

DEPARTMENT OF THE ARMY  
HEADQUARTERS, US ARMY GARRISON HAWAII  
SCHOFIELD BARRACKS, HAWAII 96857-5000

USAG-HI Regulation  
Number 420-2

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Facilities Engineering  
TEMPORARY WATER SERVICES

This first edition addresses the functional responsibilities and procedures for the request, approval, and implementation of temporary water services on United States Army Garrison, Hawaii (USAG-HI) installations.

1. PURPOSE. To establish and implement regulatory guidelines for installing temporary water connections to the existing water distribution infrastructure on USAG-HI installations.

2. REFERENCES.

a. Required References.

(1) Army Regulation (AR) 420-1, Army Facilities Management, 12 Feb 08, with Rapid Action Revision (RAR) 28 Mar 09.

(2) Technical Bulletin (TB) Medical (MED) 576, Sanitary Control and Surveillance of Water Supplies at Fixed Installations, Mar 82

(3) Unified Facilities Criteria (UFC) 3-230-02, Operations and Maintenance: Water Supply Systems, 10 Jul 01.

(4) USAG-HI Pamphlet (Pam) 420-2, Temporary Water Services Administrative Support Supplement.

(5) Directorate of Public Works (DPW) Customer Service Handbook, 11<sup>th</sup> Edition, August 2011.

b. Related References.

(1) United States Code (USC) Title 42, Chapter 6A, Subchapter XII, Part A et. seq., Safety of Public Water Systems.

(2) Chapter II: 209-217, Section 2-213, Board of Water Supply Rules and Regulations, City and County of Honolulu.

c. Required Forms. This regulation prescribes the following command forms.

(1) USAG-HI Form 36, Request for Temporary Water Service

(2) USAG-HI Form 37, Reduced Pressure Principle Backflow Prevention Assembly Test Report.

(3) USAG-HI Form 38, Notice of Temporary Water Service Approval.

d. Referenced Form. Department of the Army (DA) Form 4283, Facilities Engineer Work Request.

3. SCOPE. This regulation addresses the procedures that realize authorized installation of water cross-connection control units to the existing water distribution infrastructure on USAG-HI installations located on the Island of Oahu. (NOTE: For temporary water service policy and procedures on Pohakuloa Training Area (PTA) and Kilauea Military Camp, see paragraph 7.a. of this regulation.)

4. APPLICABILITY. This regulation applies to all USAG-HI organic and tenant activities occupying real property facilities on USAG-HI installations, to include contracting agencies generating construction contracts for which the work projected will require temporary water services drawn from an established water dispensing source on the installation.

5. RESPONSIBILITIES.

a. *Commander, United States Army Garrison, Hawaii.* Provides senior, executive-level guidance and oversight to the Director, DPW, pertaining to any and all policy and procedures contained in this regulation

b. *Director of Public Works.* Provides senior, Directorate-level guidance and oversight to DPW internal elements responsible for implementing temporary water services on USAG-HI installations.

c. *Engineer Branch, Engineering Division, DPW.*

(1) Provides management and oversight to the provisions of this regulation.

(2) Vested with approving authority for point of connection, devices used, water conservation and landscape irrigation plan.

d. *Plumbing Shop, Utilities Branch, Operations and Maintenance Division (OMD), DPW.*

(1) Exclusively responsible for installing and removing water meters, and, when approved by the Utilities Branch, DPW, backflow prevention devices, as part of a cross connection into any component of the established water distribution infrastructure on a USAG-HI installation.

(2) Monitors the status of all installed temporary water service meters and backflow prevention devices for the duration of the terms of approval.

(3) Performs all required inspections of approved cross-connection devices authorized by this regulation.

e. *Work Order Section, Business Operations Division (BOD), DPW.*

(1) Responsible for accepting Service Orders (SO) and Facilities Engineer Work Requests (FEWR) from activities requesting the installation of water meters and/or Reduced Pressure Principle Backflow Prevention Assemblies.

(2) Enters the data into the Directorate automated work management program.

