

# 4. System Operations

MCWD USER SUPERVISOR TRAINING

# Training Contents

1. **Site Operation Plan**
2. Irrigation Operation
3. Periods of Operation
4. System Identification & Signage
5. Maintenance & Modifications
6. Cross-Connection Prevention

# Site Operation Plan

User must prepare a **Site Operation Plan** as part of the permit application.

- Includes an operations and monitoring section:
  - Calculations of estimated irrigation demand per month
  - Irrigation application rate
  - Times and areas of use for irrigation
  - Description of recycled water identification signs
  - A discussion of safe operations monitoring and compliance items
- The User Supervisor is responsible for ensuring compliance with this plan



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1. Site Operation Plan
- 2. Irrigation Operation**
  1. Confinement
  2. Application Rates
3. Periods of Operation
4. System Identification & Signage
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# Confinement

Irrigation must be operated to **prevent discharge onto unauthorized areas**

- Adjust spray heads to eliminate overspray
- Adjust sprinklers to confine discharge to design area
- No overspray (water landing beyond target area)

Report **any and all failures** that cause unauthorized discharge of recycled water to MCWD



# Application Rates

Knowing your application rates is key to staying in compliance!

- Don't apply recycled water at a rate greater than the rate of soil infiltration
  - Adjust application duration and frequency

## Reporting Requirements

- Report quarterly irrigation rates
- Report total area where recycled water was applied over the last quarter

Changing your frequency and duration is a quick and easy fix to most ponding or runoff issues!





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# Periods of Operation

Irrigation may only occur during **periods of least use** by the public

- **9 PM - 6 AM**
  - Reduce the public's interaction with recycled water
  - Water-efficient irrigation methods excluded from time restrictions (conditionally)
  - Exceptions possible (conditionally)
- Before any irrigation, **visually confirm** there are no people in the irrigation zone
- Timing identified on Permit





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1. Site Operation Plan
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4. **System Identification & Signage**
  1. System ID
  2. Advisory Signs
  3. General Fixtures
  4. Piping
5. Maintenance & Modifications
6. Cross-Connections

# System ID

- **PURPLE**
- Use sites must have purple signs posted throughout the use area with one sign located in a high visibility place
- All recycled water facilities, equipment or appurtenances must be identified with purple tags and/or purple paint.
  - Valves, valve box lids, pipes, controllers, sprinklers, quick couplers
- User Supervisor should be familiar with on-site facilities, including signage



# Advisory Signs



All areas where recycled water is used shall be posted with clearly marked signs

- At least 8 x 12 inches
- Placed where easily seen
  - At property lines near crosswalks
  - At drive entrances
  - At street corners
  - No further than 1,000 feet apart
  - At the beginning and end of every median
- Signage in English and Spanish



# Advisory Signs

- The signs must include
  - the words “Recycled Water in Use - Do Not Drink - Agua Reciclado, No Beber”
  - Lettering that is a minimum of ½ inch in height
  - Black or white text on a purple background with a picture of a glass of water crossed out.
- Potential issues: missing sign, illegible text, or incorrect wording

**Do NOT** include negative wording such as “Warning”, “Caution”, or “Danger



# General Fixtures

- Valve Boxes
- Quick coupling valves
- Irrigation Controllers
- Sprinkler Heads



No:

- Missing Tags
- Faded
- Not secure



# Piping

For above and below grade recycled water lines:

- Purple PVC or purple wrapped pipe
- Labeled with “RECYCLED WATER-DO NOT DRINK” on two sides continuously

Existing buried lines must be converted when exposed during modifications or maintenance.

Purple pipe shall **NEVER** be connected to an unidentified pipe





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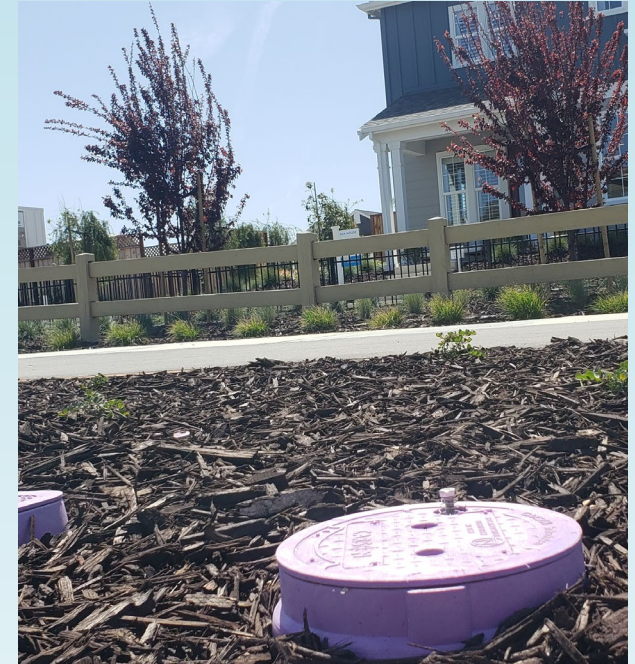
# Maintenance & Modifications

Preventative maintenance program to ensure compliance

- Regular inspections to identify any use violations
  - Special attention to eliminate runoff, ponding, and windblown spray conditions
- Establish and maintain record-keeping system of all inspections, modifications, or repairs

Regular maintenance ≠ modification

- Modifications require MCWD approval, routine maintenance does not
  - Routine maintenance = no change to recycled/potable water systems/operating procedures
  - Maintenance must still be documented



# Maintenance & Modifications

Modifications require approval from MCWD, State DDW, and the Regional Board

- Submit plans and site operation manual to MCWD
  - To ensure new construction meets Title 22 requirements
- MCWD will issue new permit with updated Use Area

Construction notification:

- Call MCWD at least 1 week before commencing work
- Preconstruction meeting at least 24 hours before starting construction
  - MCWD must be notified by phone each workday until completion of the project



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# Cross Connection Prevention Plan

Site Operation Plan must have Cross Connection Plan section with:

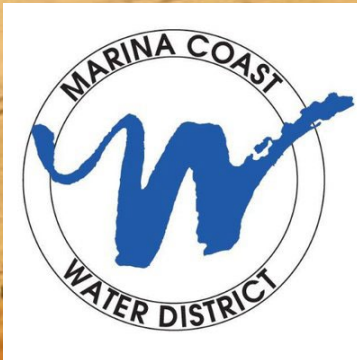
- Points of possible interconnection with potable system
  - Methods used to ensure to no cross connection
- Methods and assemblies to prevent backflow
- Monitoring and testing compliance
  - Backflow prevention devices tested annually
  - Physical cross-connection test performed every four years
    - Testing records maintained for at least 3 years
- Emergency contacts + site emergency procedures





Please reach out to MCWD  
Engineering Department if you have  
any questions

Thanks for watching our training!



MCWD Recycled Water - Safe, sustainable,  
drought-proof solutions protecting our  
groundwater's future