

Environmental Standard Operating Procedure

Originating Office: Natural Resources Environmental Affairs Office	Revision: 22 September 2015 Supersedes: 30 September 2012	Prepared By: NREA, Subject Matter Expert (SME)	Approved By: Water Resources Manager
File Name: BFP-ESOP	Effective Date: 1 January 2016	Document Owner: NREA	

Title: Backflow Prevention / Cross Connection

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for the prevention of cross-contamination of potable water supplies through the use of Backflow Prevention Devices (BFPD).

2.0 APPLICATION

This guidance applies to those individuals working with BFPDs aboard Marine Corps Air Ground Combat Center (MCAGCC), Marine Air Ground Task Force Training Command (MAGTFTC) Twentynine Palms.

3.0 REFERENCES

- 40 CFR 141
- Safe Drinking Water Act
- CCR Titles 17 and 22
- Health and Safety Code Section 116525-116595
- **MCAGCC Cross Connection Control Plan (CCCP)**
- **Lincoln-Hunt Backflow Testing SOP**
- **NHTP Backflow Testing SOP**

Documents that are controlled by MAGTFTC in accordance with *EMP-12, Document Control*, are shown in **bold**.

4.0 PROCEDURE

4.1 Discussion:

Protection of potable water is regulated by federal and local laws. Managing BFPDs and identifying cross-connections is critical to preserving potable water supplies. A cross-connection is any unprotected actual or potential connection between a public or a user's water system and any other source system through which it is possible to introduce into any part of the potable system a substance other than the potable water with which the system is supplied.

Cross-connection can lead to backflow, which is the flow of liquid or gas opposite the intended direction. Backflow preventers are designed to protect the drinking water supply from contamination. The National Primary Drinking Water regulations set standards for the treatment of potable water including process control, sampling, and permitting.

4.2 Operational Controls:

The following procedures apply:

1. BFPDs must be readily accessible for inspection, testing and maintenance.
2. Lincoln-Hunt is responsible for ensuring that all BFPDs located within Military housing are inspected and tested annually with results submitted to Natural Resource Environmental Affairs (NREA) Water Resources Manager and PWD Cross Connection Control Manager by December 30. When devices are found to be defective, they shall be repaired or replaced. All BFPDs shall be tested, maintained/repared and inspected by appropriately certified personnel.
3. Naval Hospital Twentynine Palms (NHTP) is responsible for ensuring that all BFPDs located within NHTP are inspected and tested annually with results submitted to Natural Resource Environmental Affairs (NREA) Water Resources Manager and PWD Cross Connection Control Manager by December 30. When devices are found to be defective, they shall be repaired or replaced. All BFPDs shall be tested, maintained/repared and inspected by appropriately certified personnel.
4. MCAGCC Public Works Division (PWD) is responsible for ensuring that BFPDs are inspected and tested annually with results submitted to Natural Resource and Environmental Affairs Office (NREA) by December 30. When devices are found to be defective, they shall be repaired or replaced. All BFPDs shall be tested, maintained/repared and inspected by appropriately certified personnel.
5. BFPDs shall be tested immediately after they are installed, relocated, or repaired and not placed in service until they pass inspection by appropriately certified personnel and are functioning as required.
6. PWD, NHTP and Lincoln-Hunt shall notify the water user before testing of BFPDs is needed. The notice shall contain the date when the test must be completed and approximant time the system will be down.
7. Cross-connection / shut down testing of potable and recycled water system must be completed by appropriately trained personnel every 4 years or after major work is accomplished.
8. Trained cross-connection specialist will identify all new construction and or change of use for buildings. Trained cross-connection specialist will determin if a BFPD can be removed from service at any given location. Documentation of the survey and change shall be maintained in accordance with the MCAGCC Cross Connection Control Plan.
9. Inventory and surveys for backflows will be updated and maintained by PWD, NHTP and Lincoln-Hunt as required.
10. Testing and maintenance reports shall be maintained by PWD, NHTP and Lincoln-Hunt for a minimum of five years.
11. A turnover folder containing this ESOP and other pertinent environmental information shall be maintained and passed down from ECC to ECC replacement.
12. If there are specific situations or other concerns not addressed by this procedure, contact MCAGCC Natural Resource Environmental Affairs, Water Resources Office (760-830-7883).

4.3 Documentation and Record Keeping:

The following records must be maintained for BFPD management:

1. Inventory of BFPDs (not including temporary BFPDs).
2. BFPD Maintenance/Inspection records.
3. Testing and maintenance reports shall be maintained by PWD for a minimum of five years.
4. Submit annual inspection and repair records to NREA Water Resources Office annually by 30 December.
5. Certification and training records of individuals working with BFPDs.

4.4 Training:

All affected personnel must be trained in this Standard Operating Procedure.

1. Inspectors/testers must complete State and County plumbing certification course and maintain proper certification.
2. Hazard Communication training/Globally Harmonized System.
3. General Environmental Awareness training.

4.5 Emergency Preparedness and Response Procedures:

Refer to Combat Center Order 5090.5C, Subject: Integrated Contingency and Operations Plans (ICOP) for Marine Corps Air Ground Combat Center and Environmental Compliance and protection Standard operating procedure for MCAGCC

4.6 Inspection and Corrective Action:

MAGTFTC PWD, NHTP and Lincoln-Hunt are responsible for ensuring that BFPDs are inspected and tested annually by 30 December. PWD, NHTP and Lincoln-Hunt shall ensure deficiencies noted during the inspections are corrected immediately. Actions taken to correct each deficiency shall be recorded on the inspection sheet.

ECC/Unit Inspection Checklist - Backflow Prevention

Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Is an inventory of BFPDs (not including temporary BFPDs) maintained and available?			
2. Are all BFPDs inspected by state and county certified personnel?			
3. Are BFPDs tested immediately after installation, relocation, or repair and not put into service unless properly certified?			
4. Are training and inspection records maintained and available for inspection?			
5. Are five years of BFPD Maintenance/Inspection records complete and available?			
6. Are BFPD's tested/inspected annually?			
7. Are all buildings and or use areas been identified for possible cross-connection?			
8. Have cross connection / shut down testing been completed in accordance with the MCAGCC CCCP?			
6. Have any cross-connections been identified? If yes was both potable and recycled water system secured? What additional actions were taken?			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____
 Signature: _____
 Date: _____