



POSITION STATEMENT: DROUGHT & WATER SUPPLY EMERGENCY PREPAREDNESS

ICWP RECOMMENDS:

1. That all states and the federal government should develop and sustain the expertise needed to improve the collection of data and the methods for anticipating and alleviating the impact of water supply interruptions resulting from drought and other foreseeable emergencies (natural, accidental and deliberate).
2. That all states, water management districts and local water utilities should promote the preparation and maintenance of drought and emergency plans as part of broader water planning. This planning should occur at appropriate local and regional scales with the objective of identifying and supporting management decisions related to the reduction of demand and allocation of available supplies during water supply emergencies.
3. That each state should identify and sustain an effective, central point of coordinated planning, preparation and response. Among the coordination functions served by this agency, evaluating and supporting local capacity to plan, prepare and respond effectively will continue to be essential.
4. That regional approaches, utilizing interstate organizations and agreements among the states where interstate waters are involved, should be assessed and refined to facilitate a coordinated response to water supply interruptions and scarcity consistent with existing water laws, river basin compact and court decrees.
5. That state and federal agencies should promote measures to increase water availability including, but not limited to, conjunctive management, aquifer storage and recovery, and new reservoirs.
6. That state and federal resource agencies should improve research programs to increase the accuracy of drought predictions; earlier warnings will enhance drought management and mitigation.
7. That water supply contingency planning should be designed using reliable and appropriate information, ready for implementation and tested periodically by the agencies involved to assure their ability to accommodate reasonably foreseeable demands, shortages and system failures.
8. That federal support for national and regional centers (Regional Integrated Sciences and Assessments (RISA)) for assistance to states in developing effective drought and water supply emergency preparations and in understanding the impacts of climate variability, should be sustained.
9. That the Congress should fund full implementation of the National Integrated Drought Information System (NIDIS) implementation plan to enable the NOAA to provide better information to decision makers at every level of government so that they can make more timely decisions leading to reduced impacts and cost recovery.

BACKGROUND

Drought and emergency water management, planning and response are indispensable elements of water supply management, where reliability is essential. Water supply emergencies are caused by a range of natural, accidental and deliberate factors. While the risk associated with each factor varies, their occurrence is foreseeable and the adverse consequences for water allocation and distribution can be reduced through advance understanding, preparation, and planning.

The failure of a water supply, whether due to engineering failure, disruption by earthquake, flood, pollution, climatic conditions, regulatory requirements or terrorist activity, strikes a blow at the confidence and vitality of the community and its economy.

Drought is a useful example because it will occur at some time every year in the United States and each time drought occurs, many of the same issues are raised. Principally, these are: how much damage was inflicted, to whom, and where; who is going to pay for it; and how can we prevent or reduce damages and recovery cost in the future?

During the past 10 years, water management officials in the US have begun making significant progress in the anticipation and preparation for emergency interruptions. Increased awareness of water supply variability and vulnerabilities at the regional scale has been combined with greater involvement of local water government and water providers.

In 1998, Congress passed the National Drought Policy Act, which articulated the benefits that can be attained through development of a national drought policy based on preparedness and mitigation planning and acknowledged that America lacks a consistent, comprehensive policy to help reduce the impacts of drought and created the National Drought Policy Commission to advise Congress on how best to:

- Integrate federal drought laws and programs with ongoing state, local, and tribal programs into a comprehensive national policy to mitigate the impacts of and respond to drought.
- Improve public awareness of the need for drought mitigation.
- Achieve a coordinated approach to drought mitigation and response by governments and nongovernmental entities, including academic, private, and nonprofit interests.

Drought conditions can last for years, making it difficult to estimate losses accurately, and the compilation of drought impact statistics at the national level is inconsistent. Nonetheless, even the most conservative estimates of the impacts of drought are substantial. For its May 2000 report, the National Drought Commission updated several studies of the federal government's response cost (in terms of 1998 dollars) for several major post-World War II droughts, finding that:

- the federal government spent \$3.3 billion responding to the 1953-56 drought;
- federal drought response cost during the 1976-77 drought was at least \$6.5 billion; and
- Federal drought response cost about \$6 billion during the 1988-89 drought (not including crop insurance payments);
- low flows on the Mississippi in 1988 caused barge shipping prices to double and triple, leading to an estimated \$1 billion in increased transportation costs; and
- the 1996 and 1998 droughts in Texas caused a loss of \$4 billion in direct income, with the total impact to the state's economy close to \$11 billion.

