

A photograph of a rocky shoreline with blue water. A dark blue text box is centered over the image. The text inside the box reads: "Whiskey is for drinking and water is for fighting over. ~Mark Twain".

Whiskey is for drinking and water
is for fighting over.
~Mark Twain

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Preparing a Drought Management Plan





Steps in Preparing your Management Plan

1. Obtain public input and involvement
2. Define goals and objectives
3. Assess water supply and demand conditions
4. Define drought indicators
5. Identify drought mitigation measures
6. Assess mitigation measures
7. Develop a drought index and management strategy



1. Public Input and Involvement

- Need public “buy-in” for plan to be successful
- Create a Task Force or Committee
 - Citizens
 - Major Water Users
 - Other Water Agencies
 - Businesses
 - Civic Groups
- Include Public Agencies
 - Law Enforcement, Fire Dept., Parks Dept.



2. Define Mitigation Goals and Objectives

■ Water-Use Priorities

- Which water-users can and should be restricted
- Across-the-board or targeted restrictions
- What legal requirements need to be met
 - Minimum Flow Requirements
 - Reservoir Conservation Requirements
- Do some water-users take priority over others
 - Fire Departments
 - Hospitals



3. Assess Supply and Demand

- Identify Water Supply Sources

- Who ultimately controls the sources
- Treatment infrastructure

- Determine the Maximum Yield of Current Sources

- Determine Community Water Demand

- Average and peak demand
- Historic demand trends
- Use by customer sector
- Interior vs. Exterior use
- Projected future demand
- Environmental demands



Assess Supply and Demand (cont'd)

- Identify Local Conditions
 - State Water Law
 - Current Conservation Efforts
 - Third-party effects of your groundwater
- Compare water demand with supply yield
- Forecast potential deficits



4. Define Drought Indicators

■ Palmer Index

- Based on soil moisture supply and demand
- Long Term

■ Reservoir Storage

- Reflects precipitation, surface runoff, and groundwater

■ Groundwater Levels

- See “Introduction to Well Drawdown” on resource CD for information on gauging your groundwater levels



5. Identify Mitigation Measures

- Public Information and Education
 - Bill Stuffers/Fliers
 - Advertisements
 - Press Conferences
- Restrictions/Bans on Nonessential Use
 - Ornamental Use (fountains, ponds)
 - Pavement/Street/Car Washing
- Pricing
 - Excessive-use surcharges
 - Drought surcharges
- Rationing (limit available supply)
- Local Regulations/Ordinances
 - Excess-use penalties
 - Criminal Penalties for Noncompliance (fines)
 - Interagency cooperation



6. Assess Mitigation Measures

- Anticipated water-use reduction
- Consumer acceptance
- Equity
- Cost
- Sustainability
- Legal / Contractual Issues
- History
- Ease of Implementation



7. Develop your Plan

- Adapt Drought Index and Management Strategy Template to suit your needs
- Template samples based on California long-term drought commencing in 1986

Implementing a Drought Management Plan





Steps in Implementing the Management Plan

1. Formally adopt the Plan
2. Public Information and Education
3. Enforcing Drought Restrictions



1. Formally Adopt the Plan

- Approval of Citizen / Community Task Force
- Approval of Local Officials
- Approval of your Board of Directors



2. Public Information and Education

- Pick ONE person to deal with the Media
 - KEEP THE MEDIA INFORMED
- Let water-users know where to ask questions
- Staff Booths at Local Events
 - Take advantage of large group gatherings
- Bill Stuffers and Fliers
- Drought Fact-Sheet
- Demonstrate conservation equipment
- Provide Updates



3. Enforcing Drought Restrictions

- City / County / State Ordinances

- Ask for local conservation ordinances to be instated

- Incentive Programs

- Supply retrofit devices
 - Conservation kits
 - Provide rebates for water-saving appliances

- Disincentive Programs

- Excess-use charges



Enforcing Drought Restrictions (cont'd)

■ Monitoring

■ Reactive

- Respond to complaints made by other consumers
- Least costly

■ Proactive

- Actively patrol and issue warnings/conservation kits
- Expensive
- Possible “bad-cop” image



Enforcing Drought Restrictions (cont'd)

■ Noncompliance Penalties

■ First Offense

- Issue a Warning
- Supply with educational and retrofit materials

■ Second Offense

- Minimal fine imposed on user's bill

■ Third Offense

- Steeper fine imposed on user's bill
- Consider cutting user's water or installing a meter at their location