(3) Forwards the SO and/or FEWR to the DPW agency responsible for implementing the conditions of the SO and/or FEWR.

## 6. OVERVIEW.

a. Paragraph 10.1, Section 10 of reference 2.a.(2) above is quoted as follows:

(1) "Cross connections and Backflow. Cross-connections are the physical links through which contaminated materials can enter a potable water supply. The contaminant enters the potable water supply when the pressure of the polluted sources exceeds the pressure of the potable source.

(2) "The flow of contaminated water to the potable system is called ' backflow.' Backflow of contaminated water through cross-connections can occur in all water system and does occur in most water systems. Backflow due to back pressure occurs when the user's water system is under higher pressure than the [source] water supply system. Back siphonage is caused by the development of negative or sub-atmospheric pressures in the water supply piping."

b. The policies and procedures in this regulation shall be binding in order to prevent the occurrence of backflow into the installation water systems as described in 6.a.(1) and (2) above.

c. At no time shall water be drawn from any component of the water distribution infrastructure on a USAG-HI installation without the installation of, at minimum, a reduced pressure principle backflow preventer device. The Garrison standard shall be a Reduced Pressure Principle Backflow Prevention Assembly approved and sanctioned by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

## 7. POLICY AND PROCEDURES.

a. Water system infrastructures for PTA and KMC differ significantly from systems in place on USAG-HI installations on the Island of Oahu mandating a different set of temporary water service procedures from those documented in this regulation. Temporary water services for those installations must be coordinated through the office of the Water Systems Engineer, 656-3296.

b. Installation of any cross-connecting device to a component of the existing water distribution infrastructure on a USAG-HI installation shall be the exclusive responsibility of the Utilities Branch, DPW, USAG-HI (hereafter referred to as the DPW Utilities Branch). There shall be no exceptions to this policy. Only the following components shall be part of the cross-connection into a component of the established water distribution system.

(1) Water meter (optional at the discretion of the Engineer Branch, Engineering Division, DPW (hereafter referred to as the DPW Engineer Branch)).

(2) Reduced pressure principle backflow preventer as approved in this regulation.

c. The need for water service on USAG-HI installations that cannot be obtained from the existing dispensing components of the water distribution infrastructure in place, e.g., faucets, requires an authorization from the DPW Engineer Branch to connect into that system. These cross-connections are to be temporary; the primary source for temporary water service cross-

connections shall be from existing fire hydrants. Cross-connections into surface or sub-surface water distribution components, e.g., above and/or underground water mains, are discouraged. Only the Engineer Branch proponent can evaluate and determine the validity for approving those cross-connections.

d. Requests for temporary water services for active duty and tenant units supported by the DPW, USAG-HI for utilities services .

(1) Requests for temporary water services are initiated on USAG-HI Form 36, Request for Temporary Water Services (see Enclosure 1 to USAG-HI Pam 420-2) and forwarded to the DPW Engineer Branch, Stop 253, ATTN: Water Systems Engineer, (656-3296). USAG-HI Form 36 can be transmitted as an email attachment to: karl.santa@us.army.mil. A map section or detailed, accurate sketch showing location of proposed connection to hydrant or waterline must also be included. If a section of a map cannot be generated to send as an email attachment along with USAG-HI Form 36, the map must be brought to the office of the DPW Water Systems Engineer on Wheeler Army Airfield. Point of connection must be clearly identified or the request will be returned. Requests for temporary water service must also include a water conservation plan explaining how the user will control usage and reduce waste. When irrigation is performed a landscape irrigation plan must also be submitted that will identify the duration of the irrigation, daily frequency and duration of watering and average daily demand. Requests for temporary water service must be received by the DPW Engineer Branch not less than thirty (30) calendar days prior to the date the service is to begin. The Water Systems Engineer represents the DPW Engineer Branch on all issues pertaining to temporary water services cited in this regulation. Any reference to the DPW Engineer Branch shall be understood to mean the Water Systems Engineer, who serves as the Branch proponent on the issue.

