

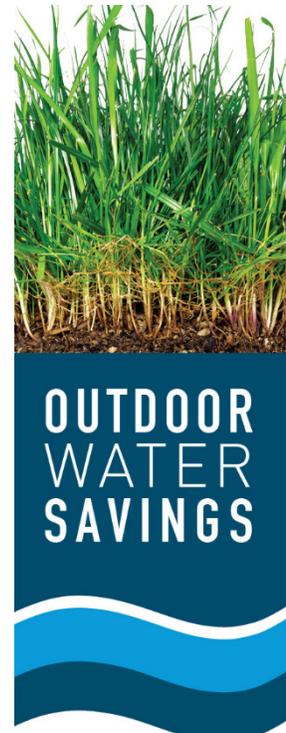
REQUEST FOR PROPOSALS

AWE OUTDOOR WATER SAVINGS RESEARCH INITIATIVE

Phase 2

Use and Effectiveness of Municipal Irrigation Restrictions during Drought

November 28, 2016



Overview

Drought conditions prompt dramatic action by water utilities to curb customer demands. These actions are typically focused on limiting the frequency of lawn watering, but it's unclear which actions or levels of implementation are most effective. This research will compare the drought response approaches implemented by different water providers and the impact and water savings achieved through different measures and levels of implementation. This research will examine the impact of varying levels of mandatory and voluntary watering restrictions as well as different messaging and information. The final report will discuss which measures and messaging provide the most significant drought water demand reductions.

The Alliance for Water Efficiency is seeking proposals from well qualified organizations and individuals to complete a 12-month research study to explore how drought response measures have been implemented and the water demand impact achieved among 11 water providers in California, Texas, Arizona, and Nevada.

Research Questions

The goal of this project is to conduct new empirical research on drought response approaches implemented by different water providers and the impact and water savings achieved. The proposal should set out how the research team will seek to answer the following questions:

- 1) What are the different forms of mandatory and voluntary irrigation restrictions typically implemented by North American water providers?
- 2) How do mandatory and voluntary irrigation restrictions vary across water providers?
- 3) What demand reduction impacts can be achieved through different levels of mandatory and voluntary irrigation restrictions?
- 4) During times of drought, what can water providers do to maximize outdoor irrigation demand reductions?
- 5) How does media coverage impact drought response, and what are the comparative impacts of local vs. state and regional drought messaging?
- 6) What is the longevity of demand reductions during and after a drought?

Goals

The goal of this project is to conduct new empirical research on drought response approaches implemented by different water providers and the impact and water savings achieved.

Research Approach

The proposal should include a complete task-by-task description of the research approach. An overview is provided below. The specific research approach and locations should be developed by the applicant research team. An excellent example of the type of research AWE is seeking to fund can be found here - *Kenney, Douglas S., Roberta A. Klein, and Martyn P. Clark, 2004. Use and Effectiveness of Municipal Water Restrictions During Drought in Colorado. Journal of the American Water Resources Association (JAWRA) 40(1):77-87.*

Study Site Assessment

Eleven (11) water providers, wholesalers, and water organizations in the U.S. have volunteered to assist with this study and provide both a cash contribution to the budget and information, data, and assistance with local research.

The 11 contributing participants are:

1	Arizona Municipal Water Users Assoc., AZ**
2	Austin Water Utility, TX
3	City of Plano, TX
4	City of Sacramento, CA
5	California Urban Water Agencies, CA**
6	Los Angeles DWP, CA
7	Lower Colorado River Authority, TX*
8	Metropolitan Water District of Southern California*
9	Regional Water Authority, CA*
10	Sacramento Suburban Water District, CA
11	Southern Nevada Water Authority, NV*

*Wholesale utility. **Utility membership organization.

Wholesale entities may (or may not) designate an associated retail provider to participate. The final list of utilities contributing data and information to the study may be less than 11, but proposers are encouraged to budget the project for 11 utility participants.

Many of the water providers have experienced drought within the past 10 years or are currently experiencing drought conditions. They have all been pre-screened and can provide excellent chronological information on drought implementation as well as water production and demand records. One of the first tasks will be to meet with each participant to determine the basic research approach that will be taken. Proposals should explain what steps will be taken at each study site to ensure uniform methods and approaches are used to the maximum extent possible.

The consulting research team will work with each study site to obtain necessary data and information to complete the following analyses to the maximum extent possible and appropriate:¹

The research tasks described in the proposal should include:

- Review of drought conditions faced by water providers and the conditions that lead to the declaration of drought.
- Summary of the water utility's experience going through the drought into the (where applicable) post-drought declaration period.
- Chronological description of specific drought response measure (e.g. irrigation restrictions, turf removal program, etc.) implemented by each participating utility. All measures should be included, but the particular interest of AWE is on irrigation and outdoor use restrictions.
- Summary of the utility dollars spent (media buys, customer outreach, staff time, turf replacement, enforcement, etc.) to respond to the drought.
- Analysis of the varying levels of drought restrictions and measures imposed and the timing of implementation.
- Chronological summary of local media coverage of the drought and the timing of media coverage.
- Quantitative, descriptive analysis of the changes in water use brought about by varying levels of drought response, specific measures implemented, media coverage, state proclamations, etc.
- Exploration of the differing impact of varying levels of voluntary and mandatory drought measures and the factors that contribute to successful demand reductions.
- Persistence of demand reductions once the official declaration is over (where applicable).
- Recommendations for planning to respond to future droughts.

The research team should propose to work with at least five separate water utilities that have responded to drought conditions over the past 10 years by imposing (voluntary and/or mandatory) irrigation restrictions.

Deliverables

The key deliverables for this project are:

- Final report describing research methods and findings (to be published by AWE).
- Copy of data, programs, and sufficient details to permit replication.
- Recommendations for ongoing and future research based on the findings.

¹ Proposers are free to recommend additional or expanded analyses as appropriate.

Proposal Requirements

The following elements should be included in the body of the proposal which is limited to 12 pages:

- 12 pt. font minimum
- Executive summary
- Description of project team and qualifications (2 pages max.)
- Scope of work including research methods and study site locations
- Schedule (not to exceed 18 months)
- Proposed budget including clear delineation of the team members and anticipated hours assigned to each project task and hourly rates for each team member.

The following elements should be included with the proposal, but are not subject to the 12-page limit:

- Description of up to three similar projects completed by research team members (one page per project max).
- Statement of qualifications
- Resumes
- References

Project Budget

AWE has allocated \$140,000 for this project. The budget submitted with the proposal shall be considered a firm, fixed priced bid. All work must be completed by the applicant within the proposed project budget. No additional funds will be available.

Pre-Proposal Teleconference

AWE will conduct a pre-proposal teleconference for any interested bidders on Wednesday, December 21, 2016 at 1:00 p.m. Central time. The call in number will be 1-888-537-7715 Pass Code: 91850804#. Attendance is encouraged, but not mandatory.

Proposal Submission and Due Date

Proposal packages should be submitted as PDF files via email to Jeffrey Hughes of the Alliance for Water Efficiency – jeffrey@a4we.org.

Proposals are due by 5 p.m. Central time on Friday, January 20, 2016.