

# America's Water Crisis 2011

“Whiskey is for Drinking...Water is for Fighting Over” -  
But You Can't Use Whiskey to Process Apples!

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Presentation to the Apple Processors Association

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# America's Water Crisis- 2011

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- What Crisis?
  - ▣ Water still comes out of my faucet.
  - ▣ Droughts have occurred for centuries – they're cyclical
  - ▣ There seems to be plenty of water in our rivers and lakes
  - ▣ What's the problem?

# Water: The Necessary Ingredient

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- How is water allocated?
  - ▣ Public resource
  - ▣ States control allocation of water resources
  - ▣ Shared rivers can mean multi-state/federal control
    - compacts - international treaties
  - ▣ Groundwater – a mixed bag
- What you see is not always what you get!
  - ▣ Water rights
    - West: prior appropriation doctrine
    - East: riparian doctrine
  - ▣ Natural flow vs. storage water vs. groundwater

# Western Water Law

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- Over a century of history and experience
- Thousands of court cases
- Sophisticated water management/tracking systems
- Compacts between states
- Treaties between nations
- Still fighting over water!
- There are more wealthy water lawyers per capita in the West than any other place in the world.

# Eastern Water Law

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- Riparian doctrine
  - ▣ In general, you have the right to use water if:
    - You own land adjacent to the stream
    - You do not impede or interfere with downstream uses
- Eastern states are now regulating water allocation
  - ▣ North Carolina, Virginia, Georgia, New York, Great Lakes
  - ▣ Why regulate? Growing demands for water coupled with seasonal drought periods
  - ▣ The next drought will always be worse than the last one – let the fighting begin!

# America's Water Crisis 2011

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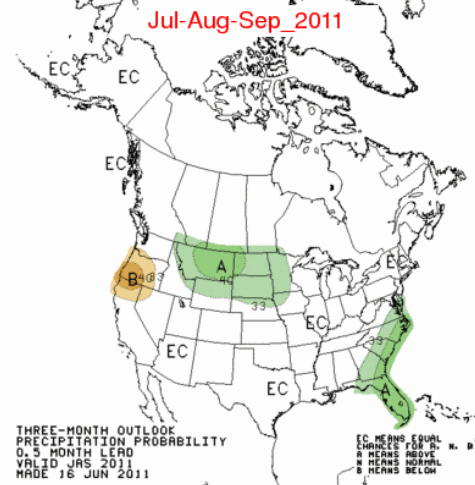
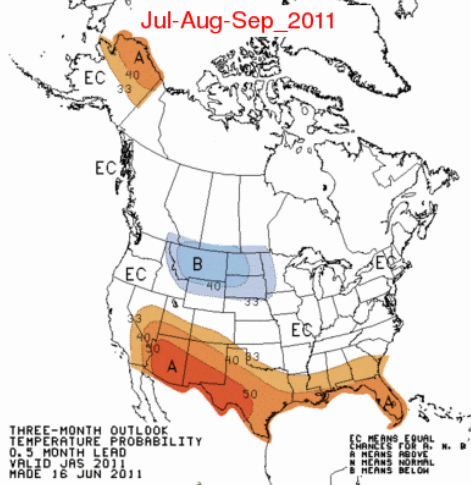
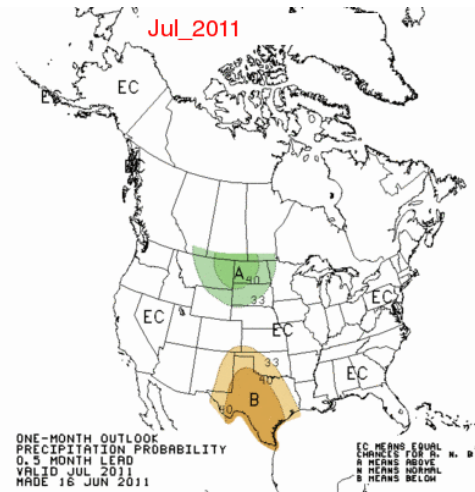
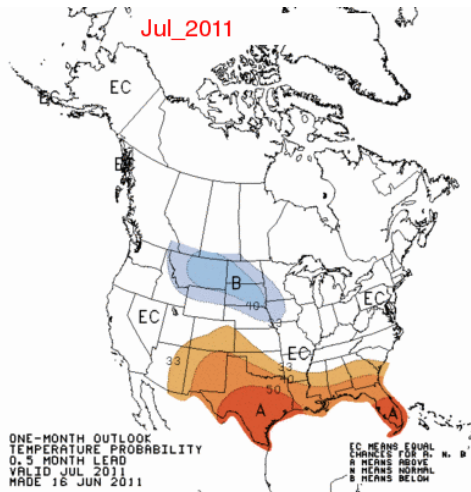
- Increasing demands for fresh water
  - ▣ Population growth
  - ▣ Domestic energy production
  - ▣ Governmental protections for fish and wildlife habitat
- Static or decreasing water supplies
  - ▣ Changing climate patterns – changing water supplies
  - ▣ No new water project development/funding
  - ▣ Aging water infrastructure
  - ▣ Water quality challenges/protections