(2) After reviewing the submitted USAG-HI Form 36, the Government Representative or Project Manager shall coordinate with the Federal Fire Department (FFD) on the scope and duration of the proposed cross connection installation. FFD concurrence on the proposed cross-connection installation must be first secured before proceeding. In the event the FFD does not concur with the installation, the DPW Engineer Branch will return the request and advise the requesting agency to select another location or another means of providing the water source, e.g., mobile water tank.

(3) Approved requests shall be returned via the submission method it was received. When submitting the request, the requester should specify the preferred method of return, e.g., command distribution, facsimile, or email attachment. It shall be the requester's responsibility to provide correct destination phone or facsimile numbers or email address. Approved requests for temporary water service are valid for one hundred and twenty (120) days from the date of the approval.

(4) During the review process of the requester's submitted USAG-HI Form 36, the DPW Engineer Branch will determine if a water meter will be part of the cross-connection assembly installation as well as settle the issue of reimbursement requirements. For one connection the first water meter will be provided by DPW. A second meter can be provided if necessary and available. Each additional meter will need to be provided by the requesting agency. Generally there is no reimbursement requirement for active duty, military units supported by DPW for utilities services. Approved requests for temporary water services will indicate if the DPW Utilities Branch will install the backflow preventive device. In the event the requester will be responsible for that part of the cross connection, the provisions of paragraph 7.d.(4) below applies.

(5) Once the requester receives the approved request for temporary water services, it shall be the requester's responsibility to generate an SO and/or FEWR through the DPW Work Management Section. The SO and FEWR process is described in detail in reference 2.a.(4) above. Assistance with the procedures can be obtained by calling 656-1275/5281/1349.

(6) Approved SOs for installation of water meters and/or backflow prevention devices will be forwarded to the Plumbing Shop, Utilities Branch, DPW (hereafter referred to as the DPW Plumbing Shop) for action. The DPW Plumbing Shop shall be responsible for procuring, installing, and testing of the reduced pressure principle backflow preventer. The test results shall be recorded on USAG Form 37, Reduced Pressure Principle Backflow Prevention Assembly Test Report (see Enclosure 2 to USAG-HI Pam 420-2). Once the DPW Plumbing Shop completes installation of the backflow preventer assembly (and water meter if the SO included concurrent installation) and the required tests have been successful, the results shall be recorded on USAG-HI Form 37 and forwarded to the DPW Engineer Branch. Receipt of the completed USAG-HI Form 37 shall be confirmation that the temporary water service is in place and ready for use. The DPW Engineer Branch completes and forwards USAG-HI Form 38, Notice of Temporary Water Service Approval (see Enclosure 3 to USAG-HI Pam 420-2) to the requester.

(7) It shall be understood that the person's name entered after the lead line, "Name of Individual Requester," on USAG-HI Form 36 will be the *user activity's* permanent contact person or, the user activity POC, for any and all temporary water service issues pertaining to the approval for the duration of the service. It shall be the responsibility of the requester of the temporary water service to promptly inform the DPW Engineer Branch of any change in data elements on the original USAG-HI Form 36. Any interruptions in communication between the DPW organizations supporting the requester activity will be sufficient reason to initiate termination of the temporary water service.

(8) In the event temporary water services will be needed beyond the 120-day approval period, a request for extension must be submitted to the Water Systems Engineer. The request for extension must be received by the DPW Water Systems Engineer at least fourteen (14) *working days* prior to the "End Date" entered on the approved USAG-HI Form 36. (See Enclosure 4 to USAG-HI Pam 420-2 for an example of a request for water service extension)

(9) It shall be the responsibility of the DPW Engineer Branch to monitor temporary water service for the duration of the approval period. In the event no request for an extension of water service is received within 21 working days of the end date of service, the POC Engineer Branch, DPW shall notify the user activity POC by submitting USAG-HI Form 38. Concurrently, a courtesy telephone call will be attempted to the user activity POC. It shall be understood that no response from the user activity POC to the water service termination notice within seven (7) working days of the date of the notice or no communication to attempted telephone contacts, will result in termination of the temporary water service. The DPW Engineer Branch will notify the Chief, Utilities Branch, OMD, DPW, to disconnect all appurtenances that were installed to support the service up to the End Date cited on the original USAG-HI Form 36.

e. Requests for temporary water services by activities other than DPW-supported units and activities, e.g., contractors performing construction work as part of Garrison, contracting office oversight and management.

