

Arizona Water Reuse 2019 Symposium



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Director

Arizona Department of Water Resources

July 29, 2019

Drought Contingency Plan Recap

Lower Basin Drought Contingency Plan

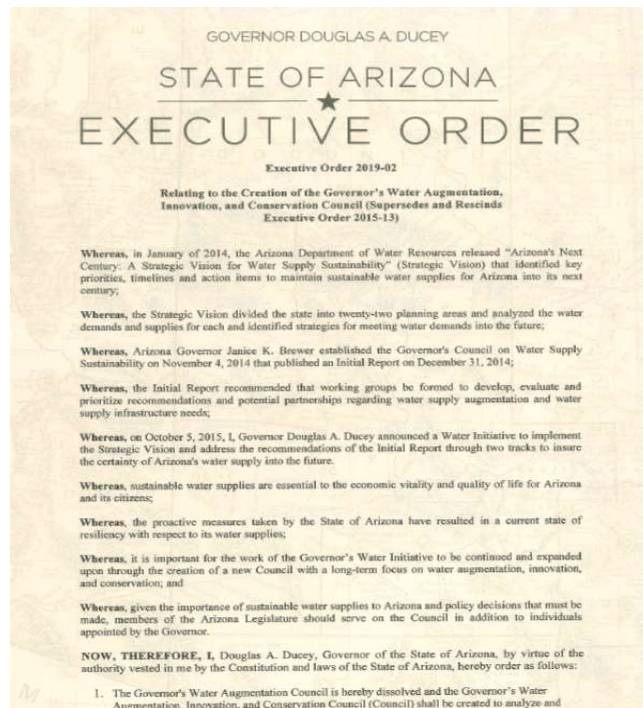
- ADWR & CAWCD jointly hosted 9 public Steering Committee meetings to discuss & recommend how to adopt and implement the LBDCP in a way that is acceptable to Arizona water users
- **January 31** – Arizona Legislature passed & Gov. Ducey signed SB 1227
 - The legislation authorized ADWR Director to sign the Interstate DCP Agreements on behalf of Arizona



Colorado River Drought Contingency Plan

- **March 27 & 28** – Reclamation & Colorado River Basin representatives testified at U.S. subcommittee hearings at the Senate (subcommittee chaired by AZ Sen. McSally) & the House (subcommittee chaired by Rep. Huffman; full committee chaired by AZ Rep. Grijalva)
- **April 8** – Bill passed after announced by Sen. McSally & Rep. Grijalva
- **April 16** – Signed by President Trump
- **May 20** – Signed & finalized by Lower Basin States, Reclamation & Interior

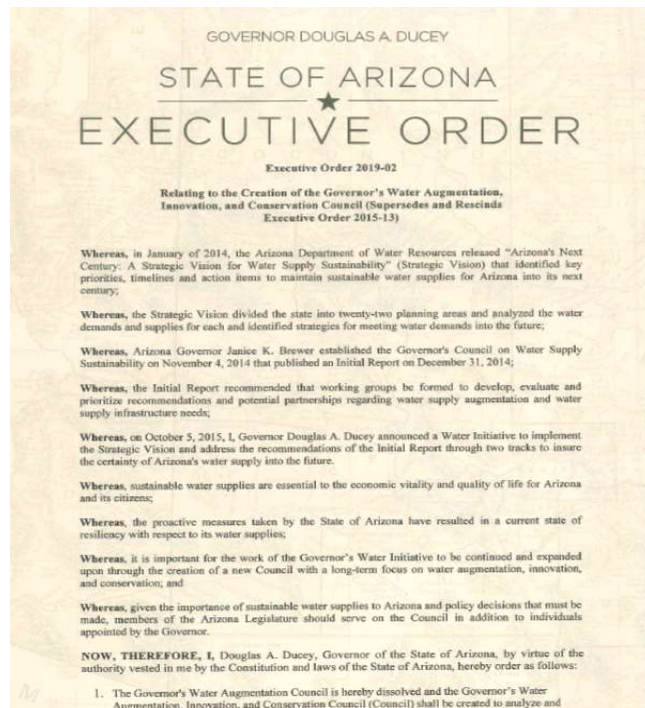




Governor's Water Augmentation, Innovation & Conservation Council

Created by Executive Order on January 31, day of DCP signing

- Dissolves the Governor's Water Augmentation Council (GWAC) and replaces with the Governor's Water Augmentation, Innovation and Conservation Council (GWAICC)
- Investigates long-term augmentation to benefit Arizona, and strategies for conservation and innovation in pursuit of more sustainable water supplies
- Meets quarterly and has formed working groups. Inaugural meeting, June 13