# Water Supply Predictions- 2011

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## Temperature

## Precipitation



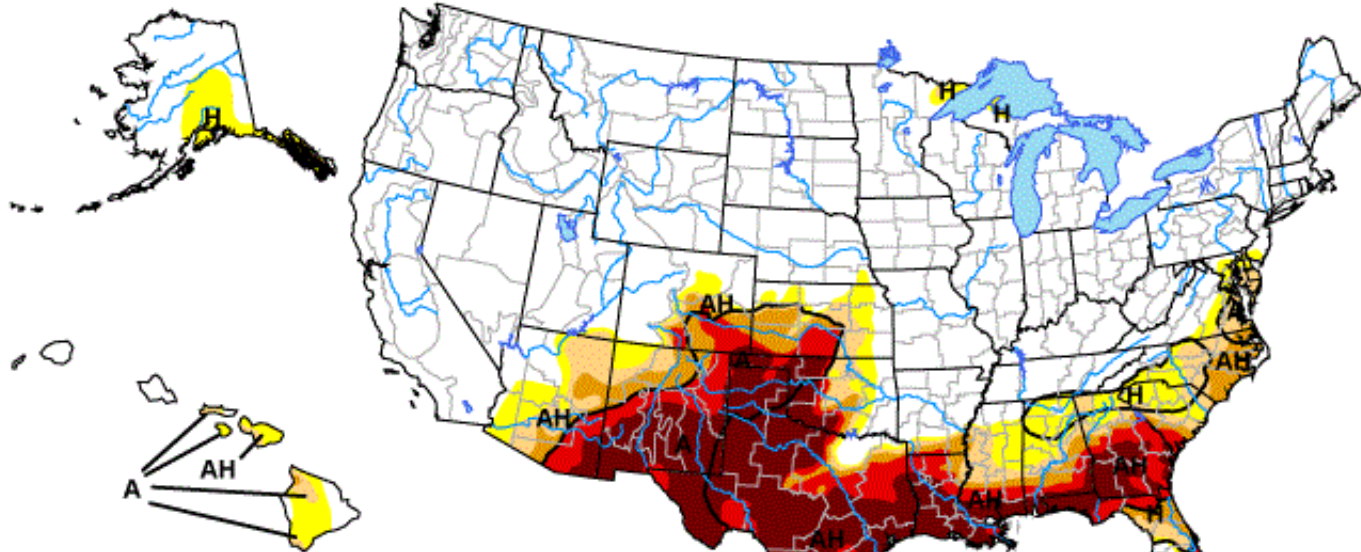
# Drought Predictions - 2011

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## U.S. Drought Monitor

June 21, 2011


Valid 8 a.m. EDT



Intensity:

-  D0 Abnormally Dry
-  D1 Drought - Moderate
-  D2 Drought - Severe
-  D3 Drought - Extreme
-  D4 Drought - Exceptional

Drought Impact Types:

-  Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>

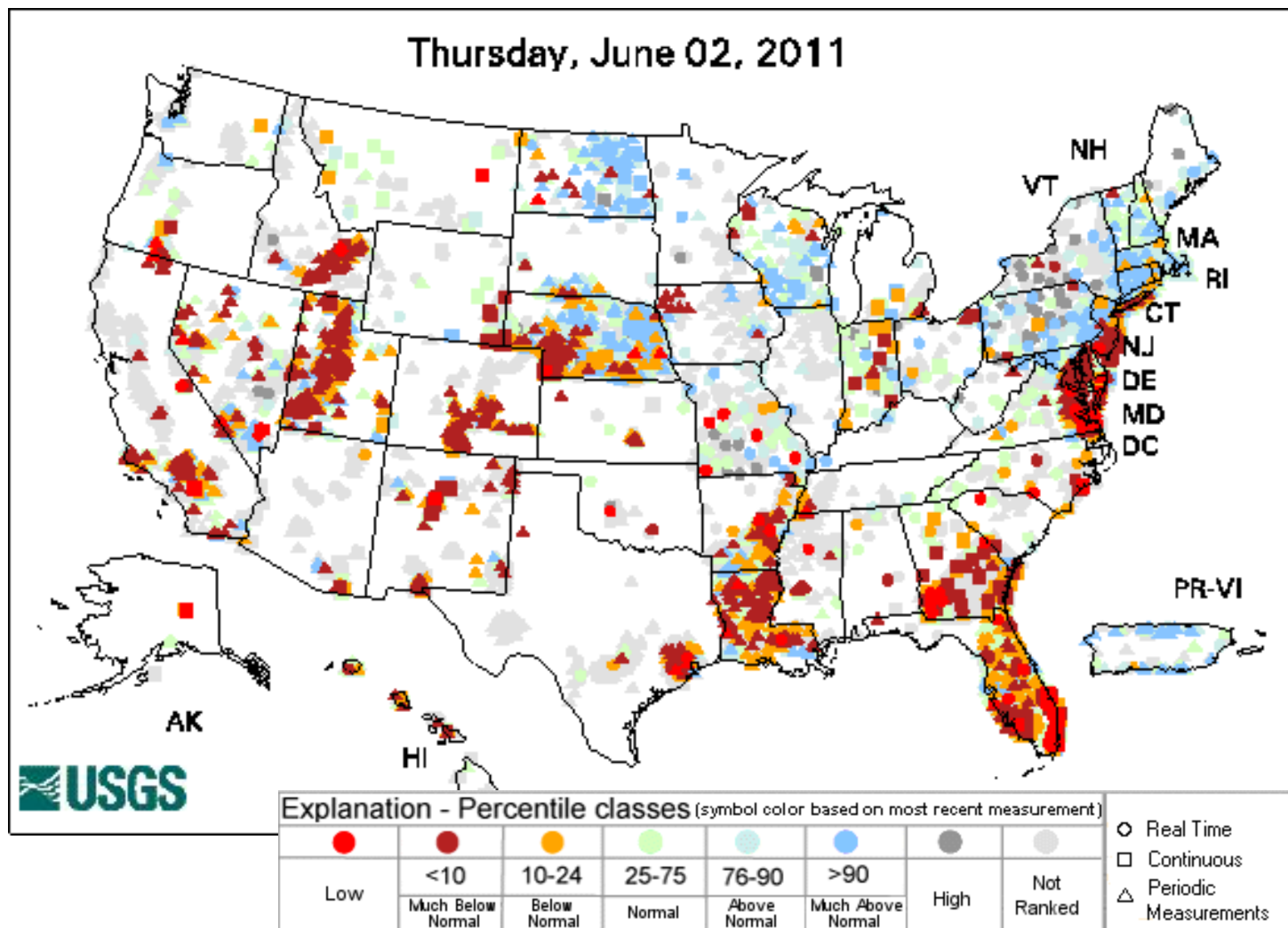


Released Thursday, June 23, 2011

Author: Brian Fuchs, National Drought Mitigation Center

