Goal 10:
Zero Waste
Five-Year Plan

Zero Waste

The total weight of solid and hazardous waste disposed of is reduced to zero by 2027.

The long-term goal for this Five-Year Plan is to ensure that the total weight of solid and hazardous waste disposed of is reduced by 100 percent by 2027. The desired end state is to eliminate or dramatically reduce the amount of waste and to effectively use, reuse or recycle all materials.

Background

The original goals from the Sept 2002 sustainability conference related to waste reduction are as follows:

Zero Waste Disposal

Originally reduction of HAPs and treated water from the Installation were included as part of this goal. After further examination and development of the Five-Year Plans, the determination was made to make the air emissions goal a separate goal (Goal 5), and add the water reduction element to the goal for reduction in energy and water use (Goal 1). These changes focus the Zero Waste Disposal Goal on hazardous and solid waste.

Desired end states related to waste reduction formulated at the Sep conference:

- Incentives to reuse or recycle products are in place.
- Decrease in the use of hazardous materials.
- Create a composting program.
- Coordination between local organizations to encourage recycling and reuse.
- Recycle or reuse of construction and demolition waste.
- More recycling options in the region.
- Cost analyses take total environmental and social costs into consideration.
- Product life-cycle costs are shared by user and producer.
- Better influence on what suppliers provide to increase shelf-lives and decrease hazardous content.
- Government agencies coordinating on recycling efforts.

Meetings for this goal have included primarily DOD representatives from area installations as far as Buckley Air Force Base near Denver.

The purposes of partnering with other area installations to achieve this goal are to:

- Learn from recycling and reduction activities at other installations.
- Share information concerning purchases and disposal amounts.
- Determine money saving ways to recycle.
- Create new recycling markets with the volume from several installations.
- Create a healthy competition between installations.
- Combine efforts to reduce total work loads.

The Natural Step System Conditions

1. Nature is not subject to systematically increasing concentrations of substances extracted from the earth's crust.

2. Nature is not subject to systematically increasing concentrations of substances produced by society.

3. Nature is not subject to increasing degradation by physical means.

4. Human needs are met worldwide.

The Zero Waste Goal aligns with all TNS System Conditions. Creating less waste minimizes the amount of resources extracted from the Earth's crust. Disposing of less waste reduces the amount of material produced by society that is put into the earth's crust. Using and disposing of less material will reduce degradation by physical means. Reducing air, soil, and water pollution supports human needs by reducing risks from environmental pollution.

Challenges and Barriers

- Finding times and locations for all teams to meet is difficult
- Waste and recycle data is not consistent across installations
- Waste and recycle data is incomplete across installations
- Some recycling efforts will cause more air pollution due to the need for transport
- Education will be required as the number of materials to be reduced or recycled is increased
- There is a lack of control over purchases by credit cards

Strategies

- Baseline data
- Partner with area installations
- Create contracting mechanisms to encourage recyclers
- Create contracting mechanisms to encourage manufacturers

Areas of Overlap

- Awareness, education and training
- Partnering
- Training lands
- Procurement

Objectives, Initiatives, Steps and Resources

Objective 10.1: Reduce solid and hazardous waste by 35 percent over the next five years.

This objective should put Fort Carson on the road to reduction by 100 percent by 2025. It is expected that percentage of reductions should increase more than by 35 percent after the first five years, as 35 percent of less and less waste will equate to smaller reductions. Thus the percentage of reductions will have to increase. It is expected that increases in reductions are reasonable, as the Sustainable Procurement Goal, better practices, and increased recycling methods will be enhanced over the next five years; thereby enhancing Fort Carson's ability to meet the final 25-year goal.

Initiative 10.1.1: Partner with all other area DOD Installations to reduce waste.

Lead: DPW

Action Agents: DOC, Defense Reutilization Marketing Organization (DRMO), DPW, with DECAM support

This specific initiative requires Fort Carson to collaborate with all other DOD installations to determine which wastes are highest in amounts or volumes, which wastes will be easiest to target, and which wastes might be reduced more easily through creative partnering, such as joint contracts. This initiative will also enhance knowledge of best practices: it will reveal which reduction and recycling methods or equipment are implemented at different installations.

Steps	Resources Needed	Time/Cost
Meet with all other area DOD installations.		
Baseline hazardous and solid waste from all area installations.		
Baseline recycling efforts from all area installations.		
Analyze data for trends		
Meet again with DOD installation representatives and determine next steps for waste reductions		
Set initiatives in motion		
Analyze methods to partner for recycle contracts.		

Measure: At least 15% more solid waste diverted to recycling due to DOD combined efforts by 2008; 10% of hazardous waste use reduced by 2008.

Initiative 10.1.2: Develop creative contracting mechanisms to promote reduction and recycling partnering.

Lead: DPW

Action Agents: DOC, DECAM

All activities at Fort Carson create waste. Contracting mechanisms provide an administrative method to reduce waste in two ways in addition to the partnering methods mentioned in Initiative 1.1. First, when ordering materials, whether non-hazardous or hazardous, verbiage may be built into order forms that require waste materials to be recyclable, biodegradable, or sent back to the vendor. Second, contractors that do any work on the installation may be required to reduce their creation of waste.

Steps	Resources Needed	Time/Cost
Analyze waste data for common sources (vendors)		
Determine best way for vendor to reduce waste from the product		
Meet with DOC to discuss verbiage for order forms, etc.		
Change forms to reflect how to decrease the amount of waste		
Analyze contracts for those who do work on the Installation		
Change contracts to reduce waste		

Measure: At least 10% waste diverted due to smarter contracting (added to Initiative 10.1.1, a total of 35% should be achieved).

Goal 10 – Zero Waste: The total weight of solid and hazardous waste disposed of is reduced to zero by 2027.

Objective 10.1: Reduce hazardous and solid waste 35% over the next 5 years.

Measures:

25% solid waste diverted

10% hazardous waste diverted

Target: 6-25 Years

100% reduction in waste

Target 1-5 Years

15% waste reduction due to recycling and better purchasing

10% reduction in use of materials that create waste

10% reduction in hazardous waste purchase and use

Baseline 2001

25 tons of hazardous waste

306,802 tons of solid waste

Existing recycling efforts

Initiatives:

Partner with all other area DOD Installations to reduce waste.

Develop creative contracting mechanisms to promote reduction and recycling partnering.