Governor's Water Augmentation, Innovation & Conservation Council

Created by Executive Order on January 31, day of DCP signing

- Chaired by Director of ADWR
- Includes previous members of the GWAC, plus Speaker of the House, President of the Senate and House and Senate Minority Leaders, or their legislative designees, plus others as appointed by the Governor
- Shall consider a communication plan for Arizona to accurately convey Arizona's water resiliency and efforts to maintain resiliency going forward

Governor's Water Augmentation, Innovation & Conservation Council

Desalination Committee

- At inaugural June 13 GWAICC meeting, members opted to continue the Desalination Committee, originally established by the GWAC
- The Committee identified the 7 top desal opportunities statewide and the critical challenges they face. Those include:
 1. Yuma Brackish Groundwater Mound
 2. West Salt River Valley
 3. Yuma Non-Groundwater through the Yuma Desalination Plant (YDP) to Bypass Drain
 4. Winslow-Leupp
 5. Gila Bend
 6. Wilcox Playa
 7. Picacho-Eloy

Collaboration with Mexico

Minute 323

- Extends the provisions of Minute 319 through 2026
- Scarcity Plan for Mexico contains additional flexibilities for Mexico on par with the flexibility that the Lower Basin Drought Contingency Plan contains
- Executed entry into force (September 27, 2017)
- Potential opportunities for binational desalination



Recharge & Recovery in Arizona

- **1986 - Underground Storage & Recovery Act**
 - Allows persons with surplus supplies of water to store that water underground and recover it at a later time for the storer's use
- **1994 - Underground Water Storage, Savings & Replenishment Program (Recharge Program)**
 - Encourages the use of renewable water supplies, particularly Arizona's entitlement to Colorado river water, instead of groundwater, through a flexible and effective regulatory program
- **Recharge program does not have specific rules**
 - Statutory Requirements – Hydrologically feasible with no unreasonable harm

Managed Underground Storage Facilities

- Provide managed releases of source waters into a natural river course
- All natural: created without use of constructed devices
- No facility maintenance
- No credits earned for days when storm/surface water runoff is present



Lower Santa Cruz USF

Managed Underground Storage Facilities

There are six Managed Underground Storage Facilities either currently storing or have stored effluent

- *Santa Cruz Managed*
- *Lower Santa Cruz Managed*
- *Heritage – Santa Cruz USF*
- *Casa Grande Managed USF*
- *El Mirage Managed USF Facility*
 - *Permit expired 2010*
- *Upper Agua Fria Managed USF (Prescott Valley)*
 - *Changed to constructed facility in 2004*



Aqua Fria USF



Lower Santa Cruz USF

Effluent Stored At Managed Facilities

- Prior to January 1, 2019, only 50% of effluent stored at managed facilities could be counted toward Long Term Storage Credits (LTSCs)
- SB 1227 allows for 95% of effluent stored at existing managed facilities to accrue LTSCs. Essentially, these are facilities that existed prior to January 1, 2019
- The permitted capacity for the facilities is 64,573 acre-feet per year
- Through 2018, over 86,781 acre-feet of effluent has been stored at these facilities

Local Active Management Area Reclaimed Use

Direct Use of Effluent:

- *Golf courses*
- *Parks & other substantial landscaping*
- *Industrial uses/Palo Verde Nuclear Generating Station*

Indirect Use of Effluent:

- *Underground storage & recovery sites*



Investments in Renewable Supply Use

Direct Use Surface Water

- *Treatment plants*

Indirect Use Surface Water

- *Annual storage & recovery sites*

Direct Use Reclaimed

- *Treatment plants & plumbing to landscaping*

Indirect Use Reclaimed

- *Treatment plants, recharge & recovery sites*

Direct Use of Colorado River Water delivered via CAP

- *Treatment plants*

Indirect Use of Colorado River Water delivered via CAP

- *Long-term storage & recovery sites*



City of Phoenix Water Treatment Plants

Arizona's Water Resource Challenges

Driving Forces

- Arizona has been experiencing long-term drought since the mid-90s
- Population & economic growth will increase demand for water

