

City of Tucson Water Department 2009 Annual Drought Monitoring Report



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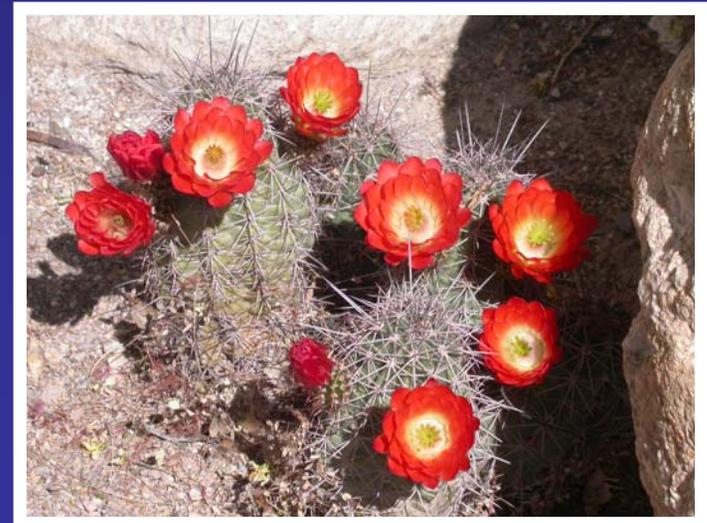


Background

- Governor's Drought Task Force (2003) developed drought response plan for Arizona
- Legislation (2005—ARS 45-342) required all AZ water systems to develop plans
- Tucson Water drought response plan approved by Mayor Council Nov. 2006; implementing ordinance approved March 2007

Tucson Water (TW) Drought Response Plan Intent

- Does not measure drought (state/national agencies do that)
- Measures potential drought impacts on water resources and water system
Key Point: Specific to Tucson Water's supplies, infrastructure, and water demand, per ADWR drought plan guidance document.
- Lists actions TW may take to respond to a sustained drought



What's in the Plan?



- Establishes four drought response stages
- Describes response measures to mitigate drought impacts on water system and water supplies
- Identifies emergency supplies

Plan Indicators and Triggers

- Indicator: Variable that changes as drought conditions change (such as Colorado River Water availability)
- Trigger: The value of one or more indicators that cause a change from one drought response stage to another



TW's Indicators and Triggers are Unique

- Tucson Water's regional indicators:
 - Severe or sustained drought, Colorado River
 - Drought status above normal, Santa Cruz Watershed



Tucson Water's drought indicators (continued)

- Local Indicators are measures of:
 - Aquifer storage
 - Potable water production capacity
 - Reclaimed water production capacity
 - Gallons per Capita per Day (GPCD)

