

Environmental Standard Operating Procedure (ESOP)

Originating Office: Natural Resources Environmental Affairs (NREA) Office	Revision: 22 December 2016	Prepared By: NREA, Subject Matter Expert (SME)
File Name: NPD-ESOP	Document Owner: NREA	

Title: Non-Potable Water General (Recycled Water)

1.0 PURPOSE

The purpose of this ESOP is to provide environmental guidelines for the management and use of Recycled Water.

2.0 APPLICATION

This guidance applies to those individuals working with and around non-potable water aboard Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms.

3.0 REFERENCES

- Title 22 CCR Chapter 4
- Title 17 CCR Chapter 5
- Clean Water Act
- **Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements (WDR) for USMC Mainside Wastewater Treatment Plant WDR Board Order No. 2016-0032**

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

4.0 PROCEDURE

4.1 Discussion:

Non-potable water is water that does not meet Safe Drinking Water Act standards and cannot be used for human consumption. Non-potable water includes un-disinfected groundwater and reclaimed/recycled wastewater. Currently all non-potable water aboard MCAGCC, is used for irrigation and dust suppression purposes.

4.2 Operational Controls:

All irrigation piping, valves and outlets will be color coded in purple to differentiate recycled/irrigation water from domestic and other water sources. Adequate means of notification shall be used to inform the public of recycled water being used at a site including signage in accordance with applicable regulations.

The following procedures apply:

1. Do not drink recycled water or use recycled water to wash hands or other parts of the body.
2. Equipment (i.e. tanks, valves, hoses, pipes, tools and pumps) that has been in contact with recycled water will not be used in conjunction with any potable water system.
3. Ensure that no cross-connections can occur and any possible or actual cross connection secured and investigated immediately in accordance with the MCAGCC, Cross Connection Control Plan (CCCCP) and applicable State/Federal regulations.
4. When performing repairs or modifications to the recycled water/irrigation system, use only materials approved for recycled water use (purple pipe).
5. Closely monitor the recycled water/irrigation system operations and be alert to and minimize over spray, run-off, and ponding. If this occurs, make the necessary corrections.
6. Ensure systems are functioning properly and repair any damage to recycled water/irrigation system(s) immediately.
7. Be aware of the types of vegetation within your site boundaries and their responses to irrigation with recycled water. You may have to alter your water management practices based on soil and water characteristics.
8. Do not attempt to modify or change the recycled water system without authorization from Public Works Department recycled water supervisor and NREA Water Resources Manager.
9. Signs shall be posted with “Non-Potable Water – Do Not Drink” at all locations utilizing recycled water.
10. Do not remove or tamper with recycled water warning signs.
11. A turnover folder containing this ESOP and other pertinent environmental information shall be maintained and passed down from Environmental Compliance Coordinator (ECC) to ECC replacement.
12. Provide “As-Builds” of any proposed irrigation area utilizing recycled water to Natural Resources Environmental Affairs Water Resources Office prior to construction.
13. Ensure a Shut Down and Cross Connection Test occurs every 4 years, is documented and records maintained for a period no less than 8 years.
14. If there are specific situations or other concerns not addressed by this procedure, contact MCAGCC NREA, Water Resources Office (760-830-7883).

4.3 Documentation and Record Keeping:

The following records must be maintained for non-potable water system management:

1. Inspection and training records maintained on file for no less than three years.
2. Service and repair records for recycled water system.
3. Shut down and cross connection test records, maintained for 8 years.
4. Plans/prints of recycled water distribution/irrigation system

4.4 Training:

All affected personnel must be trained in this ESOP and the following;

1. Annual Recycled Water Overview and Use Site Supervisor Training.
2. General Environmental Awareness Training
3. Commanding General's Water Conservation Policy Letter
4. CCB 5090

4.5 Emergency Preparedness and Response Procedures:

Refer to Combat Center Order 5090.5C, ICOP for MCAGCC, Environmental Compliance and Protection Standard Operating Procedure.

4.6 Inspection and Corrective Action:

The ECC shall ensure the designation of personnel to perform inspections. The ECC shall ensure immediate corrective action for deficiencies noted during weekly inspections. Actions taken to correct each deficiency shall be recorded on the weekly inspection sheet (including Work Request number(s)). Designated personnel shall conduct weekly inspections using this ESOP as guidance.

ECC/Unit Inspection Checklist - Non-Potable Water	
Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments/Action
1. Are preventive measures taken to ensure no cross connection can occur?			
2. Are necessary corrections made to prevent over spray, runoff and ponding?			
3. Is all damage to non-potable water system repaired immediately upon discovery?			
4. Are non-potable water warning signs posted in affected areas?			
5. If applicable has non-potable water monitoring been completed and on file per WDR?			
6. Are inspection, maintenance and training records maintained and available for inspection?			
7. Has a Site Supervisor been designated by name for the area? Who?			
8. Are Shut Down/Cross Connection Test current and on file?			
9. Are all irrigation heads colored purple is recycled water is being utilized?			
10. Are proper signs posted and visible for areas where recycled water is utilized?			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____