Short-term Challenges

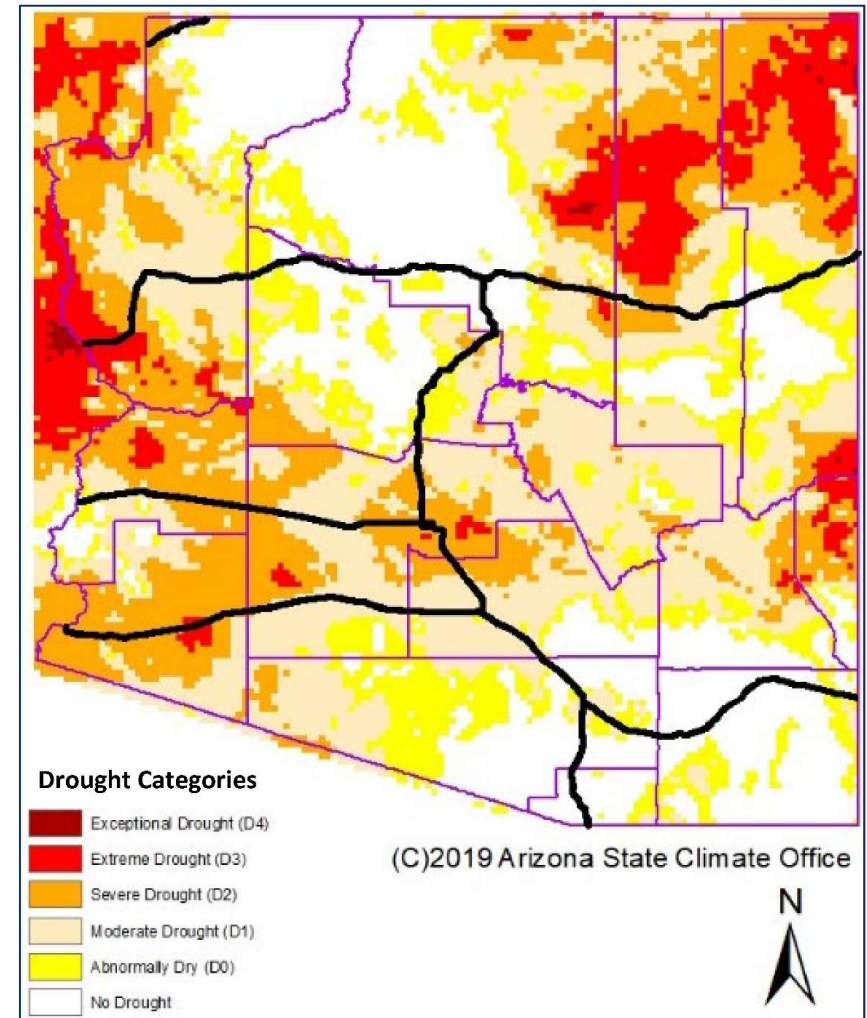
- Risks to Colorado River Supply
 - Shortage on the Colorado River System is likely at some point
 - Recurring Lower Basin Annual Deficit

Medium-term Challenges

- Water resources in rural areas of the state are more stressed
 - Primary water source is groundwater
 - Lack of groundwater regulation
 - Lack of groundwater data
 - Rural areas lack the resources to address their issues

Long-term Challenges

- Growing statewide imbalance between existing water supplies and demand projected in the next 25 years to 50 years

