



United States Department of Agriculture

# *Water-related Activities at USDA/ERS Supporting Farmers and Rural America*

Presentation to the 2021 Social Cost of Water Pollution Workshop

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USDA Economic Research Service

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**Economic Research Service**

[www.ers.usda.gov](http://www.ers.usda.gov)



# Outline

- About ERS
- Agriculture and Executive Order (EO) 14008
- Survey of Irrigation Organizations
- Other research and news





*Providing **trusted, objective, and timely** research and statistics on agriculture, food, the environment and rural America.*



# Broad Range of Economic and Policy Topics

- Agricultural Economy
- Rural Economy
- Global Markets and Trade
- Food Safety
- Food and Nutrition
- Resources and Environment



# Principle Federal Statistical Agencies



## Economic Research Service

U.S. DEPARTMENT OF AGRICULTURE



# ERS is Rebuilding

- New office in Kansas City, MO starting July 1, 2019
- Less than 100 permanent staff as of October 1, 2019
- Hired ~150 staff since October 1, 2019
  - Goal is 275 by the end of September 2021
  - Full staffing is 329
- New Administrator started Sept 1, 2020
  - Entirely new Office of Administrator leadership, and will have 3 of 4 new Division Directors
- All staff in a full time telework status since March 16, 2021
- Thriving, vibrant, productive agency!



# Secretary Vilsack's Priorities



- Many!
- Climate change
- Tackling the pandemic
- Open and competitive markets
- Food and nutrition security
- Racial and social equity
- Building back the economy



# EO 14008: Tackling the Climate Crisis at Home and Abroad (2021)

- Part I – Climate Crisis at the Center of U.S. Foreign Policy and National Security
- Part 2 – Taking a Government-Wide Approach to the Climate Crisis



Federal Register / Vol. 86, No. 19 / Monday, February 1, 2021 / Presidential Documents 7619

## Presidential Documents

Executive Order 14008 of January 27, 2021

### Tackling the Climate Crisis at Home and Abroad

The United States and the world face a profound climate crisis. We have a narrow moment to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents. Domestic action must go hand in hand with United States international leadership, aimed at significantly enhancing global action. Together, we must listen to science and meet the moment.

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

#### PART I—PUTTING THE CLIMATE CRISIS AT THE CENTER OF UNITED STATES FOREIGN POLICY AND NATIONAL SECURITY

**Section 101. Policy.** United States international engagement to address climate change—which has become a climate crisis—is more necessary and urgent than ever. The scientific community has made clear that the scale and speed of necessary action is greater than previously believed. There is little time left to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory. Responding to the climate crisis will require both significant short-term global reductions in greenhouse gas emissions and net-zero global emissions by mid-century or before.

It is the policy of my Administration that climate considerations shall be an essential element of United States foreign policy and national security. The United States will work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway. The United States will also move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.

**Sec. 102. Purpose.** This order builds on and reaffirms actions my Administration has already taken to place the climate crisis at the forefront of this Nation's foreign policy and national security planning, including submitting the United States Instrument of Acceptance to rejoin the Paris Agreement. In implementing—and building upon—the Paris Agreement's three overarching objectives (a safe global temperature, increased climate resilience, and financial flows aligned with a pathway toward low greenhouse gas emissions and climate-resilient development), the United States will exercise its leadership to promote a significant increase in global climate ambition to meet the climate challenge. In this regard:

(a) I will host an early Leaders' Climate Summit aimed at raising climate ambition and making a positive contribution to the 26th United Nations Climate Change Conference of the Parties (COP26) and beyond.

(b) The United States will reconvene the Major Economies Forum on Energy and Climate, beginning with the Leaders' Climate Summit. In cooperation with the members of that Forum, as well as with other partners as appropriate, the United States will pursue green recovery efforts, initiatives to advance the clean energy transition, sectoral decarbonization, and alignment of financial flows with the objectives of the Paris Agreement, including with respect to coal financing, nature-based solutions, and solutions to other climate-related challenges.



