Progress Report

LTC John Kallo

Agenda

- **Discussion Points**
  - Reducing Efforts
  - Recycling Efforts
  - Repurposing Efforts
  - Lessoned Learned
  - Best Practices
  - 41st Fires Brigade Success Story

Net Zero FY12 Accomplishments Supporting NZW

Reduce:

- Division published a Net Zero SOP; adopted from 41st Fires Brigade's SOP
- Established and publicized Recycling Areas in the Division HQs
- **All staff sections place recyclables from office receptacles in large bins daily**
- Each HQs section has an assigned Recycling Coordinator
- **Encourage increased light discipline (i.e., turning lights off in areas not being used and leveraging ambient light to minimize lighting used)**

Net Zero FY12 Accomplishments Supporting NZW

Recycle

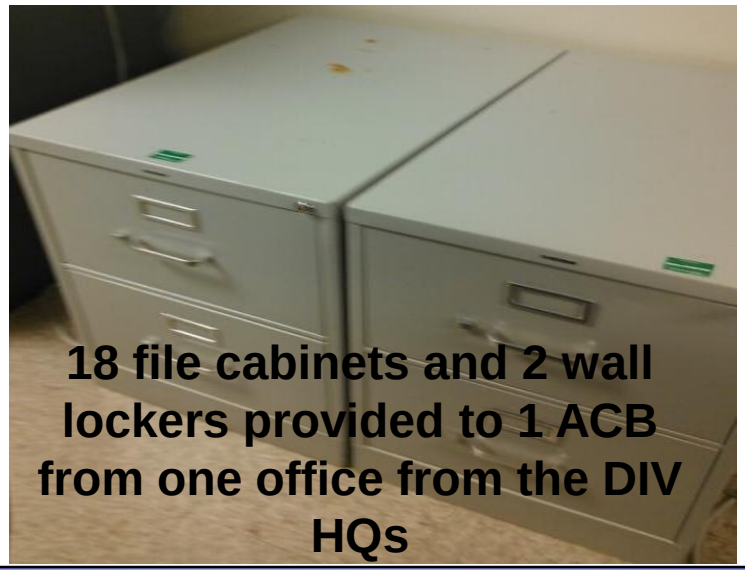
- Recycling containers placed at all entrances and major intersections of buildings
- Trash cans clearly labeled in offices
- **Division HQs and Special Projects Yard received 100% rating for recycling during their DEC 12 Environmental Inspection**
- **Section Recycle Coordinators responsible for identifying recyclable materials placed into trash receptacles and correcting the problem**

Recycling containers located at one of the entrances in the DIV HQs

Net Zero FY12 Accomplishments Supporting NZW

Repurpose:

- Within 1CD, the 1st Air Cavalry Brigade received excess furniture identified within the Division HQs to furnish unit's new footprint
- All Brigades were directed to coordinate for used furniture through DPW instead of ordering new items
- **Conducted monthly scrubs of on hand property to identify excess property for redistribution through Division**



Lessons Learned

Lessons learned from the NZW Site Assistance Visits:

- Until Soldier discipline and habits improve, units need to conduct deliberate checks of motor pool and barracks areas dumpsters
- **Offices did not have separate receptacles for trash and recyclables**
- Looking at increasing recycling containers within the barracks in order to reduce the mix of trash and recyclables

Best Practices

Innovative strategies to increase NZW awareness and participation:

- Conducting Net Zero Waste training
- **Disseminate information obtained through attending the monthly Net Zero meetings in an effort to improve trends**
- **Developing incentive program to encourage increased recycling; initial plan is to present Quarterly Battalion-Level awards for individual Soldiers and Company-sized units to recognize their recycling, reduction and repurposing efforts**
- **Appointed Recycling Coordinators down to the Company/Battery/Troop level**

41st Fires Brigade

- Developed Recycling SOP adopted by 1CD and III Corps
- Electricity bill reviewed monthly
  - Encourage lights out in areas not in use
- Awarded NetZero 2020 Most Innovative Unit Award 2QTRFY12 and 3QTRFY12
- Awarded NetZero 2020 Most Recycled Housing Area (Chaffee Village) 4QTRFY12

DIVISION WEST NET ZERO WASTE PROGRAM FORT HOOD, TX

COL Tobin Green

GOALS & EXPECTATIONS

Anticipated Recycling Savings:

•$696,000 potential annual cost savings

Fort Hood Recycling Center

100% Compliance:

Senior Leader Mandate

↓

Changes in Routine

↓

Behavior Modification

↓

Norm = Recycle Mentality

Educate and Indoctrinate:

17,000+ Soldiers will mob/demob at North Fort Hood in FY13. This is an opportunity to educate and indoctrinate them to NET ZERO.

DIVISION WEST WAY AHEAD

Document Shredder output

Optimize Environmental and Waste Management Resources

Ladman System Weight Truck measures waste produced by building
Fort Hood Document Shredder service
Product disposal
Education—Fort Hood Recycling Center leader site visits

Unit ID on Environmental and Recycle Waste Containers

Ownership creates pride. Pride ensures peak performance

Corrective Action Program

Escalating scale—first offense, second offense, etc
By echelon—individual, company, battalion, brigade

Increase Recyclables by 20% in FY 13

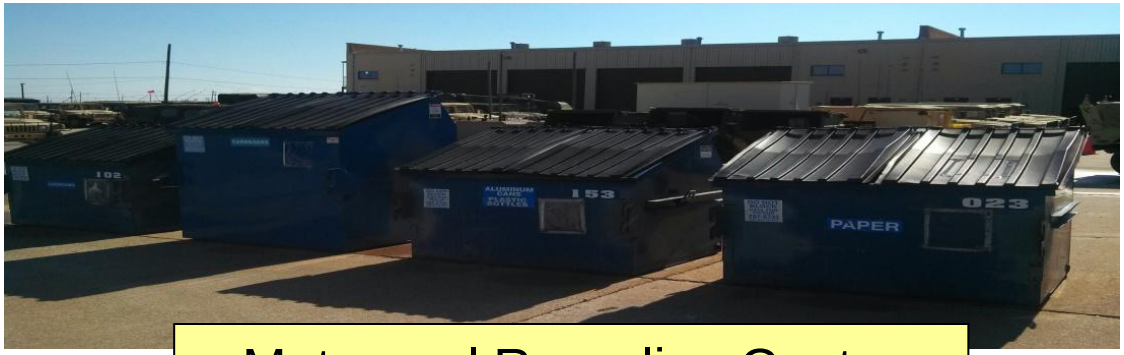
BRIGADE ACCOMPLISHMENTS

120th IN BDE NET ZERO
Review and Accomplishments

Brigade Objective
Create a culture which reenergizes recycling and raises awareness about sustaining and reusing limited resources

BDE Implementation Steps
- Educate Soldiers on the Brigade Program
- Acquire recyclable material containers for workplaces
- 70% reduction in trash cans throughout Brigade AO, forcing Soldiers to make a choice at the recycle center.
- Establish program in Division West Motorpool, BLDG 410, and North Fort Hood.

