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# Development of a Water Security Strategy for the U.S. Army

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# Support and Context

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- Funded by Army Environmental Policy Institute
- Prior AEPI-funded work included
  - *Army Installations Water Sustainability Assessment* (2009)
  - Interagency workshop to examine intersection of national security and water scarcity issues
- Concurrent AEPI-supported work included
  - *Water Sustainability Assessment for Ten Army Installations* (2011)
  - “Army Water Footprint”

# Key Motivators

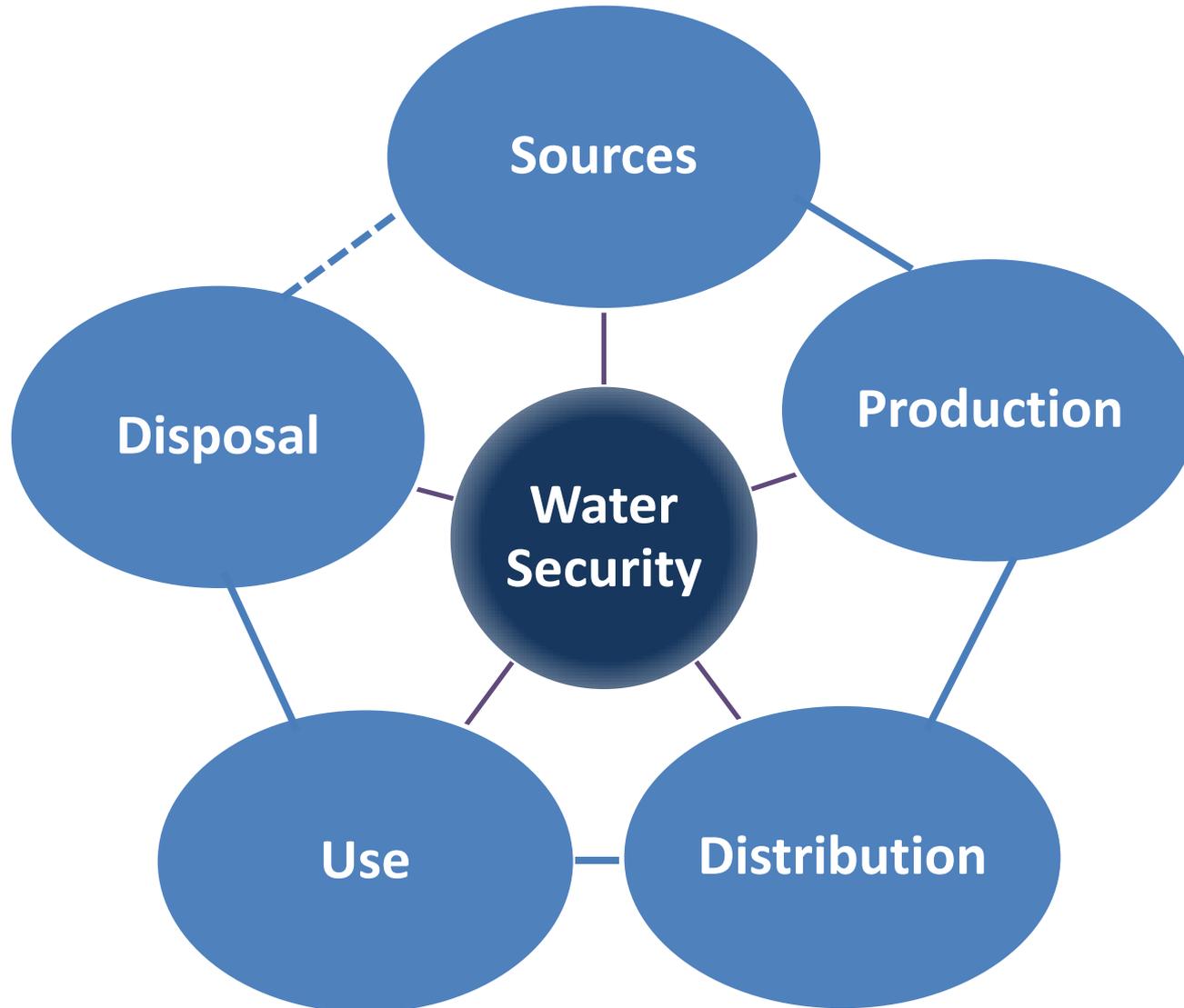
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- Institutional Army
  - Increasing regional demands for water
  - Uncertainties of availability, quality, cost
- Operational Army
  - Fully-burdened costs of bottled water
  - Infrastructure challenges: planning, technical
- Supply chain
  - Relationship between procurement and local water situations

# Army Water Security Strategy

## Scope

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# Information Sources

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- Literature review: Issues, policy drivers
- Interviews: Army, other Federal, NGOs
- Installation visits
  - Fort Huachuca
  - Fort Carson
  - Fort Bragg
  - Fort Meade

