

**Army Regulation 700–136**

**Logistics**

# **Tactical Land- Based Water Resources Management**

**Headquarters  
Department of the Army  
Washington, DC  
5 June 2009**

**UNCLASSIFIED**

# ***SUMMARY of CHANGE***

AR 700-136

Tactical Land-Based Water Resources Management

This major revision, dated 5 June 2009--

- o Expands the responsibilities of the Deputy Chief of Staff, G-4, the Deputy Chief of Staff, G-3/5/7, The Surgeon General, the Chief of Engineers, the Commander, U.S. Army Training and Doctrine Command, and the Commander, U.S. Army Forces Command (para 4).
- o Updates water management policy (para 5d).
- o Makes administrative changes (throughout).

Effective 5 July 2009

## Logistics


# Tactical Land-Based Water Resources Management

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By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.  
*General, United States Army*  
*Chief of Staff*

Official:

  
JOYCE E. MORROW  
*Administrative Assistant to the*  
*Secretary of the Army*

**History.** This publication is a major revision.

**Summary.** This regulation establishes policy and assigns responsibilities for the management of water resources in support of tactical operations. It implements DODD 4705.1 and Joint Publication 4–03.

**Applicability.** This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. During mobilization, the proponent may modify chapters and policies contained in the regulation.

**Proponent and exception authority.** The proponent of this regulation is the Deputy Chief of Staff, G–4. The proponent has the authority to approve exceptions or waivers to this regulation that are

consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or a direct reporting unit or field operating agency in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25–30 for specific guidance.

**Army management control process.** This regulation contains management control provisions in accordance with AR 11–2, but does not identify key management controls that must be evaluated.

**Supplementation.** Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from the Deputy Chief of Staff, G–4 (DALO–SUM), 500 Army Pentagon, Washington, DC 20310–0500.

**Suggested improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Deputy Chief of Staff, G–4 (DALO–SUM), 500 Army Pentagon, Washington, DC 20310–0500.

**Committee Continuance Approval.**

The Department of the Army committee management official concurs in the establishment and/or continuance of the committee(s) outlined herein, in accordance with AR 15-1. Army Regulation 15-1 requires the proponent to justify establishing/continuing committee(s), coordinate draft publications, and coordinate changes in committee status with the Department of the Army Committee Management Office (AARP-ZA), 2511 Jefferson Davis Highway, Taylor Building, 13th floor, Arlington, VA 22202-3926. Further, if it is determined that an established "group" identified within this regulation, later takes on the characteristics of a committee, the proponent will follow all AR 15-1 requirements for establishing and continuing the group as a committee.

**Distribution.** This publication is available in electronic media only and is intended for command levels A, B, C, D, and E for the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

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**Glossary**

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\*This regulation supersedes AR 700–136, dated 10 May 2005.



## 1. Purpose

This regulation sets policy for tactical water resources management. It defines the Army's responsibilities for tactical water support. This regulation does not apply to fixed installation water support operations or civil works emergency water management.

## 2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

## 3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

## 4. Responsibilities

*a.* The Secretary of the Army will serve as the Department of Defense (DOD) Executive Agent for management of land-based water resources in support of contingency operations per DODD 4705.1, paragraph 1.2.

*b.* The Deputy Chief of Staff, G-4 (DCS, G-4) is designated the Army Staff proponent for land-based water resource matters in support of contingency operations and is delegated the authority to act on behalf of the Secretary of the Army for any or all of the DOD Executive Agent responsibilities, functions, and authorities. The DCS, G-4 will—

(1) Coordinate requirements relating to logistics, research, development, and acquisition with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)).

(2) Coordinate with other Services and the joint staff to develop joint policy, procedures, and requirements for water resources management in support of land-based forces.

(3) Establish procedures for coordinating regulations, plans, and equipment acquisition related to water support for DOD components.

(4) Coordinate with other Services and the joint staff to ensure that research and development efforts meet overall DOD goals and that duplicate efforts are eliminated.

(5) Develop, in coordination with the other Services and the joint staff, joint doctrine for employment of water resources.

(6) Develop and publish an Army water support doctrine that is compatible with Joint doctrine.

(7) Ensure that tactical water support to other Services is incorporated into Army Component operational plans (OPLANS) and contingency plans (CONPLANS).

(8) Ensure the development of an automated database that will—

*(a)* Provide online data on the location, quantity, and quality of land-based water resources to DOD.

*(b)* Assist commanders, task forces, combatant commanders, and Joint Logistics Staff in making water support logistics decisions in tactical situations.

(9) Establish and chair annual meetings of Joint Water Resources Management Action Group (JWRMAG) to coordinate and resolve joint water support issues.

(10) Chair various integrated process team meetings and JWRMAG steering group meetings as required.

