WELCOME

Open House

for the

Environmental Impact Statement for the Implementation of Energy, Water, and Solid Waste Sustainability Initiatives at Fort Bliss, Texas

Please visit our Information Stations

A presentation will be given at 7:00pm, followed by an open house and an opportunity to comment.

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at Fort Bliss, Texas

Fort Bliss Background

Fort Bliss

Fort Bliss is located on 1.12 million acres in Texas and New Mexico and was established in 1849. In 1957, the installation became the home of the U.S. Army Air Defense Artillery Center and supported the air defense training mission for many years. More recently, Fort Bliss has received the 1st Armored Division and other units, and has been assigned a crucial role in preparing regular Army, Army Reserve, and Army National Guard troops for deployment.

Fort Bliss Vicinity

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What is Net Zero?

The Net Zero Vision

The Net Zero vision is a **holistic approach to addressing energy, water, and waste at Army installations.** The Net Zero vision ensures that sustainable practices will be instilled and managed throughout the appropriate levels of the Army, while also maximizing operational capability, resource availability and well-being.

The Army Net Zero approach is composed of **five interrelated steps:**

1 REDUCTION

Reduction includes maximizing energy efficiency in existing facilities, implementing water conservation practices, and eliminating generation of unnecessary waste.

2 RE-PURPOSE

Re-purpose involves diverting energy, water or waste to a secondary purpose with limited processes.

3 RECYCLING & COMPOSTING

Recycling or composting involves managing the solid waste stream, developing closed loop systems to reclaim water, or cogeneration where two forms of energy (heat and electricity) are created from one source.

4 ENERGY RECOVERY

Energy recovery can occur from converting unusable waste to energy, renewable energy or geothermal water sources.

5 DISPOSAL

Disposal is the final step and last resort after the last drop of water, the last bit of thermal energy and all other waste mitigation strategies have been fully exercised.

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Why Net Zero?

The Net Zero Goal

The Army's vision is to appropriately manage our natural resources with a goal of **net zero installations.**

Today, the Army faces significant threats to our energy and water supply requirements both at home and abroad. Addressing energy security and sustainability is operationally necessary, financially prudent, and essential to mission accomplishment. Creating a culture that recognizes the value of sustainability measured not just in terms of financial benefits, but benefits to maintaining mission capability, quality of life, relationships with local communities, and will preserve options for the Army's future. The Army must invest in its installations and improve efficiencies in energy, water and waste for the benefit of our current and future missions.

Fort Bliss **volunteered and was selected as a pilot installation** to become completely net zero in energy, water and waste by 2018.

The U.S. Army definition for what it means to be a Net Zero Installation includes:

ENERGY

A Net Zero Energy Installation produces as much energy on site as it uses over the course of a year.

WATER

A Net Zero Water Installation limits the consumption of freshwater resources and returns water back to the same watershed in a manner that does not reduce the quantity or quality of the groundwater and surface water resources of that region over the course of a year.

WASTE

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

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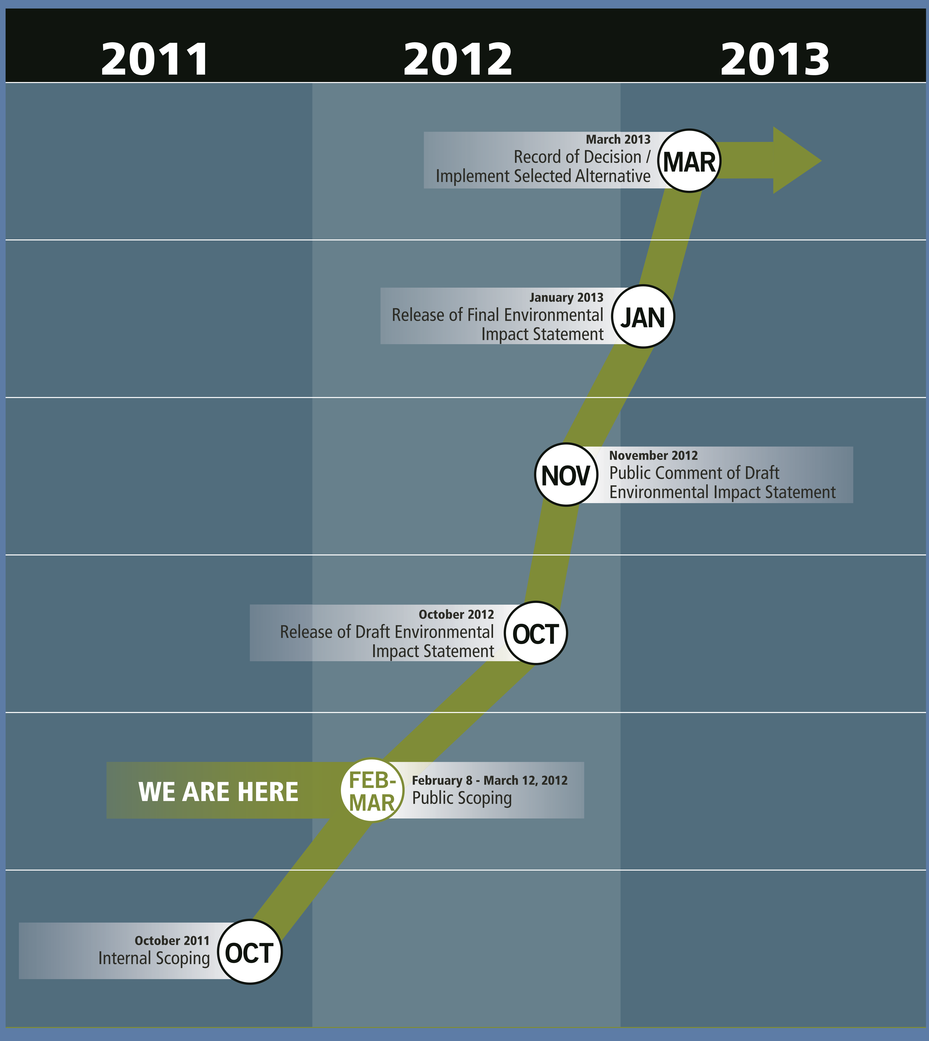
General Project Timeline