# Part 2 Involves Many Water and Agriculture Related Actions

- Reduce pollution and increase resiliency
- Conserve land, water and biodiversity
- Innovation
- Environmental justice
- Jobs and economic growth



# National Climate Task Force

- Agencies and Departments across the Federal government
- Chaired by National Climate Advisor, Gina McCarthy
- Coordinated approach across departments



# Climate Action Plan

- Within 120 days
- USDA will submit a plan
- Focus on adaptation and resilience
- Vulnerabilities for agriculture
- Ways to increase energy and water efficiency
- Progress reports



# Civilian Climate Corps

- Important role for farmers, ranchers, and forest landowners
- Strategy for creating a Civilian Climate Corps
- Next generation of conservation workers
- Aim to conserve and restore public lands and waters



# 30x30

- Steps to conserve at least 30% of the land and water by 2030
- Soliciting public input
- Report on guidelines for measuring a baseline and determining progress
- Federal Register notice was posted on 3/16/2021 and comments are due 4/29/2021
- Input will be considered as USDA prepares recommendations to expand climate-smart ag and forestry practices and systems.
- Questions include:
  - How should USDA utilize programs, funding, authorities to encourage voluntary adoption of climate-smart practices?
  - How can USDA leverage existing policies and programs? What new strategies should USDA explore?
  - What data, tools, and research are needed for USDA to carry out climate-smart ag?

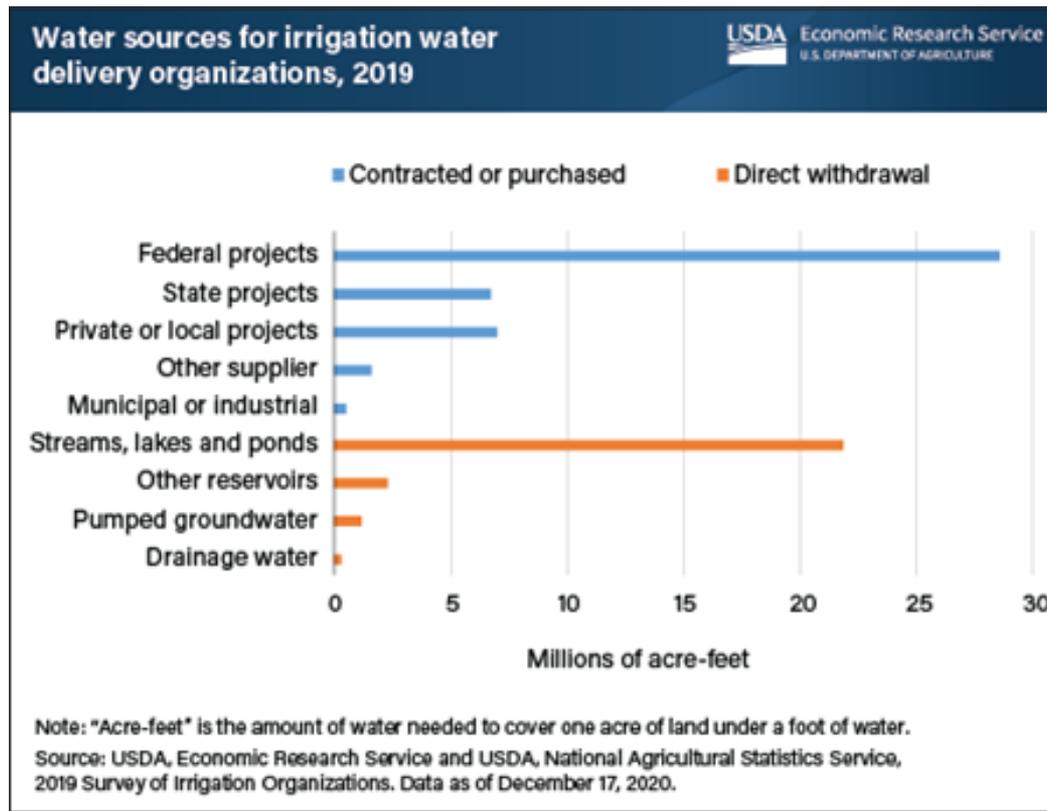


# Survey of Irrigation Organizations

- Collaboration between ERS, NASS, & OCE
- Update of 1978 Census of Irrigation Organizations
- Survey collected data on 2,677 organizations:
  - Water supply delivery
  - Groundwater management
- Developed in partnership with other Federal agencies and regional, state and local stakeholders