# Selected Observations Institutional Army

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- Water management largely compliance-driven:  
Necessary focus on meeting potable water standards, discharge standards, conservation goals
- Less attention directed outward to sustainability of regional shared water sources
- Long-term water projections currently not factored early into stationing decisions
- Embedded water in supply chain not yet considered among policy, security, or procurement issues
- Unilateral conservation actions may or may not result in greater water security

## Selected Observations Institutional Army (cont'd)

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- Ensuring quality and usefulness of water information collected can be a challenge (ISR-NI, AEWRS)
- Chronic funding constraints means attention to Army-owned and Army-operated infrastructure tends to be reactive; long-term investment a challenge
- Privatization viewed as largely successful: results investments in infrastructure, compelling savings; but may introduce security issues

# Selected Observations

## Operational Army

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- Coordinated action to enhance solutions for supplying water to today's warfighter (e.g., TRADOC Capabilities-Based Assessment)
- Importance of rebuilding and sustaining Army skill sets (e.g., civil engineering design, master planning)
- Diverse perspectives on bottled water use: optimal solution will be a judicious mix of production and delivery methods to encourage hydration; minimize costs, waste and casualty risks
- Host nation communities sensitive to Army water supply choices
- Operational Army experience can inform approach for institutional Army (e.g., level of guidance detail, feedback mechanisms, cross-service communication)

- Strategy Document
  - Sources and Rights
  - Demand
  - Infrastructure
  - Overseas Operations
- Findings Document
  - Detailed observations
  - Available through AEPI

## Goal #1: Water Resources Sustainability – Preserve Sources, Protect Rights

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- Anticipate long-term water requirements
- Protect water rights
- Influence long-term water management outside the fence line
- Eliminate installation water planning inefficiencies
- Provide comprehensive water security guidance for installations
- Coordinate, refine, and test emergency response plans and preparations
- Integrate water assessments into strategic decisions

## Goal #2: Water Resources Sustainability – Reduce Demand

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- Reduce water withdrawal and consumption rates
- Match water quality to water use
- Sustain a culture of efficiency and conservation
- Tailor conservation expectations [EO 13514] to differences among installations
- Mitigate adverse consequences of aggressive conservation

## Goal #3: Strategic Investment – Maintain Infrastructure Integrity and Security

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- Develop funding baseline for all retained and privatized systems
- Recapitalize: Fund SRM sufficiently to provide for recapitalization of non-privatized infrastructure
- Accurately anticipate cost increases resulting from privatization and budget accordingly
- Provide advance planning, contractual flexibility, and adequate staff support to implement and administer Army water privatization contracts
- Provide internal/external infrastructure compatibility
- Install robust contamination risk reduction technologies
- Assess the vulnerability of water and wastewater infrastructure to natural mishaps

## Goal #4: Water Security at Contingency Bases – Increase Self-Sufficiency, Reduce Risks

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- Reduce water use
- Engage partner nations concerning military water use
- Assist host nations with water resources sustainability
- Implement (DOTMLPF) solutions identified by the Army Base Camp Capability Based Assessment
- Ensure timely transition from bottles to local water
- Increase infrastructure adaptability
- Rebuild critical internal organic water supply capabilities
- Implement best practices and policies for distribution of water for personal hydration

## Highlighted Recommendations

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- Primer: Engaging water resources stakeholders
- Reference: How the Army secures its water
- Installation water atlas, following flow upstream: surface water, ground water, infrastructure
- Adapt Utah, Hawaii approach to water policy supporting military installations
- Apply NDMC drought readiness guide to establish “Drought Ready *Defense* Communities”
- Long-term support for water planning software
- Frame water issues for next BRAC round

## Related Developments

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- Discussions to include water security in the next iteration of the Army Campaign Plan.
- Water security information paper added to the 2012 Army Posture Statement made publically available earlier this year.
- “Army Water Footprint”
- Net Zero - Water
- Army IMCOM: CEWMPs
- Army ACSIM: Revamping ISR-NI

## Link and Contacts

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- Army Water Security Strategy  
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# Abstract

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In October 2010, the Army Environmental Policy institute commenced the development of an Army water security strategy, which was ultimately published in December 2011. The purpose of this effort was to (1) provide a complete workable definition for Army water security, (2) conduct the first comprehensive study of water security management in the Army, and (3) identify the key issues on which Army leadership can focus to ensure that the Army has enough water of suitable quality for the foreseeable future. A review of key policy drivers was followed by a series of interviews of personnel inside and outside the Army. The culminating effort identified four major goal areas:

1. Water Resources Sustainability – Preserve Sources, Protect Rights
2. Water Resources Sustainability – Reduce Demand
3. Strategic Investment – Maintain Infrastructure Integrity and Security
4. Water Security at Contingency Bases – Increase Self-Sufficiency, Reduce Risks