(1) Temporary water service requirements that support military construction (MILCON) projects need to be identified as early as possible in the initial planning phase. Unlike active duty and tenant units supported by the DPW, USAG-HI for utilities services, commercial

construction companies absorb the costs for procuring, installing, and testing the reduced pressure principle backflow prevention assembly. It shall be the responsibility of all USAG-HI agencies that generate MILCON offers to potential bidders to conspicuously include those conditions of temporary water services in order that potential bidders factor those costs into their bid offers. Army authorities that review bid offers shall ensure that those costs are in fact included in the bid offer when considering any offer for contract award.

(2) Once the construction company (or companies) has been selected and awarded a construction contract the Contracting Officer's Representative (COR) will complete USAG-HI Form 36 and submit it to the DPW Engineer Branch. The DPW Engineer Branch will specify if a water meter is to be installed concurrently with the backflow prevention device. The DPW Engineer Branch shall retain a copy of the approved USAG-HI Form 36.

(3) In the event a water meter will be included as part of the installation, the COR will submit an SO to the DPW Work Management Section. The Work Management Section generates and forwards the approved SO to the DPW Plumbing Shop. When the water meter is installed the Plumbing Shop notifies both the DPW Engineer Branch and the COR. The COR contacts the construction company to implement the process of installing the reduced pressure principle backflow prevention assembly.

(4) It shall be the responsibility of the construction company to:

(a) Procure the reduced pressure principle backflow prevention assembly. The reduced pressure principle backflow prevention assembly must be of a design that is sanctioned by the University of California foundation for Cross-Connection Control and Hydraulic Research. There shall be no exception to this standard.

(b) Install (or have) the backflow prevention assembly properly installed. The installation shall not commence without, at minimum, the presence of a representative from the DPW Plumbing Shop to observe the installation from start to finish. It shall be the responsibility of the COR monitoring the terms of the contract to provide the DPW Plumbing Shop a minimum of seven (7) calendar days notice of the installation date.

(c) Have the backflow prevention assembly tested by a certified backflow assembly tester, hereafter referred to as the "tester". The tester shall complete USAG-HI Form 37, and pass it to the construction company. The construction company representative will forward the completed USAG-HI Form 37, certified by the tester, to the COR.

(5) The COR forwards the USAG-HI Form 37 to the Water Systems Engineer and discusses any issues as needed.

(6) It shall be the responsibility of the DPW Engineer Branch, Water Systems Engineer, and a plumber from the DPW Plumbing Shop to concurrently inspect the installed backflow device and, if applicable, accompanying water meter. Both persons must concur that the installed device(s) do in fact reflect the results of the tester's report before it is determined to be authentic and before temporary water service is approved.

(7) When the conditions of paragraph 7.d.(6) above have been concurred upon, the DPW Engineer Branch will generate four (4) copies of USAG-HI Form 38. The Water Systems Engineer completes the lines 1 and 2, DPW points of contact, and lines and confirms that line (1) and lines (3) through (6) of the CERTIFICATION block accurately reflect the construction

company's data. The DPW points of contact will be: the Water Systems Engineer's name and phone number will be entered on line 1 and the Chief, Utilities Branch's name and phone number on line 2.

(8) If necessary, the Water Systems Engineer, the Plumbing Shop Supervisor, and the COR will meet with the construction company's representative at a location specified by the Water Systems Engineer to present USAG-HI Form 38 and go over any and all necessary provisions of the approved temporary water service. It shall be the responsibility of the COR to contact the construction company's representative and schedule the meeting. Otherwise USAG-HI Form 38 will be distributed via email. Meeting topics shall, at a minimum, include, but not be limited to, the following issues.

(a) The 120-day duration of the temporary water service citing the start and ending dates.