Working Toward a Decision

The following is the general schedule for the project, leading to the Record of Decision and Implementation of the Selected Alternative.



Solar Array Providing Hot Water At Barracks

Fort Bliss Recycling Center

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Purpose & Need

The Purpose of the Project

The **purpose** of the proposed action is to implement Fort Bliss Net Zero waste, water, and energy goals at Fort Bliss, TX to secure the installation's critical missions moving into the future.

The Need for the Action

Net Zero is **needed** at this time to:

- Meet and exceed Federal and State energy, water, and waste mandates; and
- Achieve enhanced security, increased efficiency, reduced operating cost, and improved Installation sustainability, while supporting the mission of Fort Bliss.
- Meet Energy Policy Act of 2005 *(EPAct 2005)* renewable energy requirements.
- Meet National Defense Authorization Act of 2010 facility renewable energy use requirements of producing or procuring 25% of total facility energy needs from renewable sources starting in 2025.

Electric Vehicle Program

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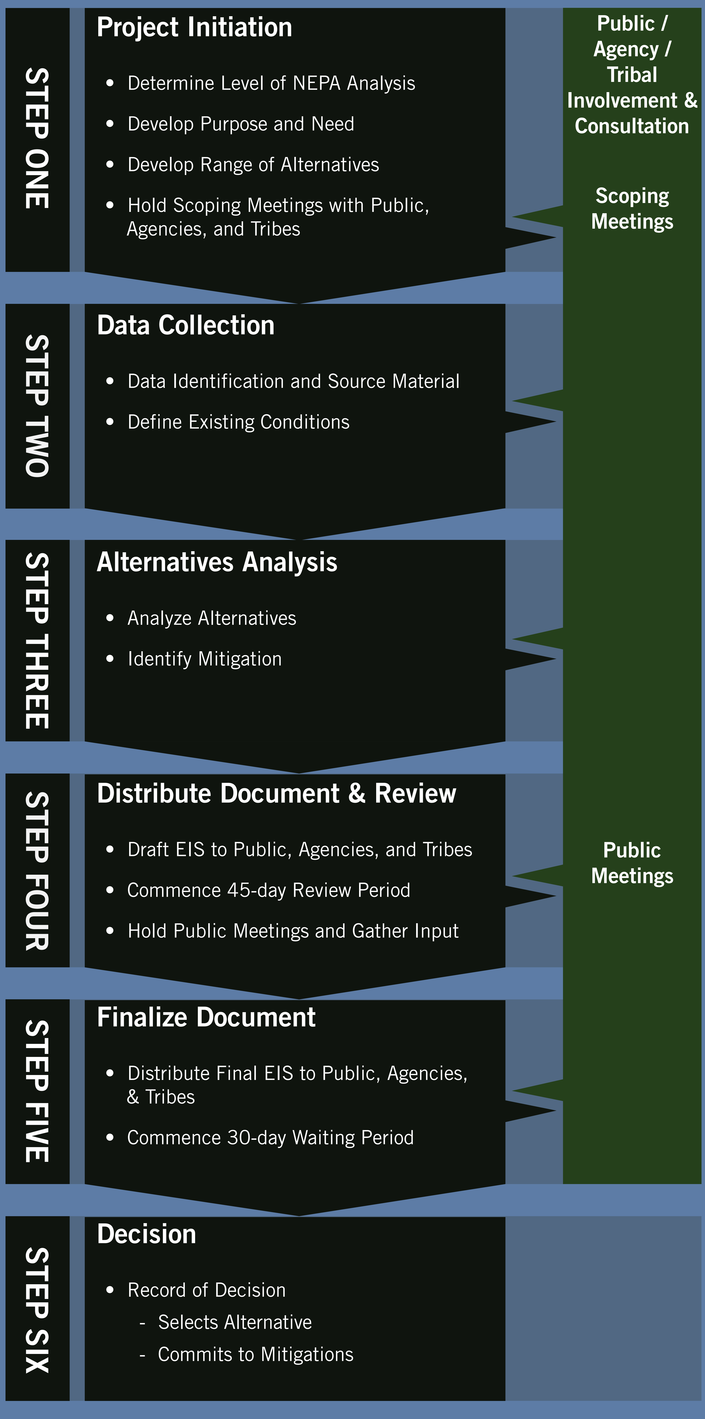
National Environmental Policy Act Process – Environmental Impact Statement