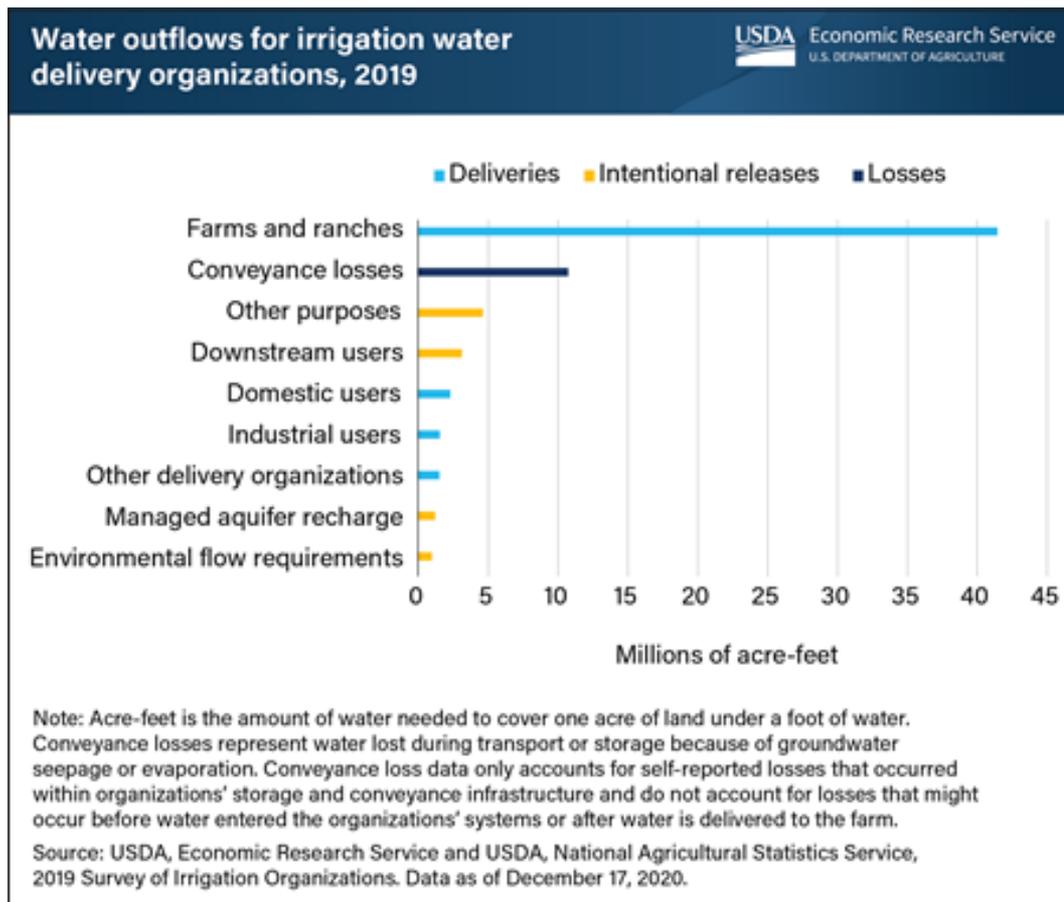


# Irrigation delivery organizations acquired water from Federal water projects and natural water bodies



- Most water came from Federal projects maintained by BoR, ACE, and Bureau of Indian Affairs
- About 22 million acre-feet came from rivers, streams, lakes, and ponds