(b) The requirements and procedures for requesting an extension to the 120-day approval, citing the sample extension letter at Enclosure 4, USAG-HI Pam 420-2, and emphasizing the need to ensure that the request is received by the DPW Engineer Branch at least 14 days prior to the established termination date.

(c) Procedures and policy concerning financial liability if Garrison-owned components, i.e., water meter, if installed.

(d) Terms for termination of water services in the event of intentional, deviations to the agreements pertaining to the same.

(e) The construction company's responsibility to notify the COR in the event the construction contract is ahead of schedule and that the temporary water service will not, in fact, be needed for the duration of the 120-day approval period. The construction company's representative will provide the adjusted date which the temporary water service can be terminated.

(9) Once all meeting topics have been discussed and all understandings are in place the construction company's representative signs line (2) in the CERTIFICATION block of USAG-HI Form 38, providing an original signature on all 4 copies. One copy will be provided to the COR, the Water Systems Engineer, and the Chief, Utilities Branch. The construction company retains the fourth copy of USAG-HI Form 38. Temporary water service shall be active from that point.

(10) The Water Systems Engineer, the Chief, Utilities Branch, and the COR shall work as a team to ensure that adequate monitoring and oversight is contributed in their respective areas of responsibility for the duration of the temporary water service.

(11) In the event the construction company does not initiate a request for extended, temporary water service or does not inform the COR of early termination of the service, it shall be the responsibility of the Water Systems Engineer to notify the construction company 14 working days prior to the termination date of the temporary water service that the service will be terminated, citing the termination date. Good cooperation cited in paragraph 7.d.(10) above should preclude the need for this notification. In the event it is exercised, it shall be the responsibility of the DPW Engineer Branch Administrative Support person to generate the Water Service Termination Notification letter on behalf of the Water Team Engineer. Should a request for extension of the service result from this notification, the procedures for extension in accordance with (IAW) this regulation and USAG-HI Pam 420-2 will be implemented.

(12) Termination of temporary water services. The following procedures shall be implemented once the COR confirms that the terms of the MILCON contract have been fulfilled and all administrative instruments of authority cited in this regulation to terminate temporary water service have been implemented.

(a) It shall be the responsibility of the COR to notify both the DPW Engineer Branch and the DPW Plumbing Shop of the date the construction company's representative confirms temporary water service will no longer be needed. The COR will confirm the date and time that the construction company will (or will have) the backflow prevention device removed.

(b) Under no circumstances will the backflow prevention device be removed without, at minimum, the presence of a plumber from the DPW Plumbing Shop observing the process from start to finish.

(c) Prior to the removal of the backflow prevention device, the Chief, Utilities Branch shall assign sufficient plumbing support to ensure that water flow through the backflow prevention device is securely halted and that removal of the device is safe to commence.

(d) The Chief, Utilities Branch, will provide sufficient plumbing support to remove the water meter (if installed) and perform any and all plumbing tasks that reconnect the flow of water through the water flow conduit, e.g., water mains, and that no leaks at the connections are present.

(e) The DPW Engineer Branch Administrative Support personnel will generate the notice of temporary water service termination. Published DPW correspondence control procedures apply.

(IMPC-HAW-PW)

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## APPENDIX A: Abbreviations, Acronyms and Special Terms

Abbreviations and Acronyms

<i>AR.</i>	Army Regulation.
<i>BOD.</i>	Business Operations Division (DPW, USAG-HI).
<i>COR.</i>	Contracting Officer's Representative.
<i>DA.</i>	Department of the Army.
<i>DPW.</i>	Directorate of Public Works (USAG-HI).
<i>FEWR.</i>	Facilities Engineer Work Request (DA Form 4283)
<i>FFD.</i>	Federal Fire Department
<i>IAW.</i>	In Accordance With.
<i>KMC.</i>	Kilauea Military Camp (Island of Hawaii).
<i>MED</i>	Medical.
<i>MILCON</i>	Military Construction.
<i>OMD.</i>	Operations and Maintenance Division (DPW, USAG-HI)
<i>Pam.</i>	Pamphlet.
<i>POC.</i>	Point of Contact.
<i>PTA.</i>	Pohakuloa Training Area (Island of Hawaii).
<i>RAR.</i>	Rapid Action Revision.
<i>Reg.</i>	Regulation.
<i>RP.</i>	Reduced Pressure.
<i>SO.</i>	Service Order.
<i>TB.</i>	Technical Bulletin.
<i>UFC.</i>	Unified Services Criteria.
<i>USC.</i>	United States Code.
<i>USAG-HI.</i>	United States Army Garrison, Hawaii