Results
Passed ALL Environmental Compliance inspections



Motorpool Recycling Center

166th AV BDE NET ZERO
Review and Accomplishments

Program Standards & Enforcement:

- 166 AV BDE Net Zero Waste Program established across the brigade, spanning three separate duty locations (FT Hood, TX; Des Moines, IA; St Louis, MO)
- 14 Recycling locations (example below) at every building/HQ locations
- Section NCOIC responsible to ensure program enforcement; weekly inspections by the Program Lead Officer (CW3 Vino)
- Recyclable and HAZMAT are closely monitored and sent to recycling stations to ensure proper disposal.
- Projects on Longhorn & Shorthorn Airstrips contribute to conservation of terrain & prevent erosion/fuel spill) on North Fort Hood
- Operation Clean Sweep ongoing to turn-in all excess items
- Spill kits and other emergency material are readily available for use in case of a spill. Items also used to train mobilizing aviation units. Areas covered include airstrip locations, maintenance areas, and both FARP locations.
- Unused materials are transferred to other training units

Results:

1. Recycled approximately 4500 pounds of lumber.
2. Recycled approximately 7500 pounds of scrap metal.
3. On average, recycled approximately 900 pounds of and plastic, cardboard and paper products
4. Turned in over 225 pieces of outdated, unused, and equipment to DRMO
5. Paved multiple taxiways/airstrip areas for spill prevention
6. Drainage repaired on roadways to airstrips to prevent erosion

479th FA BDE NET ZERO
Review and Accomplishments

Brigade Objectives

1. Ensure each office and battalion headquarters has and utilizes recycle bins.
2. Conduct training on NetZero vision and individual responsibilities.
3. Ensure 100% accountability of repair part recovery.
4. Enforce electrical conservation.
5. Focus office purchases on recyclable items.
6. Preservation of Live Fire Range ecosystems.

FY 12-13 Results

1. Over 70 recycle bins are throughout the brigade and battalion headquarters.
2. 479th FA BDE turned in approximately $28,500.00 in recoverable maintenance repair parts.
3. Over 1.5 STONs of material was recycled to date.
4. Electrical conservation is highly stressed from the brigade level down.
5. 75% of all office material utilized ordered is recyclable.
6. 479 FA BDE NetZero team conducts random checks throughout the week to ensure 100% compliance.

FY 13 + Goals

1. Emplace recycle bins on Life Fire Ranges, North Fort Hood class rooms, and Medical Training Site.
2. Reduce purchase/ acquisition of non-recyclable material to 10% by FY 15.
3. Continue to stress electrical conservation and incorporate low usage IT equipment.
4. Implement battalion level reward programs for compliance with Fort Hood NetZero policies.
5. Maximize PDF documentations while reducing printed products by 50% by FY 15.
6. Continued focus on Range Ecosystem Conservation.

COL Matthew Elledge matthew.g.elledge.mil@mail.mil 254-288-3451

NET 2020 • Fort Hood ZERO Waste

4TH SB Net Zero Waste Program

LTC Stephen Riley

4TH Sustainment Brigade Recycle Mission

Establish policies, procedures and instill III Corps NET ZERO 2020 Initiative in All 4TH SB operations IOT efficiently reduce solid waste material and increase overall mission readiness, while simultaneously increasing environmental local conservation.

Enthusiastically support III Corps Net Zero Waste Initiative

Net Zero Waste by 2020

FH REG. 420-6 and 4th Sustainment Brigade SOP
21 July 2012

Goal #1: Reduce

Reduce the amount of solid waste generated in all 4TH SB AO

2012 Accomplishments:

- Published Brigade Guidance with Mission Support Order (Wrangler Environmental And Recycling Round Up) and implemented BDE Standard Operating Procedures
- Established working groups down to the Company Level
- Requested external support from the Director of Public Works Environmental Division
- Educated Command Teams on the importance of the NET ZERO 2020 initiative

Goal #2: Repurpose

2012 Accomplishments:

- Redistributed unutilized furniture for maximum use and increased life expectancy
- Installed motion sensing lighting in office areas to conserve energy

Goal #3: Recycle

2012 Accomplishments:

- Provided easier recycling accessibility for all Soldiers residing in the barracks
- Encouraged maximum participation for both Soldiers and Family Members (Family Readiness Groups)
- Acquired and distributed additional recycling containers throughout the brigade footprint

Goal # 4: Marketing & Outreach

2012 Accomplishments:

- Published 4TH SB recycling labels for appropriate containers in all Areas of Operations
- Established Environmental Compliance Officers from Brigade to Battalion Levels
- Created Recycling Coordinators down to the Company Level
- Published NET ZERO goals and accomplishments in the brigade quarterly newsletter

Lessons learned from NZW/DPW Staff Assistance Visits:

- Ensure outside consolidated recycling bins are properly placed in order to promote accessibility
- Established centralized recycling areas in all office spaces
- Utilize SDO/SDNCOs and CQs to monitor adherence to recycling policies

CENTRALIZED RECYCLING STATIONS IN WORK AREAS

LABLE ALL NONRECYCLABLE CONTAINERS

CONTAINERIZED COLLECTION AREAS ARE EFFCIENTLY LOCATED

NET 2020 • Fort Hood ZERO Waste

REUSE
REDUCE
RECYCLE

USAOTC NZW Program

COL Jeffery Harris

USAOTC Recycle Mission

Reduce the amount of material sent to the landfill,
Support Environmental stewardship on and off Fort Hood
SUPPORT NET ZERO FOR FORT HOOD
Zero Waste by 2020
FH REG. 420-6 AND USAOTC SOP G4-11

Goal #1: Reduce

***Reduce** the amount of solid waste generated at USAOTC*

2012 Accomplishments:

- Gathered great ideas from the work groups
- More leadership involvement in NZW
- Personnel better informed about the importance of NZW
- Earned a 100% rating on our recycle walk thru audit

Goal #2: Repurpose

Repurpose whenever possible

2012 Accomplishments:

- Recyclables used on OTC Christmas contest
- Re-used old wooden crates
- Re-bagging old deteriorating sandbags
- Utilized cross-cut and pulverized paper

Goal #3: Recycle

Expand Recycling

2012 Accomplishments:

- Established Recycle Coordinators
- Conducted monthly site assistance visits
- Increased personnel participation
- Increased number of recycle containers in OTC footprint