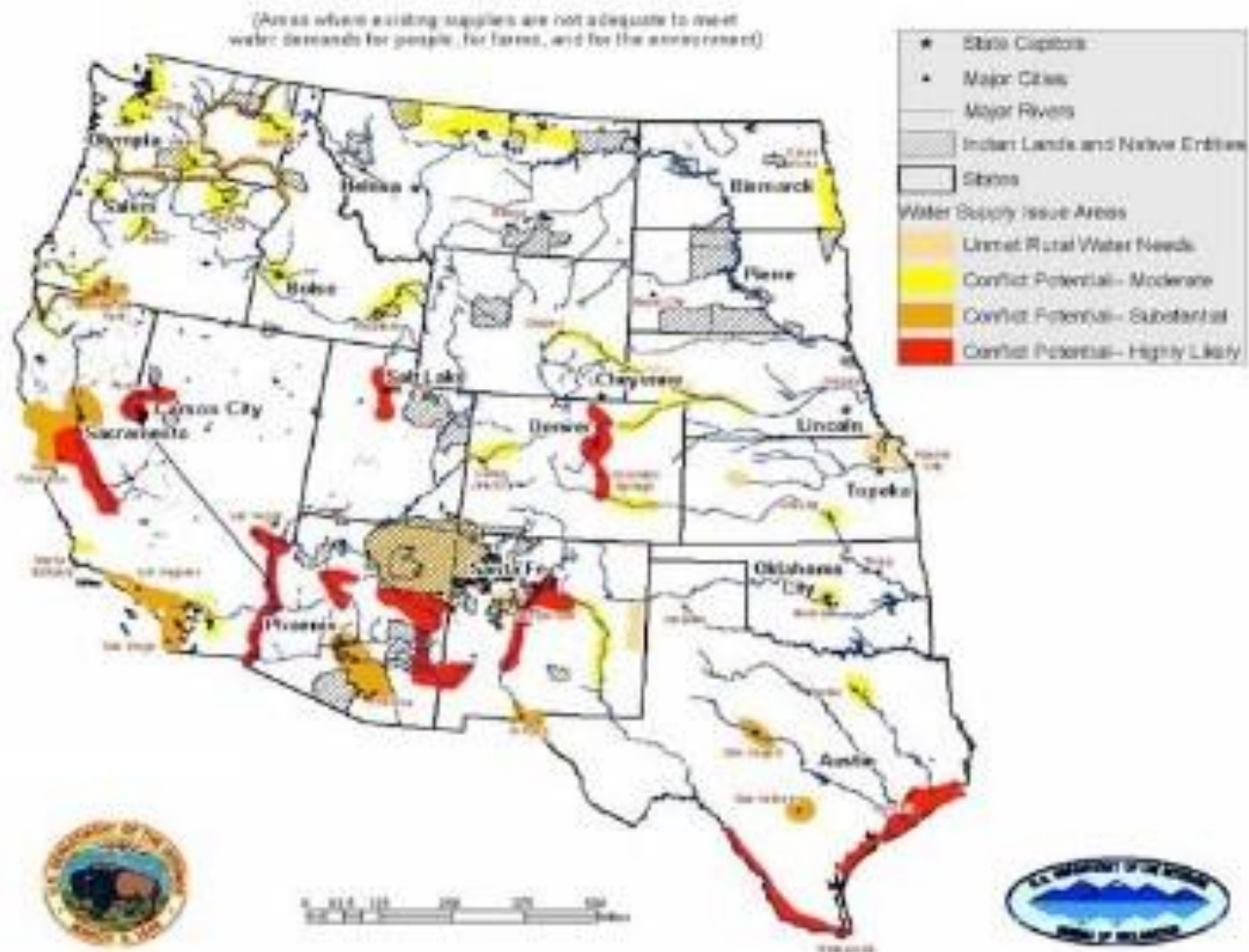
# Groundwater Resources - 2011

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# Predicting Crises Over Water - 2025