(11) Program funding to support the role, responsibility, and DOD mandate as the Executive Agent for tactical land-based water resources management.

*c.* The Deputy Chief of Staff, G-3/5/7 (DCS, G-3/5/7) will—

(1) Oversee water-related troop organization, force structure, operations, plans, and readiness.

(2) Ensure that resources are programmed to support the requirements of the combatant commands and the DCS, G-4 through the program objective memorandum (POM) submissions.

(3) Participate and attend the JWRMAG.

*d.* The ASA(ALT) will—

(1) Develop the guidance, with the DCS, G-3/5/7, for the Long-Range Army Materiel Requirements Plan and serve as co-proponent for the Army Long-Range Research, Development, and Acquisition Plan for equipping the future Army.

(2) Prepare the modernization portion of the POM with the DCS, G-3/5/7.

(3) Coordinate with the Assistant Secretary of the Army, Financial Management and Comptroller and with the DCS, G-3/5/7 to review and validate the research, development, and acquisition (RDA) program.

(4) Monitor the execution of the RDA program to include identifying programs for funding adjustments.

(5) Ensure Program Executive Office Combat Support & Combat Service Support, which will capitalize on emerging technologies relative to Army productive lines, ensuring the best possible products are available to support the objective force and beyond.

(6) Oversee the product manager, Petroleum and Water Systems, who leads a fully integrated team that develops, produces, fields, and sustains world-class petroleum and water systems in support of U.S. forces across the operational spectrum.

*e.* The Surgeon General will—

- (1) Establish potable and nonpotable water quality standards.
  - (2) Determine water quality monitoring and surveillance requirements.
  - (3) Test bulk, packaged, and bottled water supplies and approve them for distribution.
  - (4) Conduct technical review and evaluation of water equipment to determine the possible existence of health hazards.
  - (5) Assist in the development and review of test protocols for the military use of tactical water purification systems.
  - (6) Provide guidance in the selection and use of commercial-off-the-shelf water purifiers and water treatment systems.
  - (7) Establish procedures for executing field water vulnerability assessments.
  - (8) Participate in and attend the JWRMAG.
- f.* The Chief of Engineers (COE) will—
- (1) Formulate policies, procedures, and equipment requirements to locate and develop raw water sources.
  - (2) Comply with all requirements, substantive and procedural, for control and abatement of water pollution, as outlined in the Clean Water Act (Title 33, Section 151, United States Code (33 USC 151), which requires Army compliance.
  - (3) Develop and maintain an automated database for rapid retrieval of water related data.
  - (4) Construct, maintain, and operate permanent and semipermanent and nontactical water utility systems to support enemy prisoner of war, refugee, displaced civilian, and other similar humanitarian relief effort base camps.
  - (5) Establish and assist in the operation of the water utility and waste water systems associated with “Force Provider” support sites. Specific COE requirements will be determined by the Force Provider commander.
- g.* The Commander, U.S. Army Training and Doctrine Command (TRADOC) will—
- (1) Develop all tactical water support doctrine, to include doctrine on the use of commercial bottled water and water packaging systems.
  - (2) Conduct individual training for military occupational specialties, table of organization and equipment documentation, and equipment basis of issue plans.
  - (3) Validate DOD and Army water consumption planning factors.
  - (4) Assign a command representative to the JWRMAG from Headquarters, TRADOC; the Quartermaster Center and School; the Engineer School; and other agencies/commands that are deemed appropriate.
- h.* The Commander, Army Material Command will—
- (1) Oversee the Research Development and Engineering Center, which, through tank automotive research development will employ science and technology, research and development, engineering support, quality assurance, and related work to develop—
    - (a) Water storage and distribution equipment.
    - (b) Water quality monitoring equipment.
    - (c) Water treatment equipment.
    - (d) Bulk treatment for the recycle and reuse of water.
    - (e) Emergency use treatment devices for the soldier.
    - (f) Packaging into disposable or reusable containers.
    - (g) Certification of nonstandard systems, to include emergency, handheld systems for treating water..
    - (h) Water generation equipment from nontraditional sources, including vehicle exhaust and atmospheric humidity.
  - (2) Oversee the Integrated Logistics Support Center, which will—
    - (a) Maintain storage and maintenance of all tactical water equipment maintained within depots in the continental United States (CONUS), including all water equipment operational project stocks (OPS).
    - (b) Be responsible for funding and budget management for OPS.
    - (c) Develop transportation plans, containerization plans, and call forward procedures for water OPS at CONUS depots.
    - (d) Develop loan procedures for water OPS to support training exercises.
    - (e) Develop a care-of-supplies-in-storage plan for water support equipment propositioned afloat or ashore outside CONUS.
    - (f) Develop a plan for reconstitution or reset of water OPS after deployment.
  - (3) Oversee the Army Field Support Command, which, through the program management office for the Logistics Civil Augmentation Program, will—
    - (a) Develop and publish contingency plans to provide necessary augmentation of force structure via civilian contractor capability to fill shortfalls in water purification, storage, and distribution capability in the Army.
    - (b) Exercise and implement the water purification and distribution civil augmentation plans as required.
    - (4) Participate in and attend at the JWRMAG.
- i.* The Commander, U.S. Army Forces Command will—

(1) Plan for the use of tactical water support requirements for Army forces during the planning phases of an operation.