The Army is preparing an **Environmental Impact Statement (EIS)** in accordance with the **National Environmental Policy Act (NEPA)**, which requires Federal agencies to analyze impacts to the natural and human environment for any major Federal action and encourages the participation of interested citizens and federal and state agencies in the decision-making process.



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Energy Technologies

High Efficiency Natural Gas Turbines

High efficiency natural gas turbines include a combustion engine which uses natural gas as fuel to produce energy that can be used as a beating source or for electricity. Advances in turbine technology have resulted in reduced emissions from the burning of natural gas and as well as increased efficiency in the amount of energy produced.

Water Reclamation

Water reclamation involves the use of gray water, or water that has been previously used for domestic activities such as laundry, dishwashing and bathing. This gray water is then recycled and re-used for irrigation, construction and industrial processes. The use of gray water reduces the amount of potable water that is treated or pumped from aquifers, as an overall effort to conserve water in an arid climate by using water for a second time. This technique is currently being utilized by the El Paso Water Utilities and is referred to as the "Purple Pipe."

Energy Technologies

Concentrated Solar Panel - Dry Cooling

CSP technologies use lenses or mirrors to focus sunlight into a heat source for use as a power source. A dry-cooled system utilizes air as opposed to water to cool the mirrors/lenses.

Geothermal Energy

Geothermal technologies utilize heated water located beneath the Earth's surface to create steam to spin a turbine which produces and stores electricity.

Wind Energy

Wind technologies utilizes turbines to convert wind into energy that can be used to produce electricity. Wind speeds cause turbines to spin, creating energy that is stored in a generator and can later be used as a source of electricity.

Waste to Energy Plant

Waste to energy is a process of burning of solid waste to create energy in the form of electricity or heat. Multiple methods are currently being considered at Fort Bliss; one example is incineration which involves directly burning solid waste in order to produce steam to power turbines for electricity generation.

Potential Environmental Impacts

The U.S. Army has developed a preliminary list of impact topics for full analysis in the EIS. Impact topics will be analyzed for each alternative to determine what impacts could occur from the implementation of sustainability initiatives at Fort Bliss. Below is a preliminary list of potential impacts based on the proposed renewable technology alternatives.

PRELIMINARY IMPACTS LIST	ENERGY TECHNOLOGY					
	Solar – CSP Dry-Cooling	Geothermal	Wind	Waste-to-Energy	Natural Gas Turbine	Water Reclamation
Air Quality	●	●		●	●	
Air Space			●	●		
Cultural Resources	●	●	●	●		
Noise			●		●	
Soils	●	●	●	●	●	●
Water Resources		●		●		●
Biological Resources	●		●	●		●
Socioeconomics	●	●	●	●	●	●
Energy Demand	●	●	●	●	●	●
Land Use	●	●	●	●	●	●
Hazardous Materials and Waste	●			●	●	
Traffic and Transportation				●		●

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Topics of Concern

Topics of Concern

The following topics of concern have been identified for potential analysis in the Environmental Impact Statement:

- Air Quality
- Air Space
- Cultural Resources
- Noise
- Soils
- Water Resources
- Biological Resources
- Threatened and Endangered Species
- Socioeconomics
- Energy Demand
- Land Use
- Hazardous Materials and Waste
- Traffic and Transportation

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Preliminary Alternatives Map

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Preliminary Alternatives

Alternative 1

No Action Alternative

Under the **No Action alternative**, Fort Bliss would not pursue additional Net Zero initiatives to accelerate reduction of waste, water and energy consumption beyond those policies and procedures that are currently in place.