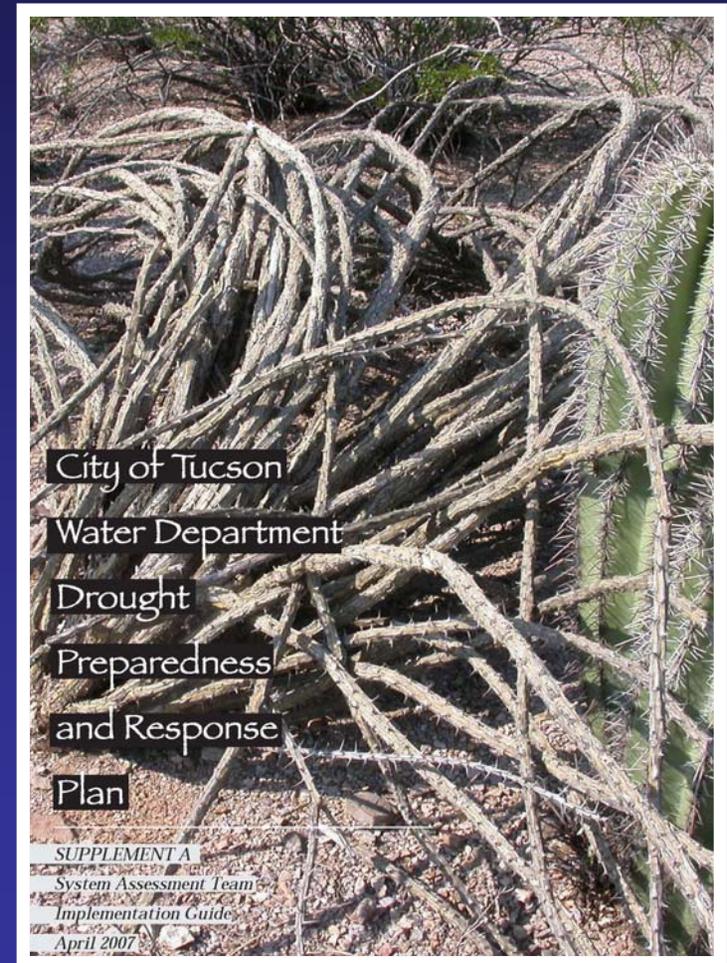


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Staff assesses regional and local indicators annually.

Staff makes drought response stage recommendation based on outcome of assessment.

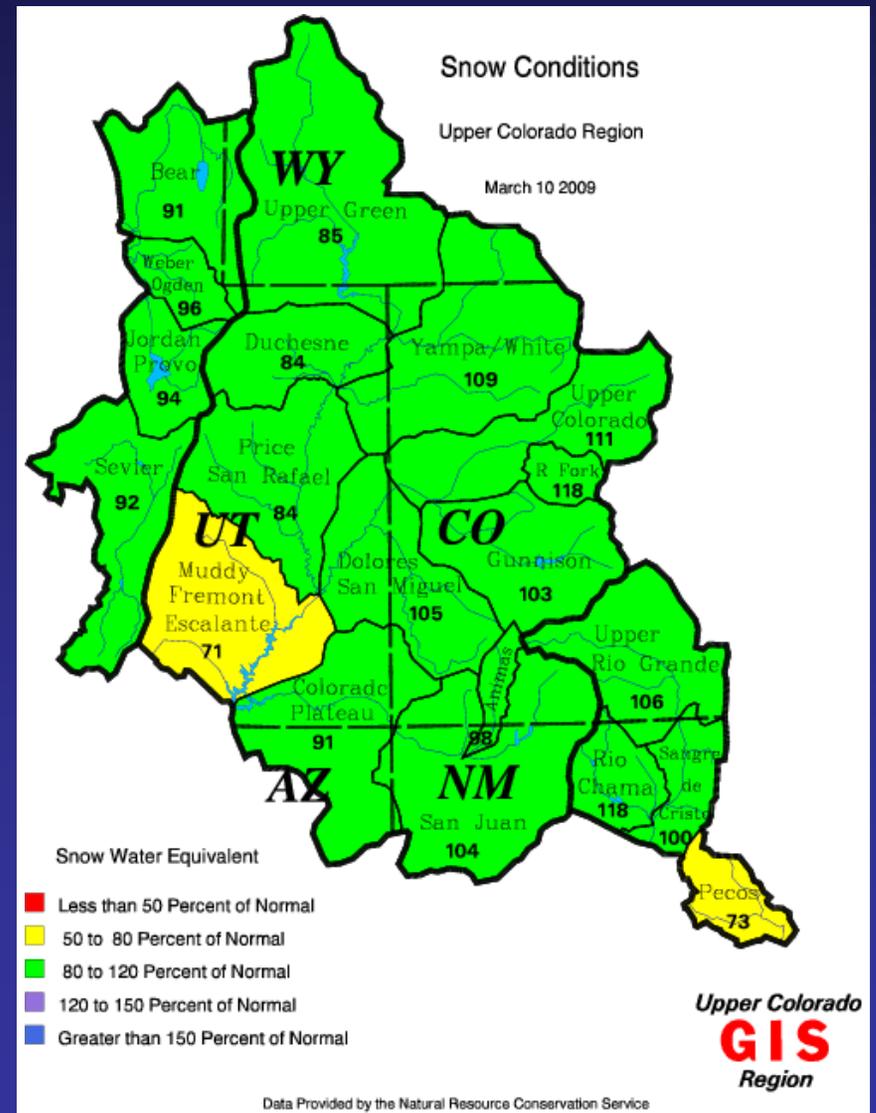
2009 assessment: Recommend continuation of Stage 1 Drought Response



