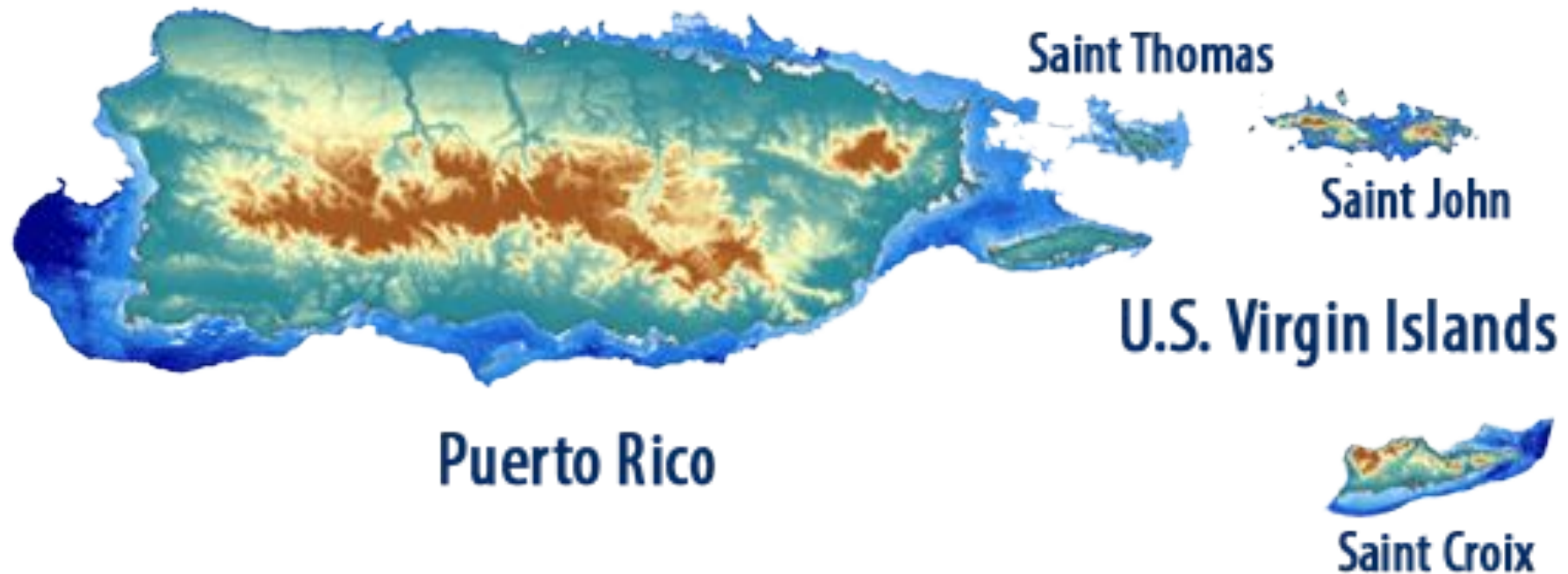


**US Environmental Protection Agency (EPA)  
Water and Energy Nexus Panel  
Puerto Rico Energy Week  
February 23, 2023**



# INTRODUCTION

## Equality



The assumption is that everyone benefits from the same supports. This is equal treatment.

## Equity



Everyone gets the supports they need (this is the concept of "affirmative action"), thus producing equity.

## Justice



All 3 can see the game without supports or accommodations because the cause(s) of the inequity was addressed. The systemic barrier has been removed.