Alternative 2

Aggressive Implementation of Water, Energy and Waste conservation Policies and Procedures

Implement policies, procedures and best management practices to maximize resource re-utilization, limit waste generation, increase resource re-purposing, and increase water and energy utilization efficiencies in new and existing facilities. The implementation of this alternative would include installation of water and energy meters to establish baseline metrics.

Alternative 3

Construction of a Water Pipeline onto Fort Bliss, Working with the City of El Paso to Reclaim Gray Water for Secondary Installation Uses

As part of Alternative 3, Fort Bliss would aggressively implement waste, water, and energy conservation as discussed in Alternative 2. In addition, Fort Bliss would pursue the construction and use of a water reclamation pipeline (referred to as "the Purple Pipe") to provide Fort Bliss with reclaimed gray water for installation secondary uses. The Pipe would connect to a conduit pipe from the City of El Paso's waste-water treatment plant (WWTP) near the Pershing Gate and water would be distributed throughout Fort Bliss.

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Preliminary Alternatives

Alternative 4

Construction and Operation of a Waste-to-Energy (WTE) plant on Fort Bliss

Implement waste, water, and energy conservation as discussed in Alternative 2. In addition, Fort Bliss would pursue the construction and operation of a Waste-to-Energy (WTE) plant to reduce landfill waste and provide the installation with a source of secure, alternative power. The facility would be sited in either the southern portion of the installation in the South Training Area (Alternative 4a) or on land that may be transferred to Fort Bliss by the Texas Government Land Office in an area along the southern boundary of Fort Bliss (Alternative 4b). In addition, to a WTE plant a Concentrating Solar Panels would be constructed near the WTE site.

Alternative 5

Development of Geothermal Energy and Hot Water Resources

The construction of a facility at Davis Dome involving an injection and production well for the production of energy and/or hot water, for supply to the McGregor Base Camp complex. Concentrating Solar Panels may be used in connect with this alternatives to increase the temperatures of the geothermal resource and increase the efficiency of energy production.

Alternative 6

Development of Wind Energy Resources

Develop wind power technology utilizing utility-scale wind turbines in up to 1,000 acres in the central-southeastern portion of the installation or on up to 1,800 acres at the extreme northeastern portion of the installation. Both sites would require the construction of an electrical transmission line to tie-in to existing electric substations.

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Preliminary Alternatives

Alternative 7

Development of up to 300 acres for Dry-cooled Concentrating Solar Panel (CSP) Technology

Fort Bliss would develop up to 300 acres in the South Training Area (STA) using CSP technologies and cooling the stream turbine using dry cooling. Transmission lines would also be constructed.

Alternative 8

Implementation of Additional Renewable Energy Development within Future Compatible Footprints

Additional geothermal, wind, or solar resources may be developed in compatible footprints of less than 100 acres across the installation as long as they meet the environmental criteria (to be developed as part of the EIS process). The implementation of this alternative would allow the installation to adaptively select future compatible footprints and best technologies to increase the installation's energy security, reduce green-house gas emissions, and increase the percentage of energy consumed that is derived from renewable energy sources.

What other suggestions do you think should be considered for the preliminary alternatives as we develop the Sustainability EIS?

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How To Comment

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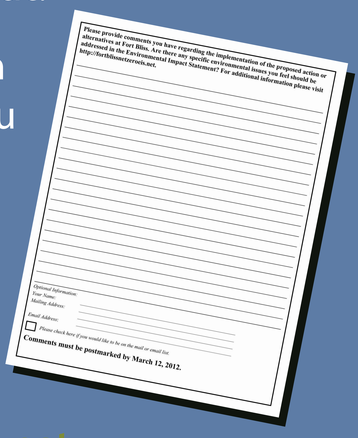
Options for Providing Your Input:


Please provide comments you have regarding the implementation of the proposed action or alternatives at Fort Bliss. Are there any specific environmental issues you feel should be addressed in the Environmental Impact Statement? For additional information please visit http://forthlissnetzeroeis.net.

Optional Information
Your Name:
Mailing Address:

Email Address:
☐ Please check here if you would like to be on the mail or email list.

Comments must be postmarked by March 12, 2012.

- Complete the Comment Form and leave it with us before you leave or return by mail (Comment form is pre-addressed).
- Submit Comments through the Project Website at: http://www.ftblissnetzeroeis.net
- Provide Oral Comments during the meeting.
- Mail Written Comments to:

  John Kipp
  Fort Bliss Net Zero EIS
  Environmental Division
  Bldg. 624, South Taylor Road
  Fort Bliss, Texas 79916

Please Note: Comments will not be accepted by fax, email, or in any other manner than those specified above.

PLEASE SUBMIT ALL COMMENTS BY MARCH 12, 2012

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