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Colorado River Status

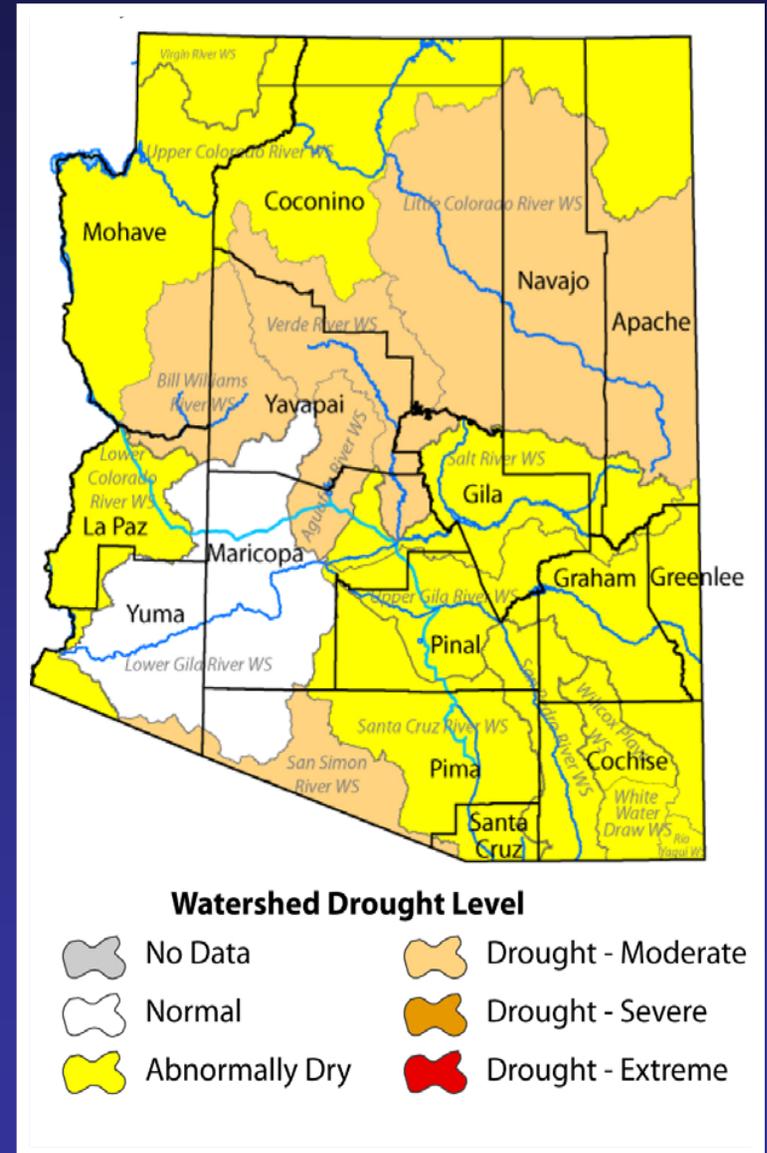
- Watershed in multi-year drought but shortage not declared for 2008 water year.