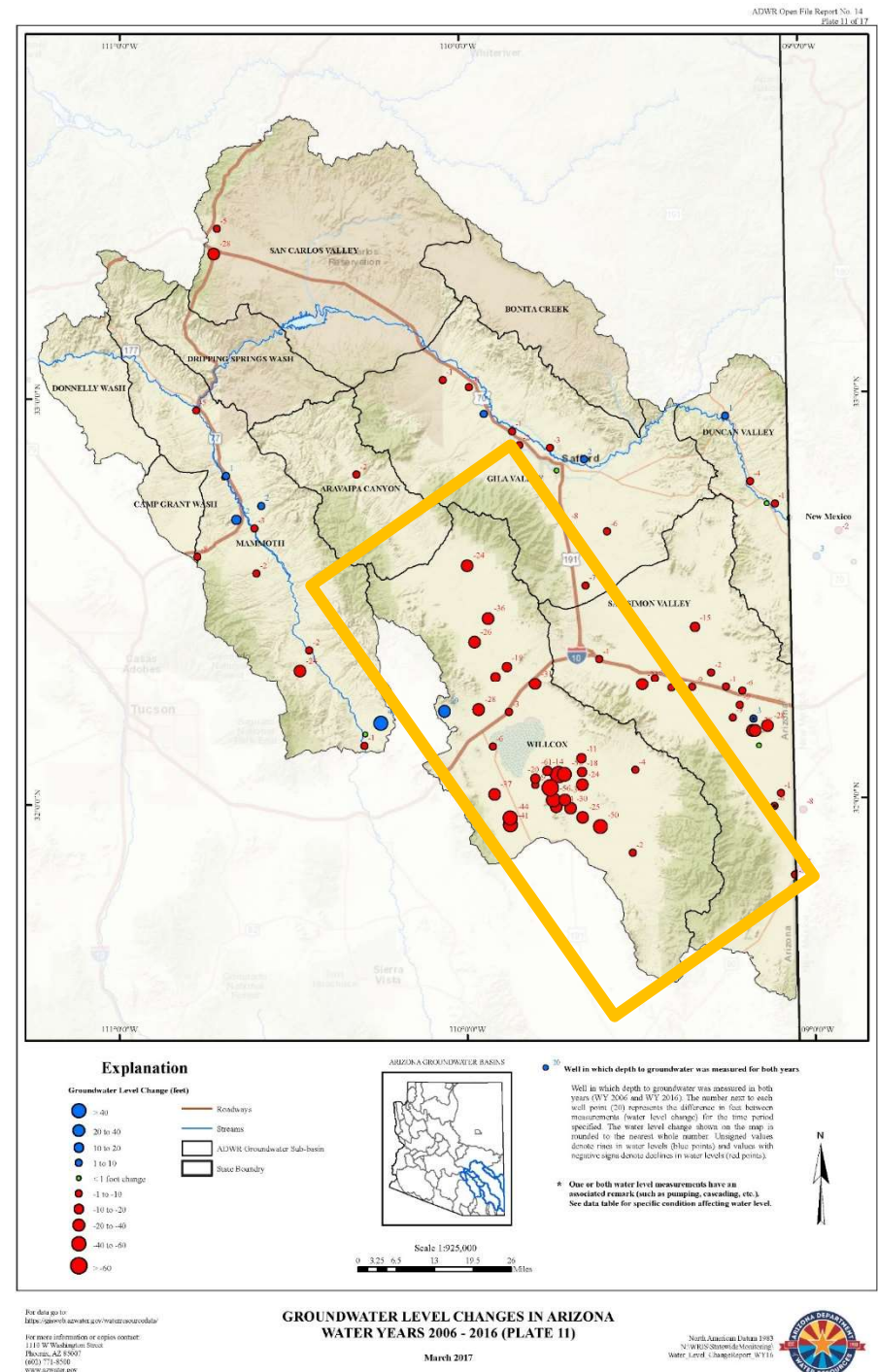


Long-term Drought Map April – June 2019

Arizona Groundwater Levels in decline

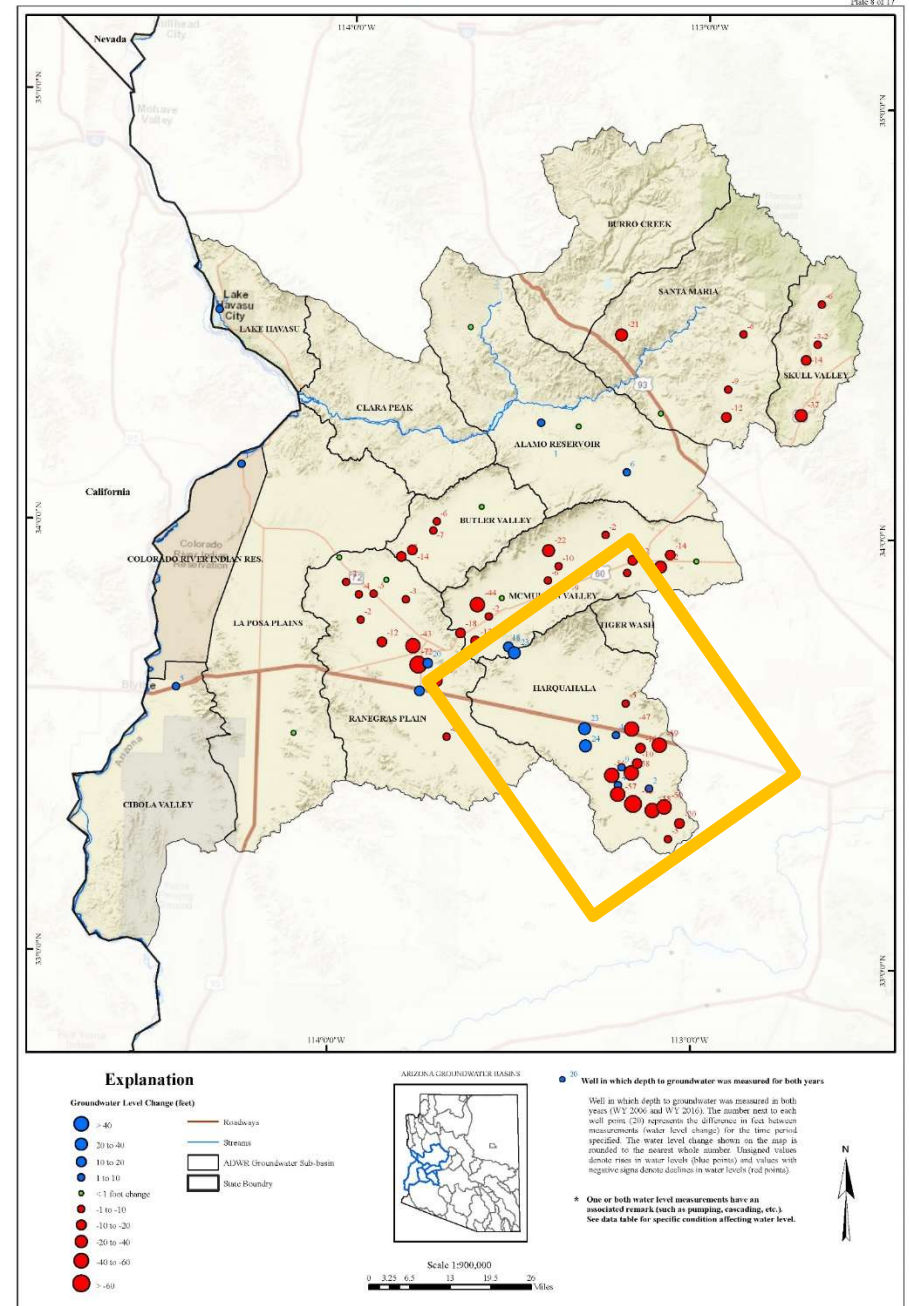
Willcox Groundwater Basin Groundwater Level Changes Water Years 2006- 2016

- 29 GWSI wells with declining water levels
- Maximum 10-year decline: 62 feet
- 1 GWSI Well with rising water level
- Mean Water Level Change: -26 feet



ADWR Open File Report No. 14
Plate 8 of 17

- 13 GWSI wells with declining water levels
- Maximum 10-year decline: 73 feet
- 7 GWSI wells with rising water level (CAP water stored by Vidler Water Company)
- Mean Water Level Change: -21 feet



For more information or copies contact:
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**GROUNDWATER LEVEL CHANGES IN ARIZONA
WATER YEARS 2006 - 2016 (PLATE 8)**

March 2017

North American Datum 1983
NW1/4S1/4StatewideMonitoring
Water Level Change Report WY16



Questions?

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PROTECTING
ARIZONA'S WATER SUPPLIES
for **CURRENT & FUTURE GENERATIONS**