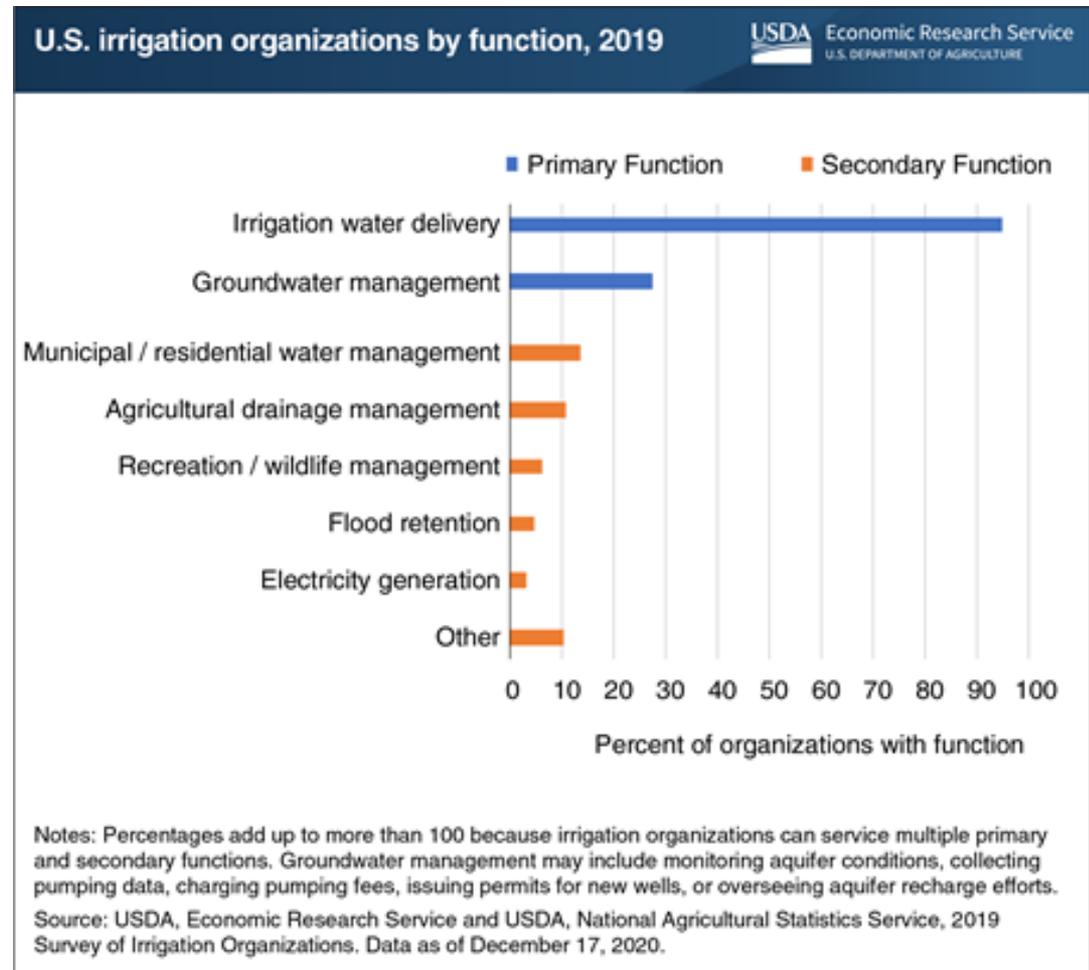
# Irrigation delivery organizations released water from systems for a variety of users, purposes



- 41.4 million acre-feet of off-farm water delivered to farmers and ranches in 2019
  - Domestic, industrial, and other irrigation sources
- Conveyance losses represent 16.7% of the use
  - Opportunities for focus of conservation efforts