Goal # 4: Marketing & Outreach

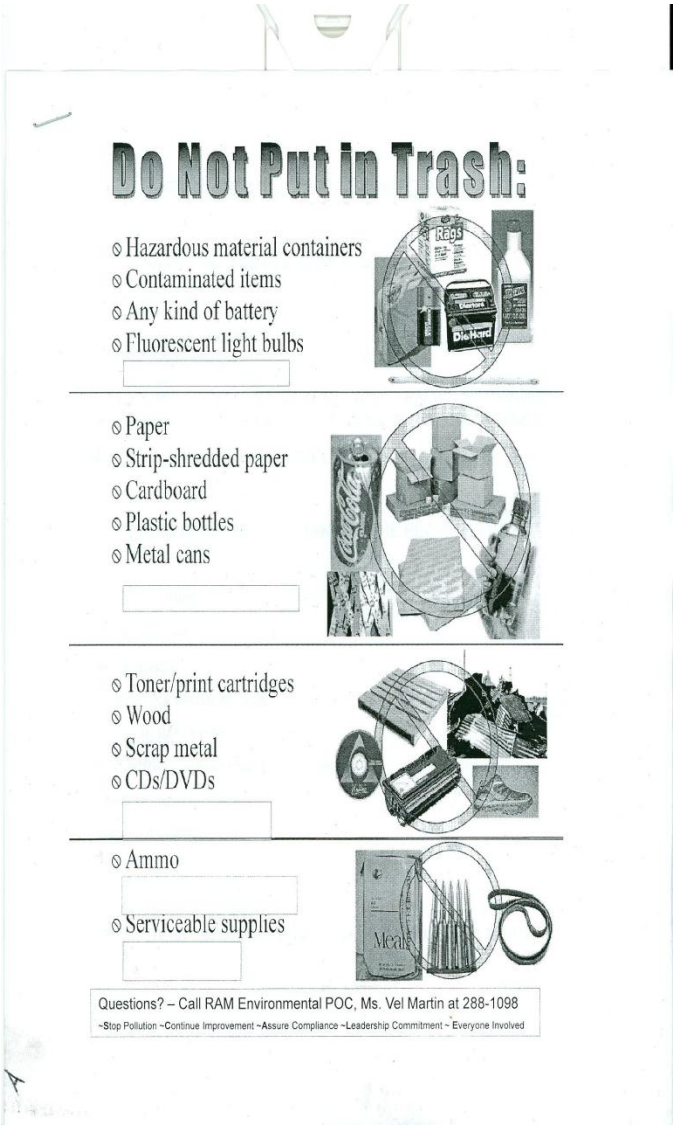
Aggressive **communications** campaign

2012 Accomplishments:

- Developed a poster and information sheet
- Recycling is a must at all OTC events
- Developed training guidelines for all

  Directorate Recycle

  Coordinators



FY12 Accomplishments

Reduce:

- Monthly Recycle Meetings,
- Increased dumpster inspections
- Increase awareness of separating recyclables
- Placing more recycle containers
- Developed a promotional poster

Repurpose:

- Re-use wood .
- Cross-cut and pulverized shredded paper
- **Used modular furniture gets re-used when possible**

Lessons learned from the NZW Site Assistance Visits

- Only two containers are needed in personal areas
- Not enough recycle containers and not correctly positioned
- Use ‘Single Line Streaming’
- Plastics 1-7 are being accepted now

COMMON AREA

PERSONAL AREA

COMMON AREA

Container Placement is Important!

COMPETITION EFFORTS TO PROMOTE RECYCLING

=

OTC!!!!!
BECOME A
RED CIRCLE
TEAM MEMBER
AND
REMEMBER TO
RECYCLE

USAOTC RECYCLE COORDINATORS: "THE DYNAMIC DUO"

OTC! LETS DO OUR PART!! RECYCLE.

LETS KEEP FORT HOOD BEAUTIFUL AND TRASH FREE.

Lunch on your own 1220-1320

Recycling 101

Mr. Mike Bush – DPW Recycle Manager

Recycle Mission

Mission

Reduce the amount of material sent to the landfill, Generate funds through the sale of materials, and Support Environmental stewardship on and off Fort Hood

SUPPORT NET ZERO FOR FORT HOOD

Zero Waste by 2020

What do we do?

- Paper
- Metals
- Plastics
- Shredding – HIPPA certified
- Sensitive Document Destruction
- Scale Services (DITY Moves)
- Other products
- We do not handle Housing materials

Containers are Available

35 Gallon

Desk side

Wire Frame

Call us to sign for bins to place in offices, barracks (laundry rooms), motorpools

Event Containers

Call us for event support 287-2336

Life Cycle of a Recyclable Material

How the process works

Material in Indoor Containers

Place recycle containers next to all waste bins with labels

Designate individuals to empty containers in common areas

Material in Outdoor Containers

Place paper, cardboard, plastic/metal in outdoor containers for pick-up

All Material Goes to the Recycle Center

Material is Hand Sorted

Products are Prepared for Baling

Products are Made into Bales

Then the Bales are Sold

About 15%-20% of the materials are used domestically and sold to various factories and reprocessing plants.

About 75%-80% of the material is exported

Benefits to Fort Hood

- **The more material we process and sell at higher profits, the better service we can provide, and the more money we can return to Fort Hood.**

- **Help us reach our Net Zero Waste goals.**

What Goes in Each Container?