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May 2003

# Preventing Water Crises - Tools

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- Collaboration
- Water conservation and management technologies/funding
- Water infrastructure funding/financing
- Innovative water markets/transfers
  - States control water management/allocation
  - Marketing “conserved” water
  - New State water laws may be needed
  - Downside: Irrigated agriculture may be the new reservoir to meet future demands for water



# Sacramento-San Joaquin Delta

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- Endangered species / water quality / drought
  - ▣ Delta smelt, salmon
- State, Feds, Municipal and Agricultural water agencies, Delta residents, Environmental groups, Local governments, Fishing and Recreation groups
- Activities: Habitat restoration, water flow and management, invasive species management, enhanced water treatment, conveyance systems
- Challenges: Cost, saline intrusion, water quality, invasive species, magnitude of impacts

# Colorado River Basin

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# Colorado River Basin

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- Drought/Law of the River/Mexican Treaty of 1944
- Seven States, Feds, Municipal and Agricultural water users, Environmental groups, Recreation
- Activities: Shortage sharing criteria, coordinated reservoir management, species conservation, innovative water conservation and management projects, collaboration with Mexico
- Challenges: Continued drought, invasive

# Funding Challenges

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- Federal water conservation funding on the chopping block in FY2012
  - Earmarks banned in both Houses of Congress
  - Federal funding slashed by House of Representatives for FY2012 USDA conservation programs
  - Legislation stalled for new water projects/funding
- Need for Public/Private partnerships
  - Incentivize private financing of infrastructure
  - Use markets to promote water conservation strategies
  - Integrated regional water management approach

# Solving Water Quantity Issues

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- Water conservation and management
  - ▣ New paradigm for reducing water “footprint”
  - ▣ “Offsite mitigation” for water consumption
  - ▣ Integrated regional water management
- Research and technology
  - ▣ Role for good data in developing good science
  - ▣ Real-time water management technologies developed and deployed at the watershed level
- Collaboration
  - ▣ Key to finding long-term successes in preventing crises

# Water Quality Challenges

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- EPA draft guidance on jurisdictional waters
  - Expands jurisdictional waters (“significant nexus”)
  - Impacts to Sec. 404 dredge and fill permits
  - Maintains CWA exemptions (agricultural runoff/ditches)
  - Public comment period ends on July 1, 2011
- TMDL – NPDES Programs for nonpoint/point sources
- Stormwater regulations
  - Draft due out this September – final November 2012

# Water Quality Challenges

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- EPA Pesticide General Permit Rulemaking
  - July 30, 2011 Final
  - Effective October 31, 2011
  - Impacts only non-delegated states of Idaho, District of Columbia, Massachusetts, New Hampshire, and New Mexico
  - Can influence other delegated states' regulations on pesticide use - permitting
  - Scope of pesticide regulation could expand if draft CWA guidance adopted by EPA

# Water Quality Challenges

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- Food safety
  - ▣ Increasing calls for U.S. testing of raw produce for contaminants
  - ▣ Potential nexus to irrigation water quality for food production
- Regulatory backlash – 112<sup>th</sup> Congress
  - ▣ Economic conditions
  - ▣ EPA overreach
  - ▣ Legislative action

# Congressional Action

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- Legislation before the 112<sup>th</sup> Congress
  - HR517 Removes authority of Administrator on certain dredge and fill site requirements
  - HR872 Reducing Regulatory Burdens Act (FIFRA)
  - HR2018 Clean Water Cooperative Federalism Act
  - S272/HR457 EPA Fair Play Act (EPA authority removed for previously permitted activities)
  - FY2012 appropriations language: restrict funding to EPA/Corps of Engineers for specific activities implementing new CWA guidance

# Your Water Crisis – What You Can Do

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- Get involved in local, regional, and state water issues - collaborate
- Become educated and engaged on federal and state water issues – legislation and policies
  - ▣ National and statewide water groups play key role in setting federal water policies – need input from key stakeholders/industries
- Become a water conservation leader
  - ▣ Keep records/set performance metrics
  - ▣ Marketing opportunities for meeting water conservation metrics/reducing your “footprint”



# Questions?

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