# ENVIRONMENTAL JUSTICE



## Executive Order 14008 (2021) –

### *Tackling the Climate Crisis at Home and Abroad*

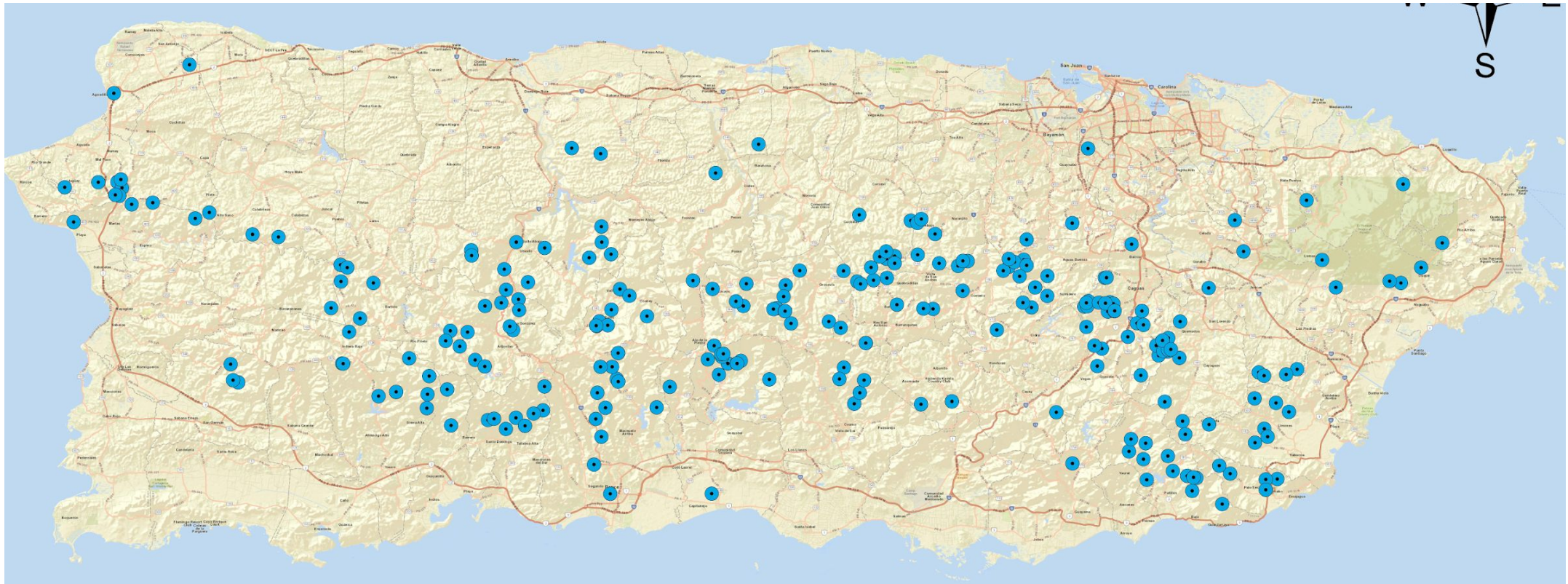
- ▶ *“To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern.*
- ▶ *That means investing and building a clean energy economy that ...turns disadvantaged communities — historically marginalized and overburdened — into healthy, thriving communities....”*
- ▶ The order also creates a government-wide **Justice40 Initiative** with the goal of delivering 40 percent of the overall benefits of relevant federal investments to disadvantaged communities and tracks performance toward that goal.