# Irrigation organizations performed a variety of water management functions

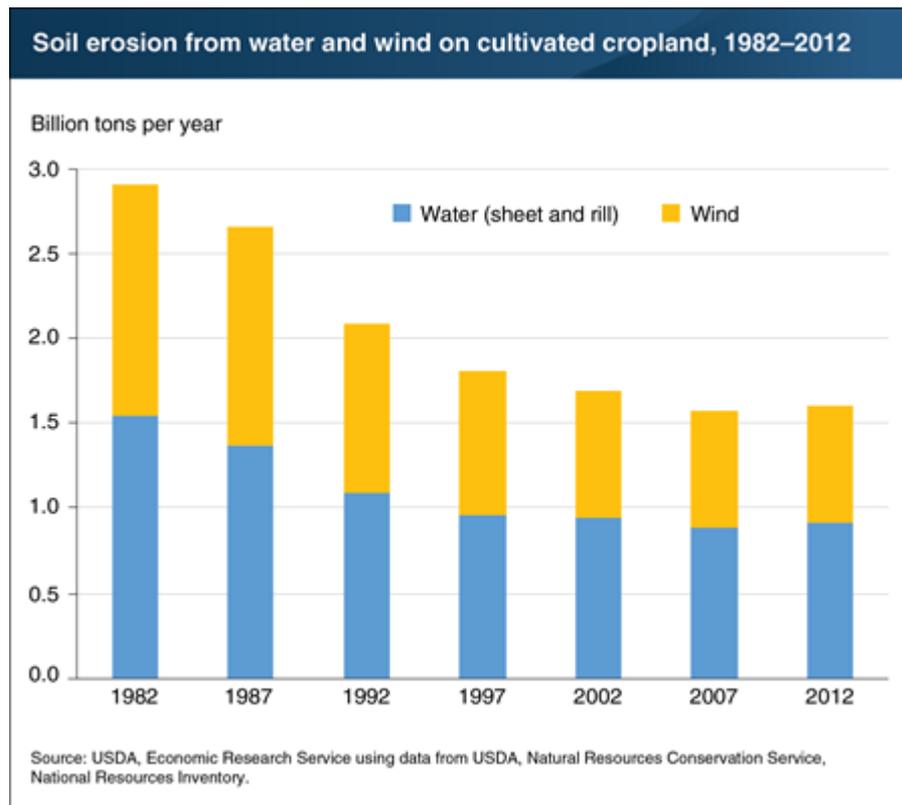
- 2,677 organizations in the 24 states where most irrigation occurred
- 95% had a primary function of delivering water directly to farms
- 27% were involved in groundwater management



# Other Research & News



# Conservation practices have decreased soil erosion on cultivated cropland over time



- Reducing erosion is an important first step toward improving soil health, which can increase yields in crop and forage production.
- Healthy soil also has a positive impact on water quality, decreasing nutrient runoff into streams and rivers.
- Healthier soil tends to have a greater ability to hold water, which can give crops greater drought resilience.



# Conservation Reserve Program

- General sign-up period extended (was to expire Feb 3, 2021)
  - Long-term, resource conserving practices to improve environmental quality
- Provides many environmental benefits, including
  - Carbon sequestration
  - Reductions in nitrogen and phosphorus
  - Creating restored grasslands and wetlands, and protecting stream miles





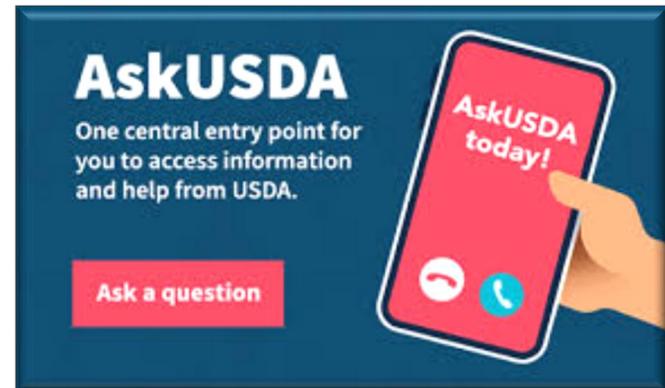
United States Department of Agriculture

# Questions?

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