The National Drought Commission reviewed 88 federal program authorities intended to provide drought assistance, finding them in four categories:

- preparedness, including planning and mitigation;
- information, including monitoring/prediction and research;
- insurance; and
- emergency response.

POLICY CONSIDERATIONS

Water supply interruptions have been caused by a variety of natural, accidental and deliberate events. “State water managers expect freshwater shortages in the near future, and the consequences may be severe. Even under normal conditions, water managers in 36 states anticipate shortages in localities, regions, or statewide in the next 10 years.”¹

Inadequate design or maintenance of our water diversion, storage, treatment and delivery infrastructure expose our water supplies to vulnerability or failure due to fatigue, flooding, earthquakes, sabotage, unconstrained demand and other foreseeable risks. Drought conditions can jeopardize water supplies in several regions of the US simultaneously at varying degrees of severity and may require a coordinated effort among the states in the affected region(s). Unfortunately, the onset and scale of droughts continue to be very difficult to predict.

Public and private investment across the US is driven by many factors, including recreation, education, public safety and basic infrastructure. The social and economic disturbance caused by every significant shortage of water supplies will limit the vitality and weaken the reputation of a community as surely as polluted air, congested roadways, failing schools, electric power interruptions and crime.

Our public safety and the welfare of our communities depend upon the availability of reliable water supplies. Recent experience in responding to emergencies demonstrates the importance of advance planning, preparation and coordination. These preparatory efforts should be focused on improving the reliability of water supplies through all feasible means in coordination with specific and immediate means to reduce water demand the longevity and severity of water shortages are minimized.

Leaders in local government, the business community, non-governmental organizations and individual citizens often perform practical and indispensable roles. Federal agencies also contribute invaluable expertise, data, research, supplies, equipment and funding. However, our nation relies heavily on state governments for emergency preparation and response due to their legal authorities, geographic scale and regional relationships.

The success of advance planning and response preparation depends upon adequate design, communication and training. These efforts may be complicated by the necessity of distributing responsibility and resources among multiple agencies. Additionally, the fiscal constraint of public budgets further complicates these efforts.

Our planning should anticipate potential conflicts among water rights and between state and federal laws, and points of vulnerability, such as the reliability of communication systems and the action of other agencies. Any provision for alternative means of supply and distribution (structural and non-structural) that may be necessary during severe or long-term water supply shortage should be identified, evaluated and agreed upon as quickly and clearly as possible to avoid unnecessary confusion, delay and conflict during emergency response efforts.

To be successful, our communities need to identify and understand the interdependency among critical infrastructure systems such as levees, floodways, reservoirs and detention basins, treatment plants and distribution lines. This understanding (not just among officials and experts, but including a large portion of the community) is essential in reducing the vulnerability of our critical infrastructure and restoring it to serviceable condition in the event of a disaster. Public understanding and awareness of the priorities, restrictions and reallocation measures and the role that key agencies will serve in an emergency can most effectively be enhanced during periods when water supplies are plentiful and secure.

National and regional centers of drought management serve as clearinghouses and as sources of technical expertise and assistance in developing effective programs for anticipating and mitigating the impacts of drought and other serious water supply emergencies.

EFFECTIVE DATE: This position was initially proposed by the ICWP Legislation & Policy Committee and adopted by the ICWP Board of Directors in February 2007 and updated in October 2008. This revised version was approved by the ICWP Membership on December 1, 2010. It will continue in effect until December 2013 unless revised or archived at an earlier time by the Board of Directors or by the Membership.

¹ GAO report “Freshwater Supply –States’ Views of How Federal Agencies Could Help Them Meet the Challenges of Expected Shortages, July 2003.