Cardboard **Paper** **Plastic/Metal**

Cardboard

Cardboard Boxes

Food Boxes

Cereal Boxes

Frozen Food Boxes

Corrugated Cardboard Boxes

Paper Board Boxes

PAPER

Magazines

Newspaper

Brochures

Mail

Books

Maps

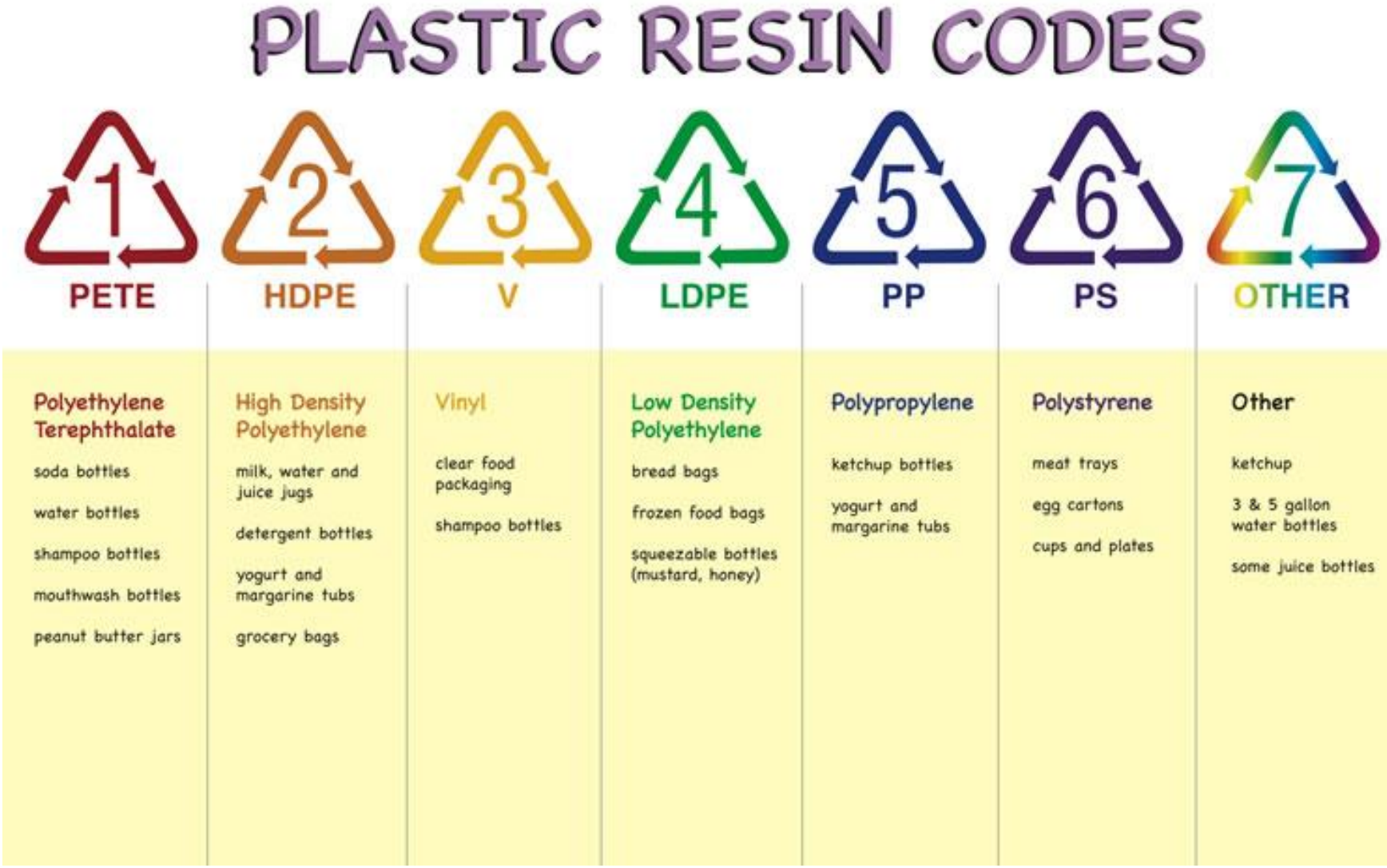
Fast food bags

All Paper

Plastic & Metal

- Plastic Bottles
- Plastics # 1-7
- Shopping Bags
- Coat Hangers
- Pill Bottles
- CD's and CD cases
- Metal Cans

Plastics 1-7


PLASTIC RESIN CODES
1
PETE
Polyethylene Terephthalate
soda bottles
water bottles
shampoo bottles
mouthwash bottles
peanut butter jars
2
HDPE
High Density Polyethylene
milk, water and juice jugs
detergent bottles
yogurt and margarine tubs
grocery bags
3
V
Vinyl
clear food packaging
shampoo bottles
4
LDPE
Low Density Polyethylene
bread bags
frozen food bags
squeezable bottles (mustard, honey)
5
PP
Polypropylene
ketchup bottles
yogurt and margarine tubs
6
PS
Polystyrene
meat trays
egg cartons
cups and plates
7
OTHER
Other
ketchup
3 & 5 gallon water bottles
some juice bottles

Various Bottles

HDPE Bottles

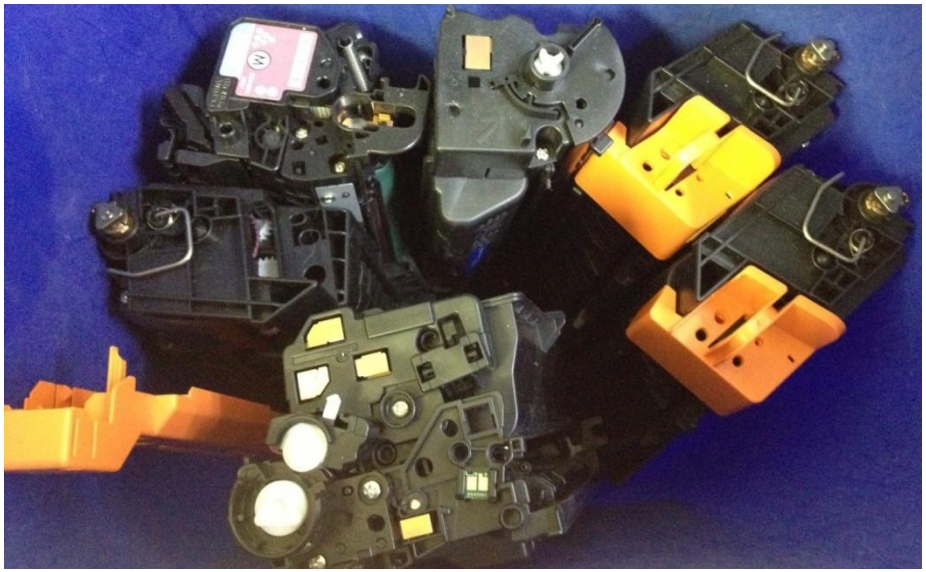
What to Bring to the Center

Scrap Metal

Brass
Copper
Aluminum (Nonferrous)
Iron and Steel
Stainless Steel
Tin

If you are a large generator of scrap metal we can place a separate container at your building or bring metal to the Center

Toner Cartridges



Sensitive Document Shredding

To set an appointment, please contact
Mr. Hector Nunez at 535-8569.

Sensitive Document Shredding

Hockey Puck

Other Shredding Services

Other Shredding Services

- Several FHR employees are HIPAA certified.
- Staples do not have to be removed.
- Please bring documents to the Recycle Center.
- If transportation is needed for large quantities, please contact the Recycle Center.
- If you shred in your office buildings, place material in a bag in the outdoor paper containers.

Recycling Glass

- **Glass can be dropped off at the:**
  - Community Centers
  - Recycle Center
  - Commissaries

Household Materials

- **Bring the following to the Center:**
  - Athletic shoes
  - Unbroken pallets
  - Tires with Rims
  - Lead acid auto batteries
  - Cooking oil
  - Christmas lights

Appliance and Scrap Metal

Household appliances:

- irons, mixers, hair dryers, microwaves,
- toaster ovens, blenders, pots and pans,
- washer, dryer, refrigerator, air-conditioners, etc

Challenges - Contamination

- **Contamination – Still the #1 problem for us on post.**
- **We don't accept junk or garbage.**
- **Our material is sorted by hand.**
- **Please eliminate food contamination and rinse products when necessary.**
- **"If you wouldn't want your hands in it, chances are we don't want our hands in it"**

Recycle Services

- **Call the Recycle Center 287-2336**
  - For a scrap metal or other outdoor containers
  - For an event that needs containers
  - To sign for indoor containers
  - To schedule a tour
  - To schedule some training

Come and see us!

Questions?