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Santa Cruz Watershed Status

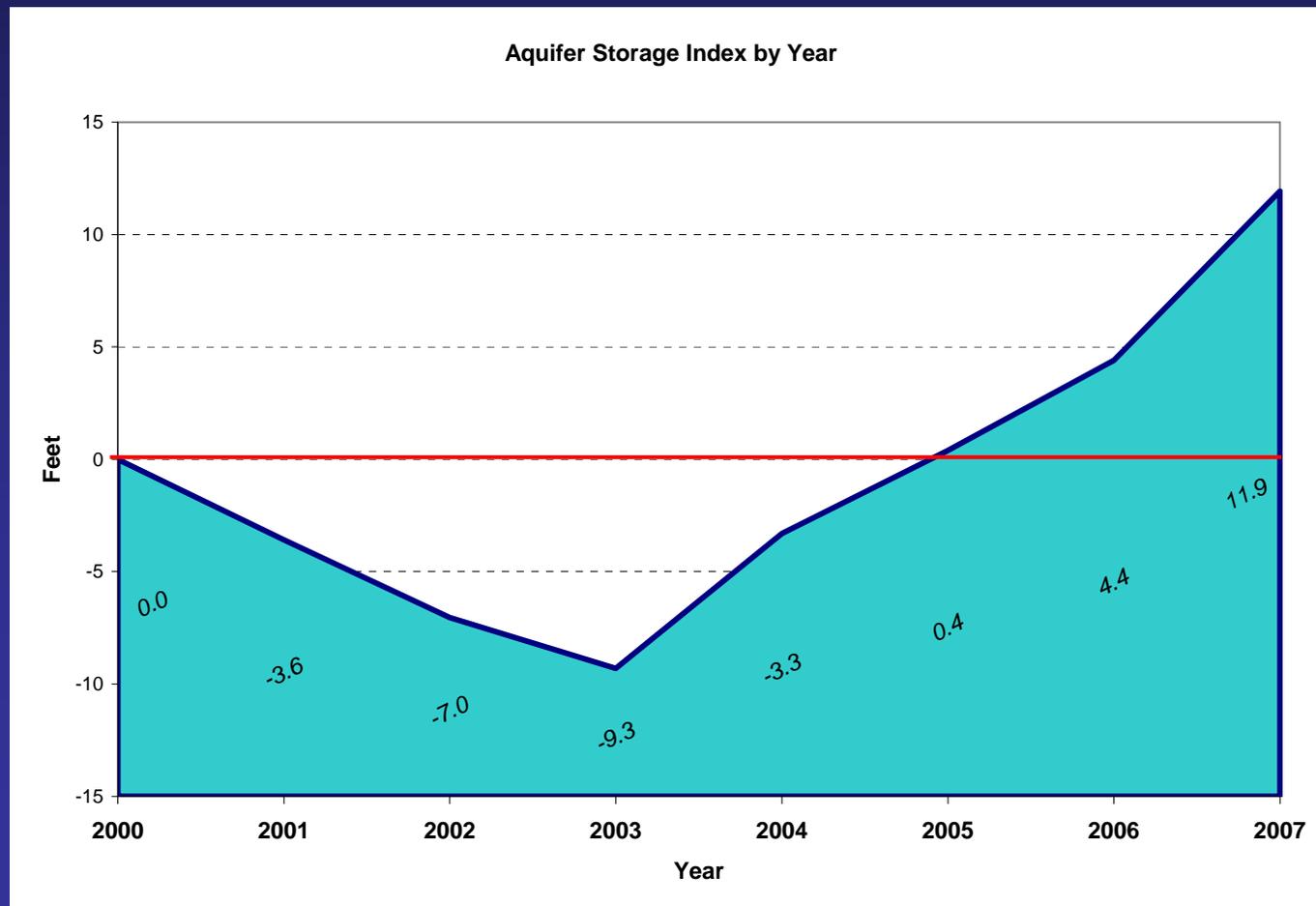
- Slight improvement due to winter storms, long-term outlook is 'abnormally dry'



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Aquifer Storage Index

- Continued dramatic improvement since 2003.



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Potable Production Capacity Index:

- Ratio of available annual capacity (in mgd) divided by maximum 30-day demand period (mgd). *Outcome:* Improvement from 2008.

