## How to Create and Implement Your Drought Plan

## Michael Hayes

# The Cycle of Disaster Management





## crisis management

Drought Mitigation Center

Nebraska

NIDIS

# **10-Step Drought Planning Process**

Purpose: To derive a plan that is dynamic, reflecting changing government policies, technologies, and natural resources management practices.

- Generic process, adaptable
- Steps are sequential but intended as a "checklist"
- Start...and start simple
- Know political will
- Stakeholder engagement
- Identify goals/objectives



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## **10-Step Drought Planning Process**

Step 1 Appoint a drought task force

Step 2 State purpose and objectives of plan

Step 3 Seek stakeholder participation; resolve conflict

Step 4 Inventory resources; identify groups at risk

Step 5 Establish and write drought plan

Step 6 Identify research needs; fill institutional gaps

Step 7 Integrate science and policy

Step 8 Publicize the drought plan

Step 9 Develop education programs

Step 10 Evaluate and revise drouble pressive

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## **Case Study: Colorado**

- Long-term planning process
  - Revised frequently since 1981
  - Now every 3 years

## Components

- Monitoring
  - State Climatologist, etc...
  - NIDIS Upper Colorado River Basin
- Vulnerability assessment
- Response
- Mitigation
- Drought Planning Toolbox











# Managing Drought Risk on the Ranch



Daybreak Ranch

Reed-Hamilton Ranch

Tippets-Myers Ranch

Shamrock Ranch

Adams Ranch

Alexander Ranch

Welch Ranch

Johnson Ranch





## Case Study: Alexander Ranch (South-central Kansas)

- Plan Components
  - Monitoring
    - Range conditions
    - Rain gauges
  - Understand critical dates
    - April 1, June 15, August 15, November 1
  - Short-term responses based on the monitoring and identified critical dates
  - Long-term mitigation strategies
     5 Grazing "Principles"







## "A rancher must understand and admit that doing nothing multiplies the problem."

"Planning makes the problem more palatable and manageable. It doesn't solve the problem but makes you proactive not reactive."





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## Case Study: Hualapai Nation (Arizona)

- Plan Components
  - Vulnerability Assessment
    - Communities, water supplies
    - Livestock
    - Wildlife and tourism
    - Timber
  - Monitoring
    - Built around vulnerabilities
  - Mitigation strategies
    - Built around vulnerabilities
  - Planning exercises



Hualapai DNR 2005





#### COOPERATIVE DROUGHT CONTINGENCY PLAN

HUALAPAI RESERVATION

Submitted to: United States Bureau of Reclamation Lower Colorado Region P.O. Box 61470 Boulder City, NV 89006-1470

Prepared by: Dr. Kerry Christensen Hualapai Tribe Department of Natural Resource: P.O. Box 300 Peach Springs, AZ 86434

December, 2003

## Test of Hualapai Drought Plan (2005)

Tribal officials were presented with drought scenarios and how they should react, in accordance with plan

Commented on roles and usefulness of the plan



## **Benefits:**

- Educated new staff on the plan and their roles
- Identified barriers to implementation
- Provided suggestions for improvement





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# **Drought Ready Communities**



🖌 🔪 Planning 👌 Planning Processes 🁌 Drought-Ready Communities

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## **Drought-Ready Communities**

The Drought-Ready Communities pilot project culminated in summer 2010 with a <u>Guide to Community Drought Preparedness</u> that communities throughout the United States can use to understand and reduce their drought risk.

The process outlined in the Guide is broad-based, recognizing that drought creates problems that go beyond the scope of what water suppliers alone can address. Worksheets and other exercises can help communities see how drought has affected water supplies and overall community well-being in the past. The Guide can also help communities identify their drought monitoring resources, so they can spot emerging drought. A planning section helps communities determine steps they can take to reduce their drought perform the next one happens. The Guide includes case studies and an extensive resource collection on how other municipalities have planned for drought, including both processes and solutions.

Drought-Ready Communities was a two-year project sponsored by the Sectoral Applications Research Program of the National Oceanic and Atmospheric Administration. It was a collaborative effort by the National

Drought Mitigation Center, the Oklahoma Climatological Survey, the Illinois State Water Survey and State Climatologist's Office, and the Lower Platte River Corridor Alliance. Three pilot communities, representing a range of water supply sources, population sizes, and economic baselines, were invited to participate in the development of the DRC methodology and all associated materials. The three pilot communities included Nebraska City, NE; Decatur, IL; and Norman, OK.

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**Downloads** 

community planning

APA's website.

### **Drought-Ready Communities**

**A Guide to Community Drought Preparedness** 





# **Drought Ready Communities**

- 1. Getting Started
- 2. Information Gathering
- 3. Establish Monitoring
- 4. Public Awareness and Education
- 5. Planning Responses (Action Plan)



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## **Big Hole River Drought Management Plan**

- 2014
  - 1997, with 11 revisions
- Goal: reduce impacts to fish populations during dry years
- Timing
- Triggers
- Monitoring
- Education
- Contacts

**Big Hole** 

Watershed Committee

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# **Drought Plan Evaluation/Revision**

- Update Plan Regularly
  - Technologies, monitoring, triggers
  - Document Must Be Dynamic
- Test Plan
- Post Drought Assessment/Evaluation
  - Lessons Learned
  - Successes/Failures

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