Special Terms

*Backflow Prevention Device.* When used in this regulation the term shall mean a Reduced Pressure Principle Backflow Prevention Assembly approved and sanctioned by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

*Contracting Officer's Representative (COR).* When used in this regulation, it shall identify the Army official who has successfully completed a course of instruction in the discipline of managing and dispensing the terms of Army contracts awarded to private sector companies selected to fulfill the terms of the contract. The COR is the company's primary point of contact to addresses any and all issues brought by company representatives for the duration of the contract period.

*Cross-connection.* Any connection into a component of the existing water distribution infrastructure on USAG-HI installations intended to divert water through that component to a for temporary use at the dispensing end of the connection.

*Directorate.* When used in this regulation, the term shall mean the Directorate of Public Works.

*Established Water Dispensing Source.* Any device that transports (water pipes) or provides a source for dispensing (faucet, fire hydrant) water on a USAG-HI installation.

*et seq.* A shortening of the Latin *et sequens, et sequential*: "and the following," especially the next page or pages in a book. The next paragraph(s) or part(s) following a citation.

*Installation.* When used in this regulation independently of the acronym, USAG-HI, shall mean a USAG-HI installation on the Island of Oahu.

*Organization.* When used in this regulation will refer to an active duty, military unit, or a Department of Defense unit staffed primarily with civilian personnel.

*Requester.* The person vested with the responsibility and/or authority to solicit temporary water services from the DPW, USAG-HI.

*Tester.* When used in this regulation shall refer to any individual recognized by the Utilities Branch DPW who is certified to test backflow prevention assemblies that are installed as part of a private construction company's requirement in fulfilling the terms of a MILCON contract on a USAG-HI installation.

*USAG-HI Installation.* When used in this regulation shall mean Army installations under the jurisdiction of the Commander, United States Army Garrison, Hawaii, located on the Island of Oahu. The term shall not include those installations located on the Island of Hawaii, e.g., Pohakuloa Training Area (PTA) and Kilauea Military Camp (KMC).

*User activity.* Used in written discussions that associate a military organization or contractor company with temporary water services as a collective unit separate from the *requester* or organization/company POC.

*User Activity POC.* The person identified by the organization or contractor company to represent the company as the primary source of coordination/cooperation for the duration of the approved temporary water service.

*TB MED*. Technical Bulletin, Medical (as in TB MED) is part of the nomenclature of a category of Army publications focusing on technical aspects concerning medical topics and issues, e.g., TB MED 576, Sanitary control and Surveillance of Water Supplies at Fixed Installations, March 1982. As of the date of this regulation there were thirty five (35) active technical bulletins in the Army index of publications with TB MED as the lead terms in their nomenclatures. Chapter 4 of TB MED 576, Water Distribution Systems, includes guidance on the focus of this regulation: cross connections.

APPENDIX B: USAG-HI Installations Subject to the Provisions of this Regulation.

Island of Oahu

Aliamanu Military Reservation.

Dillingham Military Reservation.

East Range.

Field Station Kunia.

Fort DeRussy.

Fort Shafter.

Helemano Military Reservation.

Kahuku Training Area.

Kawailoa Training Area.

Makua Military Reservation.

Piilaa Army Recreation Center.

Red Hill Coast Guard Station.

Schofield Barracks.

South Range.

Tripler Army Medical Center.

Wheeler Army Airfield.

(\*) Island of Hawaii ("Big Island")

Kilauea Military Camp (KMC).

Pohakuloa Training Area (PTA).

(\*) See paragraph 7.a. of this regulation