(2) Ensure that tactical water support for other Services, when required to be provided by the Army, is incorporated into OPLANS and CONPLANS or preplanned with inter-Service support agreements (ISSAs).

(3) Maximize the use of and dependency on tactical water purification, storage, and distribution equipment in all operations and exercises and minimize dependency on commercial bottled water.

(4) Establish a basic-days-of-supply level for water consumption (packaged) during the initial stages of combat operations. Synchronize arrival of water units in such a way that the water distribution system will expand from commercial packaged water distribution early on to water production and distribution as the theater matures.

(5) Establish and maintain a collective (unit level) tactical water training facility, integrating a total Army approach to include the Active Army, Army National Guard/Army National Guard of the United States, and U.S. Army Reserve.

(6) Respond to operational requirements for tactical water purification equipment.

(7) Participate in and attend the JWRMAG.

*j.* The commanders of quartermaster units will—

(1) Test, treat, store, and distribute potable water.

(2) Establish and operate water points for direct support/general support of units.

(3) Participate in FORSCOM unit-level tactical water support training.

(4) Identify and ensure compliance with local environmental requirements at sites where water treatment equipment is used.

(5) Employ unit field sanitation teams in accordance with Field Manual (FM) 21–10 to conduct routine inspection of unit water containers and trailers, conduct daily checks of unit water supplies for chlorine residual, and disinfect (chlorinate) unit water supplies as required.

*k.* Commanders of materiel management centers will centrally manage water as a critical commodity if potable water is declared a scarce commodity.

*l.* Commanders of engineer units will—

(1) Locate and develop water resources.

(2) Provide construction support necessary to establish water well sites and construct, maintain, and operate permanent and semi permanent water utility systems in the theater of operations.

*m.* Commanders at all levels will—

(1) Take appropriate measures to protect water inventories from pilferage, contamination, or damage/loss from natural causes.

(2) Provide adequate quantities of potable water for human consumption, food preparation, brushing teeth, personal hygiene and centralized showers.

(3) Enforce a potable water consumption monitoring program to ensure that troops under their command do not become dehydration casualties.

(4) Enforce the appropriate potable and nonpotable water sanitary control and surveillance procedures, as defined in Technical Bulletin Medical (TB MED) 577, to prevent waterborne disease and illness, including the manning, training, equipping and employing of unit field sanitation teams.

(5) Assure that, in situations where nonpotable water must be used for centralized showers and other nondrinking human contact purposes, the command surgeon has approved using water for those purposes.

(6) Procure and use only individual water purifiers recommended by TRADOC and or the Office of the Surgeon General for the intended purpose.

*n.* Commanders of transportation units will provide line haul transportation of water between bulk storage facilities.

*o.* Commanders at all levels will—

(1) Implement or oversee the implementation of preventive medicine and veterinary medicine procedures and instructions required for ensuring the adequacy and safety of field water supplies.

(2) Ensure timely and proper potable waters supply testing and approval for distribution and consumption.

(3) Ensure potable and nonpotable water quality monitoring and surveillance are performed in accordance with TB MED 577.

(4) Provide the medical oversight of field water supply operations for the prevention of waterborne diseases.

(5) Ensure the results of medical water quality monitoring surveillance and health risk assessments are uploaded to the Deployment Occupational and Environment Health Surveillance data portal.

## **5. Policy for water resources**

*a. Water-support requirements for Army forces.* Water-support requirements for Army forces will be considered in the initial phases of each military operation and, when appropriate, included in OPLANS. At a minimum, planners will ensure that—

(1) Maximum use will be made of existing water systems in an area of operations. Damaged systems that can be repaired and operated by the Army will be used to augment organic capability.

(2) Water requirements will be estimated on established planning factors.

(3) Plans will be formulated to meet all expected needs.

(4) Sufficient organic capability is programmed to support the water requirements of the force.

*b. Water support for other Services.*

(1) The Army will provide backup water support to other Services in an area of operations when requested and when the water-support requirements of the other Services exceed their own organic capability.

(2) Water support to other Services will be incorporated into OPLANS and CONPLANS or preplanned with ISSAs. Army support to other Services is a critical consideration in all POM funding requirements and Total Army Analysis development.