Rail Gunner
Net Zero Program

41st Fires Brigade

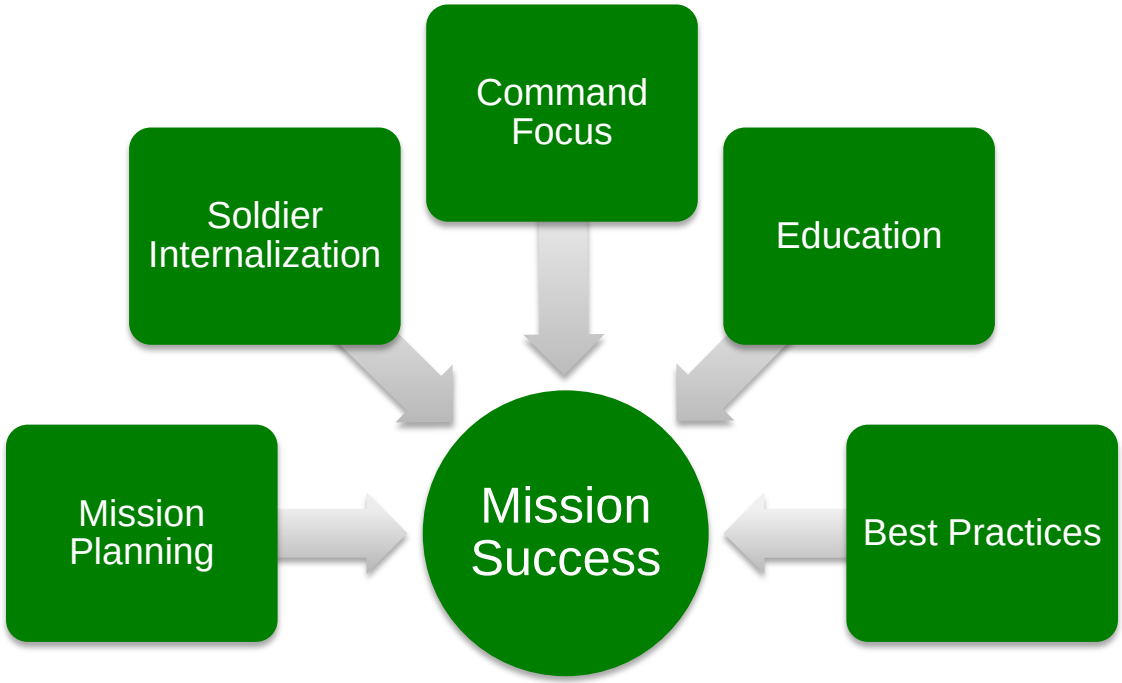
COL William McRae

Rail Gunners

Accurate, Timely, & Decisive Fires for America's First Team…Rail Gunner Strong!!

Net Zero 2020
Bottom Line

In order to succeed with our Zero Waste goals, we need to ***create lasting habits*** *that* ***foster environmental stewardship*** *and* ***waste reduction***



Success is incremental
Reduction of Recyclable, Reusable
Or repurposed waste going to the landfill.

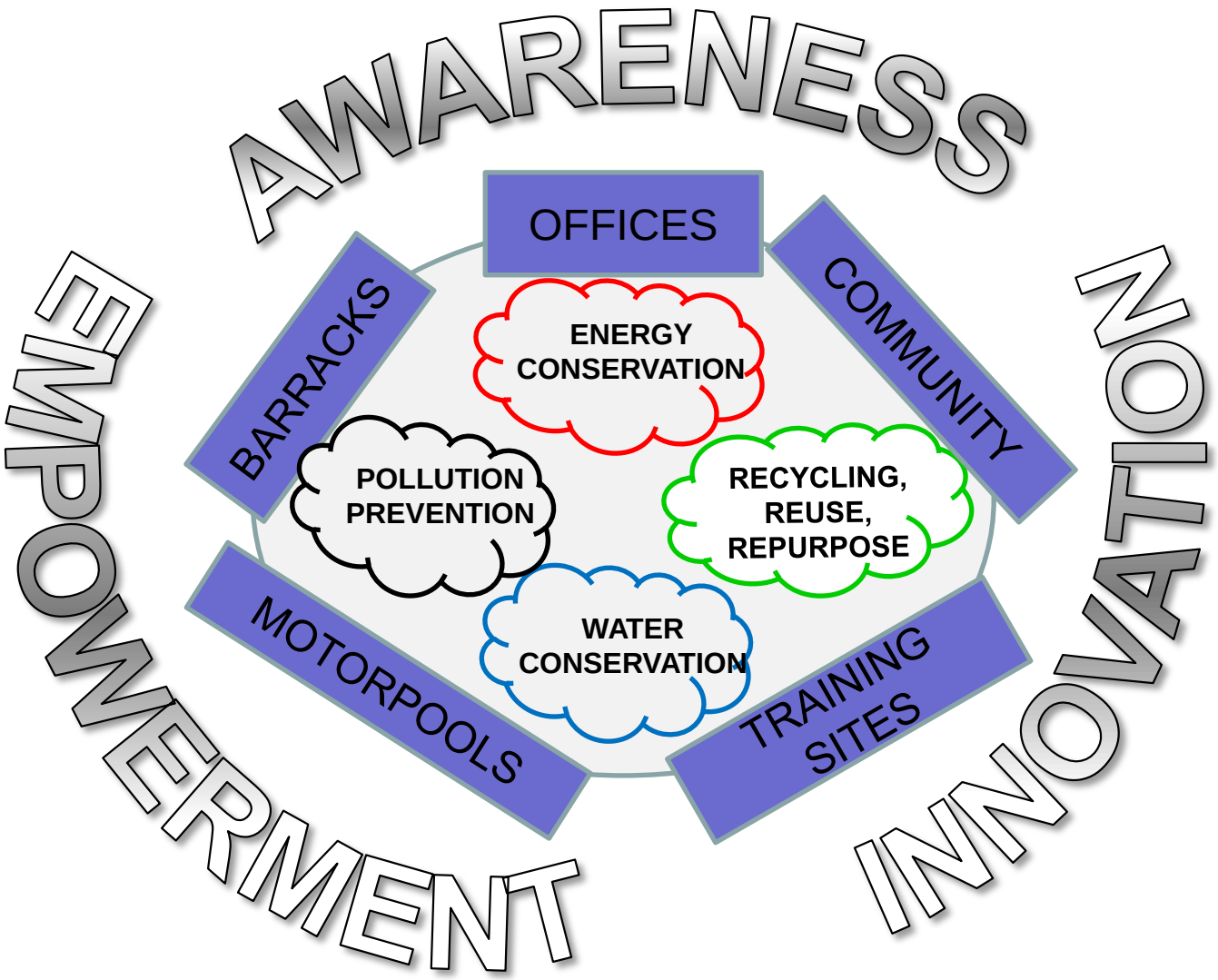
Develop a unit mindset that is:
- Internally Focused
- Externally Aligned
- Results Oriented

NET 2020 • Fort Hood ZERO Waste

The Challenge is Changing a Culture

COL Matthew Elledge matthew.g.elledge.mil@mail.mil 254-288-3451

Rail Gunner Net Zero Program



Program Overview

- Command emphasis
- Leader involvement
- Junior Soldier “ownership”
- Incentives program (Utilize competitions to promote compliance)
- Training focused primarily on Prevention; response component as well
- Focus on systemic environmental issues rather than single events
- Random walkthroughs and spot checks
- Separate Environmental and Recycling SOPs

Iron Caisson Recycle Committee

- Battalion-wide Program
- Modeled after BOSS program hierarchy
- Total of 6 members (E4 and below) chaired by Battalion ECO / CSM
- Soldiers presented recycling messages at weekly Close-out formations
- Soldiers utilized for Net Zero 2020 PSA

Purpose

- Ownership - Instill a sense of pride in one's workplace
- Responsibility – Give Junior enlisted something to make their own
- Diversity of Ideas - Uses the new generation of Soldiers to come up with ideas to influence younger Soldiers

Outcomes

- 589th BSB Received the first Net Zero 2020 Most Innovative Unit Award for a program that involved more people than Environmental Compliance Team
- Program was adopted by III Corps (FRAGO 1 to PW 11-11-800)
- Fewer violations of Recycling Compliance in battalion footprint than one year ago
- New and innovative ideas coming out of unit committees

Competition and Outreach

- 2-20 FA initiated a recycling competition with Meadows Elementary
- Broken down into “focus” months – Aluminum/Plastic/Paper
- Meadows recycled 1,720 pounds of paper, 640 pounds of plastic and 404 pounds of aluminum cans. The unit recycled 840 pounds of paper, 1,274 pounds of plastic and 343 pounds of aluminum cans.
- The effort inspired both Soldiers and students to embrace the recycling effort

School, soldiers compete in recycling competition

By Todd Martin
Special to the Daily Herald

FORT HOOD — There was plenty of trash talk. It was all of the friendly variety.

