



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 WaterSupply Sources
 - Who ultimately controls the sources
 - Treatment infrastructure
- Determine the Maximum Yield of Current Sources

- Determine CommunityWater 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
 - CurrentConservation 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/CarWashing

- Pricing
 - Excessive-use surcharges
 - Drought surcharges
- Rationing (limit available supply)
- Local Regulations/Ordinances
 - Excess-use penalties
 - Criminal Penalties for Noncompliance (fines)
 - Interagency cooperation

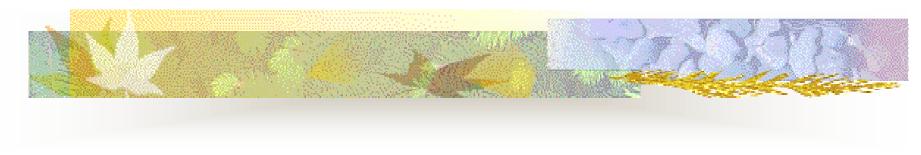
6. Assess Mitigation Measures

- 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