*c. Water standards.*

(1) Potable and nonpotable water standards will be established by the medical authority for each area of operation using guidance set forth in TB MED 577.

(2) Water standards for all applications will be established at levels that will not endanger the health of personnel.

(3) Sanitary control and surveillance of Army water supplies will be provided according to the standards, criteria and guidance published in TB MED 577.

(4) Water standards for construction, showers, laundry, and other non-personal cleansing purposes may be less than those established for drinking water. The area medical authority will approve/disapprove the use of lower quality water for these purposes after assessing the associated health risks.

*d. Water treatment, storage, and distribution.*

(1) Water treatment, storage, and distribution points will be located as close to supported units as dispersion factors, sources of supply and the tactical situation permits.

(2) Contractor-owned and/or -operated water treatment, storage and distribution systems will be subject to the same medical oversight, inspections and standards, and other requirements as those owned and operated by the military.

(3) Fresh water will be used before brackish or salt water.

(4) Only potable water will be stored or transported in containers intended for potable water and potable water containers will be labeled as such.

(5) Potable water will not be transported or stored in petroleum, oils, and lubricants (POL) tankers or other containers intended for or which have contained POL products or other toxic materials.

*e. Water management.*

(1) When water is readily available, it will be provided to the user with minimum controls.

(2) When potable water is scarce, it will be centrally managed by materiel management centers as a critical commodity.

(3) When water resources are scarce, consumption requirements will be prioritized prior to its issue.

(4) Procedures will be established to protect water supply systems and maintain the potability of the water.

(5) Water inventories will be protected from pilferage, contamination, capture, or damage/loss from natural causes.

*f. Water supply discipline.*

(1) Water supply discipline procedures will be established and enforced to include water conservation initiatives.

(2) Adequate water consumption for the various environmental conditions and activity levels encountered must be enforced to prevent heat casualties per TB MED 507.

*g. Exercises and training.*

(1) Tactical water concepts will be applied in all field training exercises.

(2) Water supply discipline training will be conducted periodically to ensure a thorough understanding of principles, practices, and procedures.



## **Appendix A References**

### **Section I Required Publications**

This section contains no entries.

### **Section II Related Publications**

A related publication is a source of additional information. The user does not have to read it to understand this publication.

**FM 10–52**  
Water Supply in a Theater of Operations

**FM 10–52–1**  
Water Supply Point Equipment and Operations

**FM 21–10**  
Field Hygiene and Sanitation

**TB MED 507**  
Heat Stress Control and Heat Casualty Management

**TB MED 577**  
Sanitary Control and Surveillance of Field Water Supplies

**DODD 4705.1**  
Management of Land-Based Water Resources in Support of Joint Contingency Operations (Available at <http://www.dtic.mil/whs/directives/>.)

**Joint Publication 4–03**  
Joint Bulk Petroleum and Water Doctrine (Available at [http://www.dtic.mil/doctrine/s\\_index.html](http://www.dtic.mil/doctrine/s_index.html).)

**33 USC 151**  
High Seas and Inland Water Demarcation Lines (Available at <http://www.gpoaccess.gov/uscode/>.)

### **Section III Prescribed Forms**

This section contains no entries.

### **Section IV Referenced Forms**

This section contains no entries.

## **Glossary**

### **Section I Abbreviations**

#### **ASA(ALT)**

Assistant Secretary of the Army (Acquisition, Logistics and Technology)

#### **COE**

Chief of Engineers

#### **CONPLANS**

contingency plans

#### **CONUS**

continental United States

#### **DCS, G-3/5/7**

Deputy Chief of Staff, G-3/5/7

#### **DCS, G-4**

Deputy Chief of Staff, G-4

#### **DOD**

Department of Defense

#### **DODD**

Department of Defense Directive

#### **FM**

field manual

#### **FORSCOM**

U.S. Army Forces Command

#### **ISSA**

inter-Service support agreements

#### **JWRMAG**

Joint Water Resources Management Action Group

#### **OPLANS**

operational plans

#### **OPS**

operational project stocks

#### **POL**

petroleum, oils, and lubricants

#### **POM**

program objective memorandum

#### **RDA**

research, development, and acquisition

#### **TB MED**

Technical Bulletin Medical

## **TRADOC**

U.S. Army Training and Doctrine Command

### **Section II**

#### **Terms**

##### **Force provider**

A modular design collective support package to improve quality of life for the front-line Soldier. It contains all the materiel necessary to provide quality food, billeting, laundry, shower/hygiene services, and expanded morale, welfare and recreation to a brigade-size force.

##### **potable water**

Water that is safe for human consumption.

##### **raw water**

Water in its natural state.

##### **treated water**

Water processed to the degree required for a specific use.

##### **water point**

Water supply point for direct support issue of water.

### **Section III**

#### **Special Abbreviations and Terms**

This section contains no entries.

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