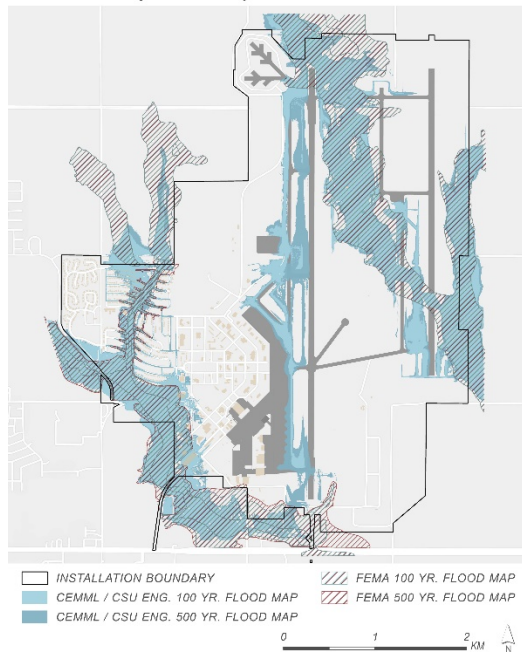


AFCEC Environmental Geographic Information System (GIS) Program

The Air Force Civil Engineer Center's Environmental Geographic Information System (GIS) Program has established both a new [program page](#) for general program data and an AFCEC Environmental GIS [Dashboard](#) for viewing environmental GIS data and map layers.

The Environmental Directorate recently increased efforts to accomplish enhanced floodplain area analyses for Air Force installations. These floodplain products are available on the AFCEC Environmental GIS Dashboard and on the Air Force Geospatial Integration Management System

Floodplain Comparison at Altus AFB



(AFGIMS) Portal for use in planning, analysis and assessments. Fourteen installations were completed through February 2020 with another 24 planned for the current contract year. These flood maps play a vital role in improving flood risk analysis during AF planning processes.

The enhanced floodplain analysis utilizes high-quality light detection and ranging (LiDAR) data acquired by the AF as a basis for the modeling. Additionally, high-quality land cover and land use data was developed using AF aerial imagery to achieve a resolution of 0.3 m or better. Traditionally, floodplain modeling data inputs have relied on the inferior National Land Cover Database (NLCD), which has a resolution of 30 meters and does not provide adequate detail for accurate floodplain modeling for installations.

After gathering and developing all necessary high-resolution spatial data, floodplain models were built for select installations, and 2D simulations were executed using subject matter expertise, best available science, and latest high-tech software and hardware tools.

The Environmental GIS Program, in partnership with Colorado State University's Center for Environmental Management of Military Lands (CEMML), collects, develops and maintains spatial data supporting Air Force environmental programs. This effort standardizes 70 environmental GIS data layers across Air Force installations worldwide. The resulting enterprise-wide environmental dataset is housed in the AFGIMS viewer and is available for utilization to identify trends, recognize patterns and perform analysis. Supported environmental program areas include Natural Resources, Cultural Resources, Hazardous Materials and Waste, Integrated Solid Waste, Environmental Storage Tanks, Air Quality, Water Quality and Environmental Restoration.

The program maintains comprehensive inventories of USAF Environmental assets that allows efficient management of resources while enabling the program to provide cartographic support and spatial analysis for forward-thinking program management solutions. Some of these solutions include 3D modeling for accurate visualization of habitat management, cartographic support for environmental impact Statements, visualizing spatial trends for resource management and identifying asset locations to enable a rapid and effective environmental response to emergencies. The program's comprehensive inventory allows for enterprise-wide analysis across the Air Force from the installation level to USAF-wide enabling streamlined environmental management.