Since January, the soldiers of the 2nd Battalion, 20th Field Artillery Regiment, 41st Fires Brigade have competed against Meadows Elementary School at Fort Hood to gather the most recyclable material.

At the beginning of the school day May 22, televised on Meadows' in-house Roadrunner News, two battalion officers admitted defeat. They smiled the whole time.

While the Deep Strike Battalion gathered 2,457 pounds of paper, plastic and aluminum cans, Meadows staff and students came up with 2,764 pounds.

The soldiers presented to the school a trophy made from plastic bottles and aluminum cans.

More importantly, the proceeds from turning in the recycling will benefit the school's Project Green garden, which has taken shape outside the school over the course of the year.

Also important, soldiers, faculty and students said, is a change in behavior. Recycling has become commonplace around Meadows and around their Adopt-A-School unit.

Lt. AnnMarie McCreight said the unit wanted to recycle aluminum cans and helped organize a competition with Meadows through the month of January.

Plans called for the unit and school to compete in recycling plastic and paper in each of the

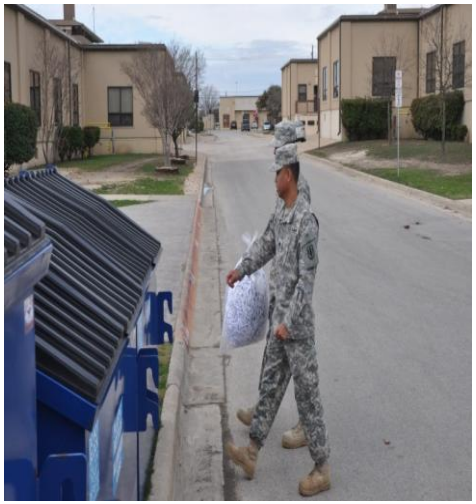
CLASS ACTS

Email items and photos to news@kdhnews.com. Items run Sunday as space allows.

Please see Class Acts, *Page* D3

Barracks and Family Housing

- Enhanced recycling in barracks – Recycle bins in every room
- Posters and Media in all common areas and work places
- Net Zero Program discussed in FRG Meetings and Community Engagements
- Collection & monitoring of Metrics (energy consumption & recycle collection)
- Leader checks incorporate Net Zero initiatives
- Exploring involvement and use of non-profit organizations



NET 2020 • Fort Hood ZERO Waste

Way Ahead

- Continued Command emphasis and Soldier ownership of Environmental Compliance and Recycling efforts
- Internal inspections and enforcement of standards
- Educate on larger scope of NZW 2020 by incorporating into all operations such as safety days, field OPORDs, and weekly safety briefings
- Maintain and build upon community outreach programs

Net Zero Program
"Everyone contributes"

41st Fires Brigade

Rail Gunners

Accurate, Timely, & Decisive Fires for America's First Team…Rail Gunner Strong!!

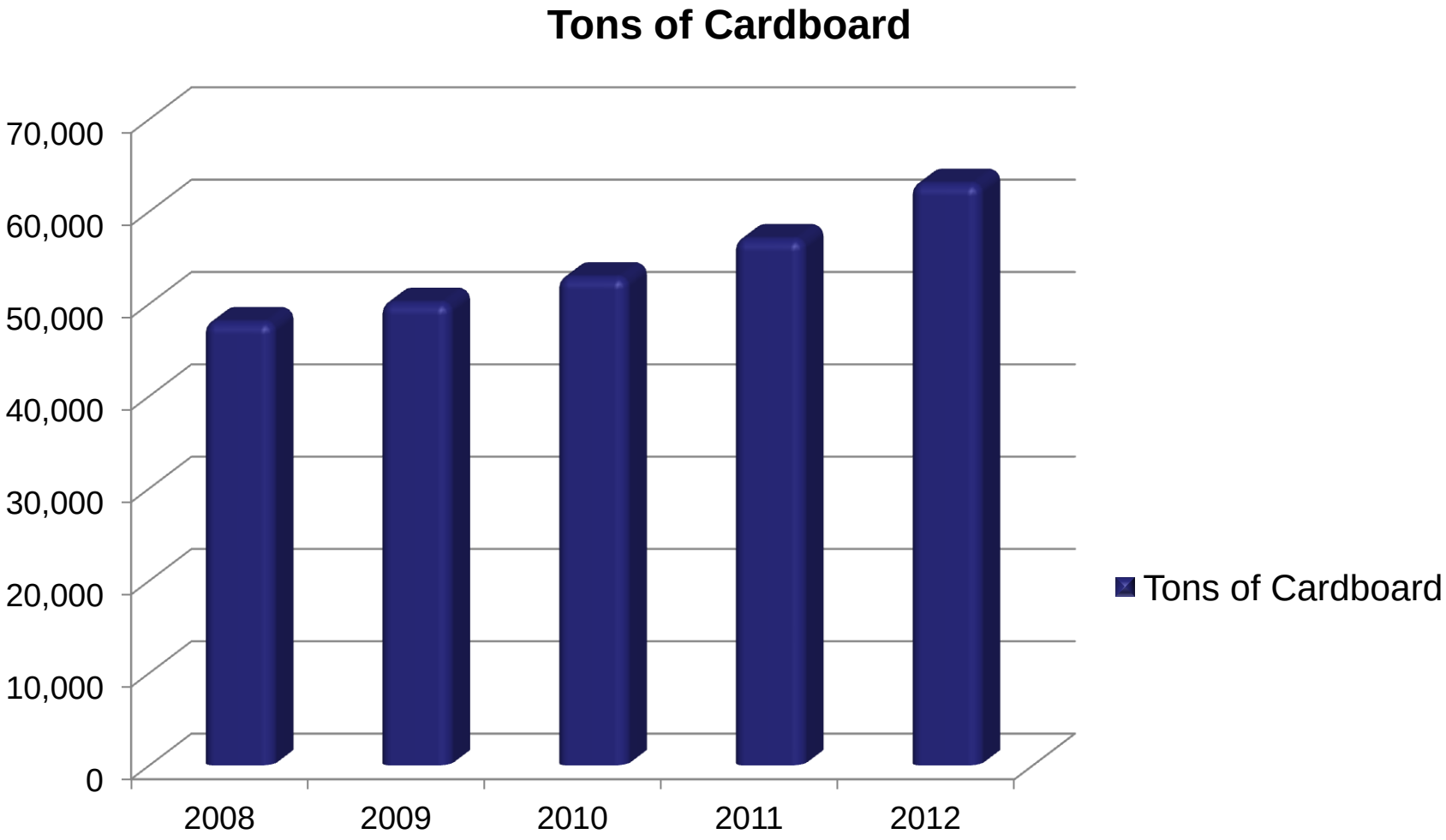
Commissary Success Story

Walt Rasco - Warrior Way Commissary Deputy Store Director

Current Recycling Program Status

- DeCA has a new website reporting program, which makes it MANDATORY for stores to report tonnage/diversion
- HQ keeps track of non-reporters & reports violators of mandate
- Each store will be able to see up to date recycling efficiency through dashboards

