The Department of the Air Force (DAF) water resources management program operates a risk based approach that directly supports mission assurance. Through policy enhancements, tool & guidance development, and comprehensive program updates, the DAF has gained insights into utility and infrastructure vulnerabilities and potential impacts to mission, empowering decision makers to invest in resilience, enhance mission assurance, and manage water more effectively.

Water Resources Management

Why it Matters

Water is essential to many mission sets, yet is under pressure from increasing industrial practices and growing populations, all competing over an increasingly scarce resource. Meanwhile, climate change impacts and aging infrastructure make meeting mission water requirements more challenging. The DAF is committed to a proactive, risk-based approach to water resilience to avoid adverse mission impacts due to water availability issues.

Key Focus Areas

The DAF water resources management program focuses on five key areas, each aiming to improve resilience to water scarcity or supply disruptions:

- Increase transparency in mission water needs and readiness
- Assess water risks and vulnerabilities comprehensively
- Analyze capability gaps and long term water availability risk
- Engage with external stakeholders
- Develop policy and guidance to improve installation water resilience

Did You Know...

The DAF used

23.4 BILLION GALLONS

of potable water in

FY 2020, down 31.5%

from FY 2007

From training to operations, water is a critical input to Air Force missions and to support Airmen day-to-day. Photo courtesy of DAF.

Current as of July 2022

Water Resilience Basics

Some factors to consider:

Mission critical water requirements

Mission impacts of a denial of water service

Water utility vulnerabilities, especially for mission critical assets

Water source supply trends & climate impacts

Access to backup water supplies

Water service's restoration priorities

Water infrastructure conditions

Maintenance of active water rights

Water contingency response plans

Future water requirements

FY 2021 and 2022 Activities

Evaluate Water Supply Risks

The DAF is leveraging existing assessments, tools, and methods to develop a comprehensive strategy for evaluating mission-level, installation-level, and regional water supply risks. Through water resilience modeling, data collection, and new policy and guidance development, the DAF is taking a leadership role in water risk analysis across the Department of Defense. Recognizing these risks enables the DAF to work proactively with base civil engineers, water managers, and local water agencies to ensure adequate water supply to meet mission needs.

Determine Water Demand

A detailed understanding of an installation's water demand helps to illuminate the water requirements of mission essential functions. The DAF developed the Installation Water Dashboard to capture installation-specific water infrastructure data and general information on water risk region-wide. The IDashboard collects existing information on water consumption practices, water rights documentation, key vulnerabilities, water used for mission, resilience documents, and more, all in one comprehensive platform. The Water Dashboard was piloted at seven installations in FY2020 and has rolled out enterprise-wide to all active-duty installations as of July 2021. Since, the Dashboard has been upgraded to include Air Force Reserve Command (AFRC) and Air National Guard (ANG) installations, tool improvements, and report generation capability.

The DAF has also created a Water Availability Scorecard, which is incorporated into the Dashboard and will assess which installations are at greatest risk of long term water availability so that DAF can prioritize resilience projects and funding.

Assess Water Management Practices

As the DAF develops a comprehensive risk-based approach to water management, it is important to have insight into the water management and planning processes already in use at DAF installations. This will improve visibility into readiness and potential vulnerabilities, support the development of Installation Energy Plans, and lead to projects and process improvements which can be prioritized by mission. Working closely with installations to develop more efficient methodologies and providing process and data transparency will support enhanced decision making at multiple levels.

The Department of the Air Force is taking a resilience-focused approach to future energy and water projects concentrated on providing strategic agility for missions and installations.

For more information:

safie.hq.af.mil/InstallationEnergy

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