Considerations in Adopting Water Conservation Rate Structures
Download customer billing history and examine use patterns by potential customer class.

Answer the following questions:
- Are the classes well defined?
- Is the class’ type of use fairly homogeneous?
- Do certain classes peak on the system?
- Are the class use patterns useful for determining rate design?
Characterization of Customer Classes

- Peaking/Homogeneous
  - Residential
  - Multi-family (need DUs to make homogeneous)
  - Irrigation (need acres to make homogeneous)
- Peaking/Non-Homogeneous
  - Master meters for typical wholesale customers
- Mild Peak/Non-Homogeneous
  - Commercial (hard to make homogeneous)
- Relatively Flat Use/Non-Homogeneous
  - Industrial
MONTHLY PATTERNS OF RESIDENTIAL WATER USE PER CONNECTION

Gallons per Month


Drier

Drying

Wet

Avg Use per Connection
Avg Monthly Water Use
Avg Winter Water Use
Typical Non-Residential Water Use Pattern

MONTHLY PATTERNS OF NON-RESIDENTIAL WATER USE PER CONNECTION

Gallons per Month

- Avg Use per Connection
- Avg Monthly Water Use
- Avg Winter Water Use
Conservation Rate Designs

- **Increasing Block**
  - Blocks defined for certain classes and price is tiered upwards as use blocks increase.

- **Seasonal**
  - Winter and summer rates

- **Base/Excess Use**
  - Customer pricing tiers depend upon summer to base peaking ratio.
Prior Research

- Water use, overall, is relatively price inelastic when prices are low or moderate, i.e. when price goes up, consumption isn’t cut back very much.
- Irrigation is more price elastic since its use is more discretionary.
- Consumer response is often short-term when water is cheap (people continue their “bad habits” when water is still affordable).
Factors to Consider in Choosing a Rate Design

- Policy Goals
- Financial Effectiveness
  - Gathers needed revenue
  - Revenue stability
- Behavioral Effectiveness
  - Short- and long-term
- Ease of Administration & Communication
- Defensibility
- Regulatory Considerations
Trade-Offs

- To obtain a greater conservation response, as many expenses as possible should be recovered through the volume rate.
- This, however, exposes utility revenues to greater weather influences, high water bills affecting political acceptance, and can impact low- and fixed-income customers.
Summary of Trade-Offs

Conservation Response
High Bills for Voters
Administrative Costs
Impact on Low & Fixed Income
Revenue Stability
Political Acceptance
Other Tandem Measures

- Public Education
- Landscaping Ordinances
- Incentive Programs
- Water Loss Management
- Other