Historical Cardboard Trend



Current Recycling Program Status

- **Plastic Bags**
  - Currently, DeCA will continue to use plastic bags
  - Reduced the size of the bags by one inch, which based on the number of bags we use, equates to the reduction 125,950 lbs of plastic
  - Currently developing a business model for the use of bio-degradable bags
  - Encouraging reusable bags

Outreach Efforts

- **Posted signs around store**
- **Educated our staff on importance of NZW**
- **Reduce, Reuse, Recycle, and Educate**

Food Waste Pilot Project

Weighed all food waste for 1 month to determine the best solution for food composting strategies

- <u>Warrior Way Commissary</u>
  - 9,227 pounds in Nov.
- <u>Clear Creek Commissary</u>
  - 20,564 pounds in Nov.

DPW is investigating possible solutions for composting food waste at the Commissaries

Questions? Thanks!

Workgroup Objective Exercise

Mr. Steve Burrow – DPW Environmental Chief

FY13 Workgroup Instruction

- Go through various slides to brainstorm ideas
- Write down the ideas that you would implement on the color coded index cards
  - Reduce = Yellow
  - Repurpose = Orange
  - Recycle/Compost = Green
  - Marketing/Outreach = Pink
- Think of other ideas you could try at work or home

Out-brief Structure

FY13 Objectives for each Workgroup

(Reduce, Repurpose, Recycle/Compost, Marketing/Outreach)

- **Three installation-wide project ideas**
  - NZW Workgroups will work these actions
  - These are projects that are big picture

- **Three unit/organizational level projects ideas**
  - Units/Organizations will implement these strategies within their sphere of influence
  - These are projects that are at your organization

Workgroup Objective Exercise

Reduce

Look at what is in your trash and try to avoid buying the things that are generating waste

Reduce Paper Towels

Avoid buying disposable products

Reduce Plastic Utensils

Try reusable items rather than purchasing single use products

Reduce Single Use Items

Bring reusable plates and glasses to work

Reduce

Bring a thermos or mug

Reduce all those coffee cups

Reduce

Bring your reusable bags to the store

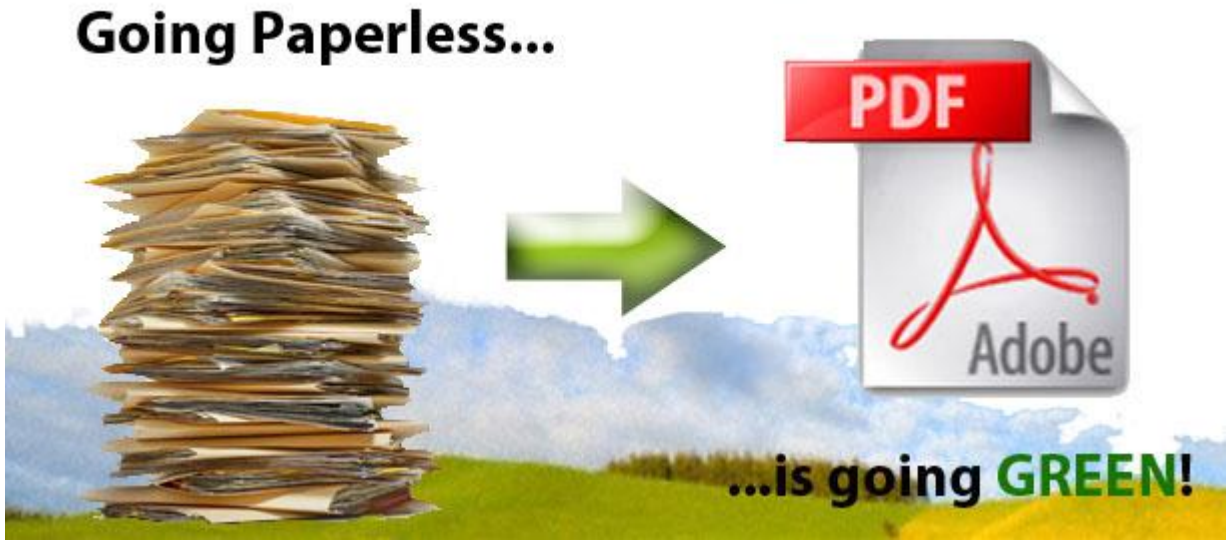
Reduce the use of plastic bags

Reduce Bottled Water

Buy concentrated cleaning products

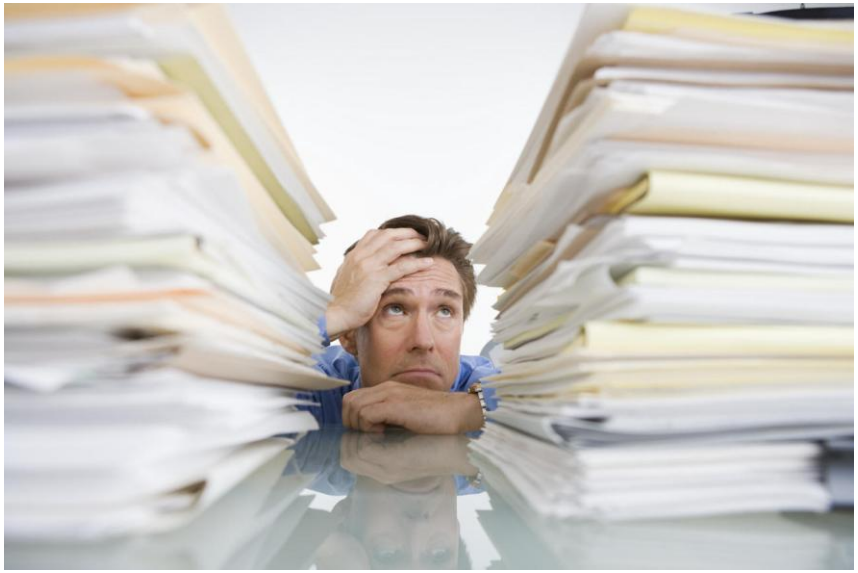
Purchase concentrated products

Reduce Office paper



Commit your organization to going Paperless Print double sided

Use Electronic Signatures



Reduce the need for printed paper and sign electronically

Got Junk Mail in the office?
Its Time to "Opt Out"

The average American household receives **41 POUNDS** of Junk Mail per year.