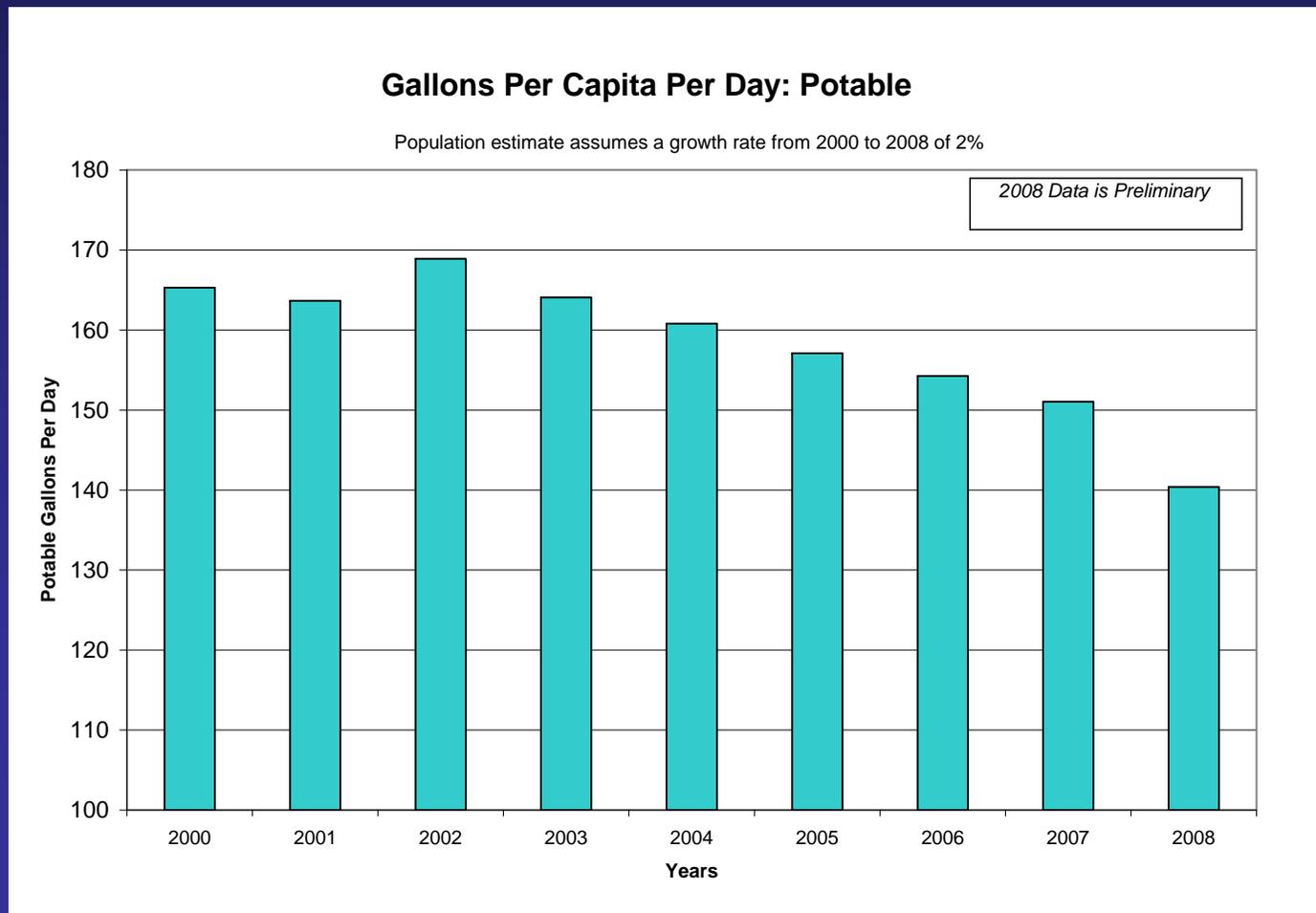


Production Capacity = 184.2 MGD

Forecasted Max 30-Day Demand
(2008) = 148.28 MGD
 $PPCI = 184.2 \div 148.28 = \underline{1.24}$

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Gallons per Capita per Day (GPCD): potable water produced divided by service area population.



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Reclaimed Production Capacity Index: Ratio of annual maximum production capacity to peak day forecast for reclaimed water.

- Index for 2009 report is 1.05 (slightly down from 1.09 in 2008), indicating adequate production capacity but no 'freeboard' (less production from Randolph)



What Happens in Stage 1?

- Stage 1 Theme: City leadership, public awareness and education
- All City depts. will conduct self water-audits as budgets allow; TW will look for ways to improve water delivery
- Continue TW conservation programming—overwhelming community response to date
- Coordinate public information messages to community with Pima County Local Drought Impact Group (LDIG) which includes other area water providers.

For More Information

- City of Tucson Water Department Drought Preparedness and Response Plan

<http://www.tucsonaz.gov/water/>

Questions?

