

Best Practices for Experts to Translate Drought Information & Reach a Broader Audience:

# Water Conservation Perspective

Jon Becker, GIS Analyst, US EPA Region 4, Water Division

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# Water Conservation Needs to be Emphasized All the Time, Not Just in Periods of Drought

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- Water Consumption: The economic and environmental costs aren't just in times of drought
- The water saved in our rivers, lakes and groundwater through conservation provides a buffer for when droughts do occur
- The time is now to prepare for future droughts, like the proverbial ant saving food for the winter



# Water Conservation and Efficiency

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- **Water Conservation:** Any beneficial reduction in water use or in water losses.
- **Water Efficiency:** The accomplishment of a function, task, process with minimal amount of water feasible.



# Water Conservation Opportunities Abound

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- **Water Utilities:** Our drinking water and wastewater infrastructure is aging and deteriorating
  - Leaking drinking water lines result in about 2.1 trillion gallons/yr of treated water. Huge amount of “non-revenue water loss”
  - Wastewater lines have similar leak issues, creating public health issues and reducing the amount of water eventually returning to lakes and rivers
- If a utility determines it needs more water, it is often more cost-effective to review their own systems for opportunities to save water than to build a new reservoir or create a new water intake
  - Some options: Identify and repair line leakage, improve metering systems, & employ water rate structures that reward conservation and efficiency
- Some communities have managed to reduce water use even during periods of population growth through these types of approaches
- Water treatment and transport have a big carbon footprint, so conserving water also mitigates climate change





# Water Utilities Cont.

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- **Bipartisan Infrastructure Law:**
  - \$50 billion appropriation to EPA for water, the largest federal investment in infrastructure ever
  - States can prioritize to provide the State Revolving Fund grants/forgivable loans to utilities or other groups to address these issues and improve water conservation, among other eligible expenses as well as support climate change adaptation and resilience
- **EPA Creating Water Resilient Utilities (CRWU):**
  - Program that provides tools and technical assistance to drinking water, wastewater and stormwater utilities to become “climate ready”

# Homeowners and Commercial Buildings:

- Emphasize the money savings from implementing water-efficient equipment
- EPA WaterSense: Voluntary partnership program for labeling products that use at least 20% less water
- Promote a nationwide ethic of water efficiency
- WaterSense provides guidance for landscaping, commercial buildings, water auditing/planning and much more



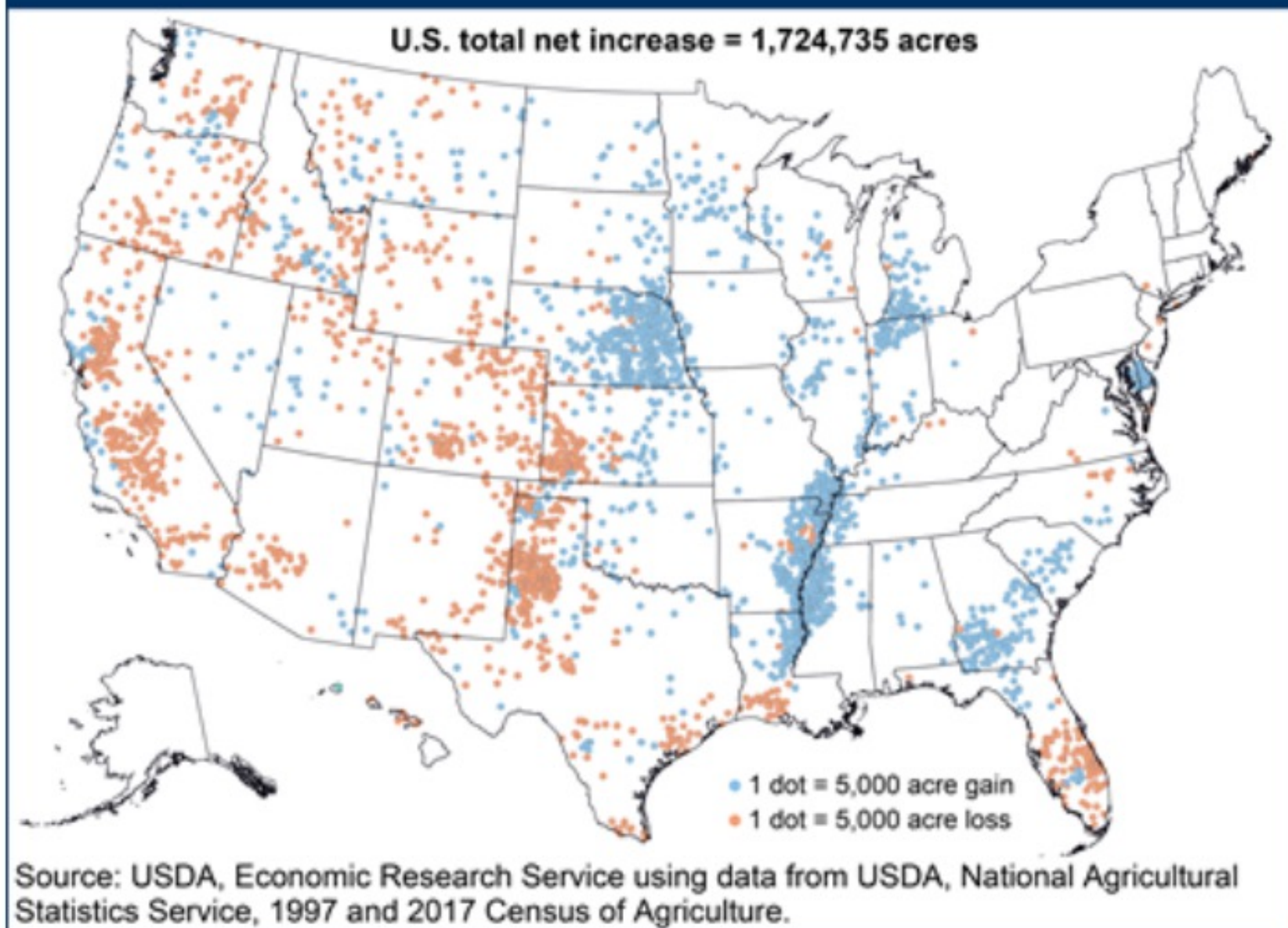
# Irrigation

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- **Irrigation water management:** Meet the needs of growing plants in a way that avoids extended soil saturation and runoff
- Technology to increase application precision and reduce unneeded applications
  - Use weather and soil moisture sensors to determine need
  - Variable rate systems apply water amount based on need of an area
- Initial investment but saves money long-term with lower water, energy and fertilizer costs



## Change in U.S. acres of irrigated agricultural land by county, 1997-2017





# US EPA & USDA Links Related to Water Conservation and Drought

- **WaterSense and Drought:** <https://www.epa.gov/watersense/drought-watersense>
- **Drought Resilience and Water Conservation:** <https://www.epa.gov/water-research/drought-resilience-and-water-conservation>
- **Water Conservation & Efficiency As an Alternative for Water Supply Expansion:** [Best Practices for Water Conservation and Efficiency as an Alternative for Water Supply Expansion, 12-1-16](#)
- **Water Infrastructure Investments:** <https://www.epa.gov/infrastructure/water-infrastructure-investments>
- **EPA Creating Resilient Water Utilities (CRWU):** <https://www.epa.gov/crwu>
- **Irrigation and Water Use:** <https://www.ers.usda.gov/topics/farm-practices-management/irrigation-water-use/>

Questions: Jon Becker, [becker.jon@epa.gov](mailto:becker.jon@epa.gov), 404-562-9227