Opt Out Now

Federal Trade Commission

http://www.ftc.gov/bcp/edu/pubs/consumer/alerts/alt063.shtm

Reduce Food Waste

Only take or prepare what you can eat

Reduce

Avoid Styrofoam Packaging

Bring your own reusable container

Reduce Event Waste

Evaluate the things you are buying for your event and find a Net Zero Waste solution

Reduce

- What does your organization purchase?
- Which items seem to end up in the trash?
- Can you find a way to order reusable items?
- How could you reduce your printing requirements?
- Can you do a unit/organization challenge?
- Who can you work with in your organization?

Re-purpose

Participate in Yard Sales

Two Installation-wide yard sales during Spring and Fall Clean-up

Reuse Government Items

Share excess materials with other units

Red Rag Reuse at DOL

Determine if your motor pool can implement a Red Rag Reuse Program similar to DOL

Donate Old Personal Items

Call for a pick-up of large items

Buy & Sell at Thrift Shops

Re-purpose

- **What items in your unit/organization could you share with others?**
- **Are there items you throw away that could be used again by others at Fort Hood?**
- **Are there items that are over purchased that have an expiration date and get wasted out?**
- **Who can you work with to improve reuse activities?**

Recycle

How long it takes for items to biodegrade in the landfill

Don’t waste resources---RECYCLE

Recycle

Set up Recycle Stations in common areas

Collocate recycle containers with trash containers

Recycle

Recycle whenever possible

In Barracks

In FHFH Villages

NET ZERO WASTE 2020 Fort Hood

At outdoor events

Recycle

- **Are you Recycling everything that you can?**
- **Do you have containers clearly labeled?**
- **Who empties the containers?**
- **Who is checking containers for compliance?**
- **What items do you generate that are not currently able to be recycled by our center?**

Marketing/Outreach

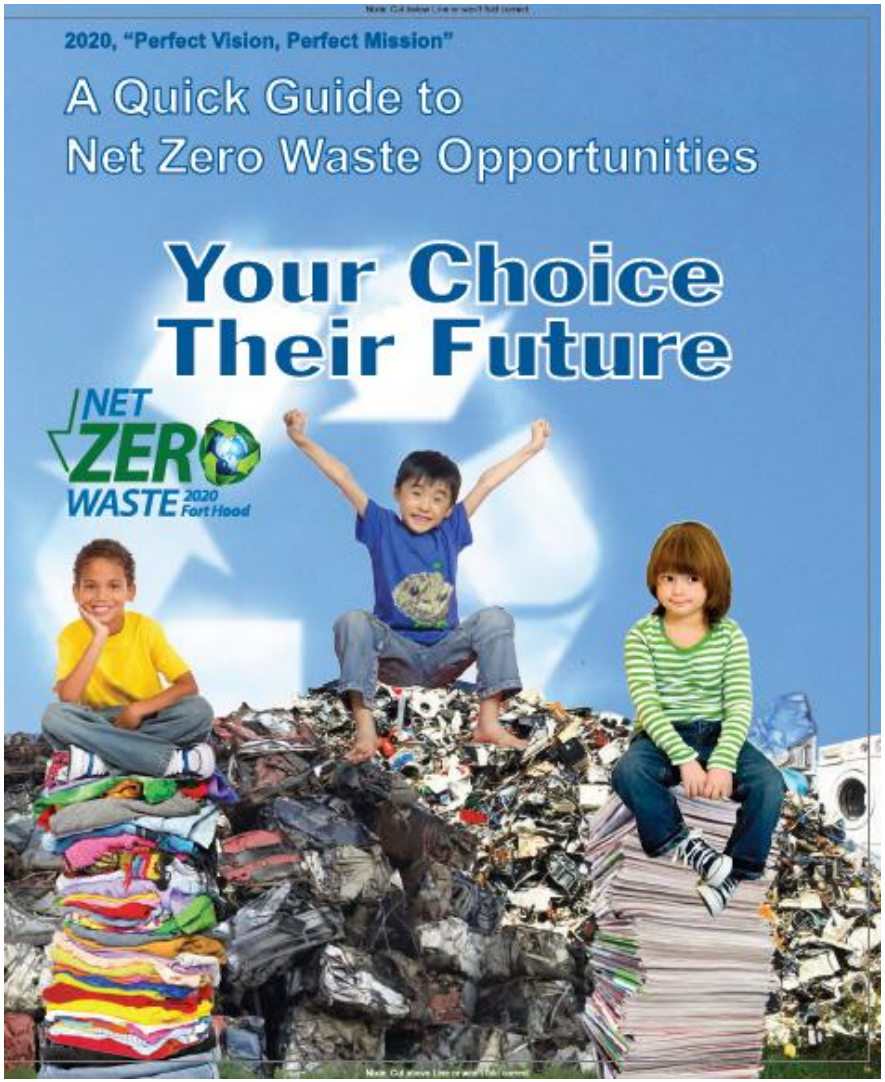
Marketing/Outreach

Net Zero Waste Website

www.hood.army.mil/netzero

Conference slides are available on this website, so you can provide some training to your units/organizations

Marketing/Outreach



Distribute booklet via email and get a copy of it on the NZW Website

Marketing/Outreach

Communicate Messages

Place signage at your building recycle stations

Provide Training

Share what you have learned today when you get back to your building

Marketing/Outreach

Site Visits

Take a tour of the Recycle Center

Marketing/Outreach

Place posters around building footprints

Marketing/Outreach

- **What other ways can Fort Hood get the word out?**
- **What outreach strategies have we not mentioned?**
- **How can you help educate others?**
- **What can you do when you get back from this Conference?**

FY13 Workgroup Instruction

Place index cards in corresponding boxes after exercise is completed

- Reduce = Yellow
- Repurpose = Orange
- Recycle/Compost = Green
- Marketing/Outreach = Pink

Your playing card will determine which break-out room you will go into to work on out-brief to the CG and GC

Cards	Room
Spades	Cascade
Clubs	Wilshire
Hearts	Ballroom
Diamonds	Kingston

- **10 minute Break**
- **Refreshments in back room**
- **Make your way to the Workgroup rooms**
- **Coffee, tea, and water are in break-out rooms**

Out-Brief

Workgroup Goal Leaders

Reduce

Repurpose

Recycle/Compost

Marketing/Outreach

Next Steps

Mr. Brian Dosa – DPW Director

2013 Next Steps

•Top three **Installation-wide** level actions from each goal area will be implemented by the Workgroups with help from identified Subject Matter Experts

Next Step: Workgroups meet in March to develop **Action Plans** for the Installation-wide projects

•Top three **Unit/Organization** level actions will be worked by respective Recycle Coordinators

Next Step: Recycle Coordinators implement the Unit/Organizational actions and report progress at the quarterly Workgroup meetings and EQCC

Next Steps

- **Recycle Coordinators** will receive an email invite to attend the combined NZW Workgroup Meetings in March, June, September, and December.

- Send names of your Recycle Coordinators to Jennifer Rawlings at jennifer.n.rawlings.civ@mail.mil

Closing Remarks

Let's Reach our Goal of Net Zero Waste by 2020

Thank You