**J40**

<https://www.epa.gov/environmentaljustice>

# KEY ISSUE

## COMMUNITY DRINKING WATER SYSTEMS



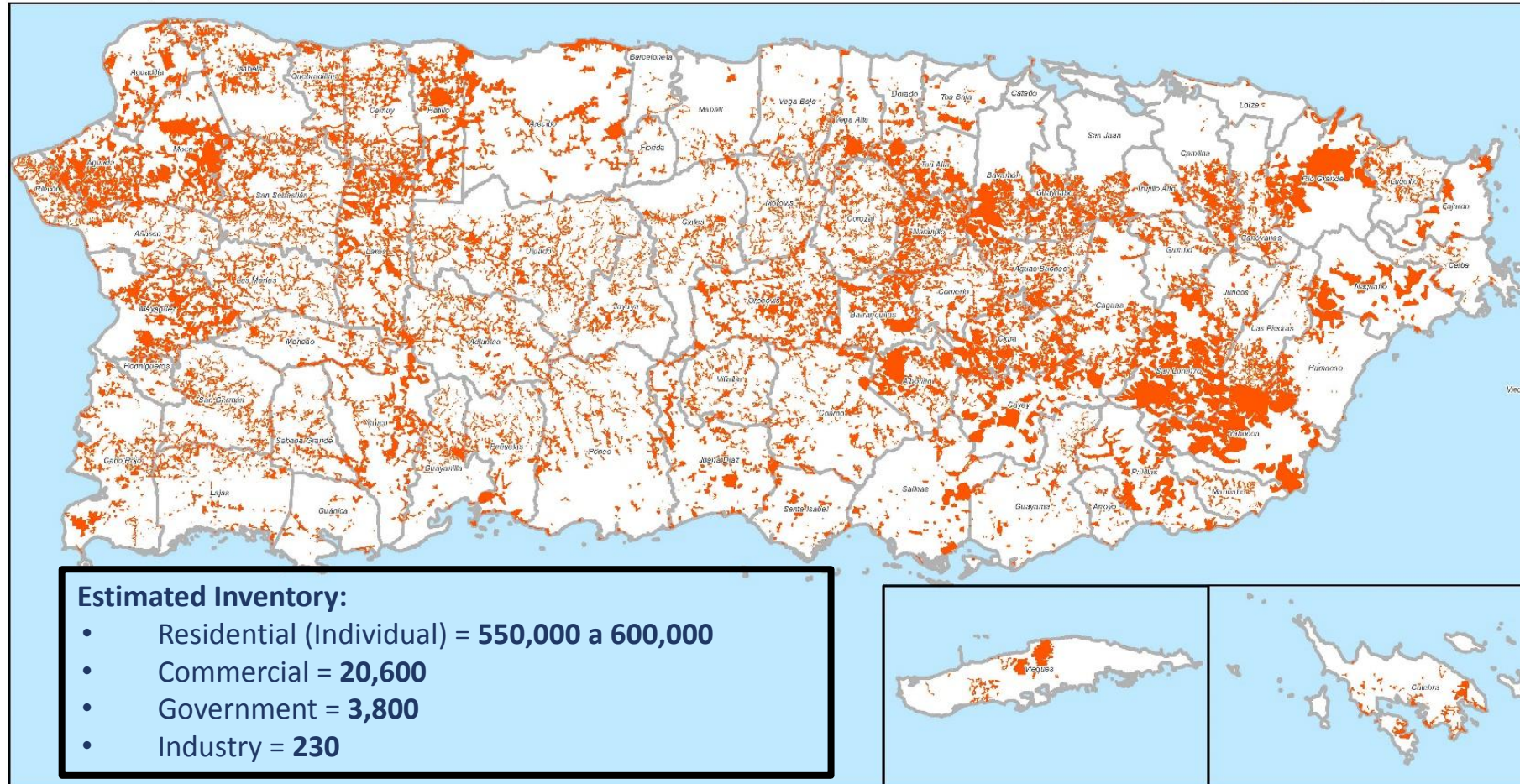
- Approximately, **235** community drinking water systems in Puerto Rico
- Serve **3%** of the population (<100,000)
- ~ **42%** of systems use surface water sources and **58%** use ground water sources

# KEY ISSUE

## UNSEWERED COMMUNITIES / SEPTIC SYSTEMS

Communities with No Sewer Connections 27 November 2018, 1400 EDT

Incident Complex - Puerto Rico



Approximately 40% - 50% of Puerto Rico's population (1.4M), rely on septic systems to manage, treat and dispose their sanitary wastes.

# CHALLENGES

## COMMUNITY DRINKING WATER SYSTEMS



In general terms, Community Drinking Water Systems (Non-PRASA systems) are:

- Located in small, disadvantaged, and low-income communities in rural areas.
- Due to the rough topography and their remote and isolated locations, it is difficult, expensive, and in most cases, unfeasible for PRASA to provide service
- Serve in average, less than 500 people.
- Many operated by the same family for 30 to 50 years (High level of ownership)
- Have poor sanitary conditions and are highly vulnerable to illnesses caused by microbial contaminants and potential chemical contaminants.
- Consumers are not provided education regarding water quality, water related diseases, and regulations.
- Are vulnerable to the effects of natural disasters.



# COMMUNITY DRINKING WATER SYSTEMS

Most of these communities lack technical, managerial, and financial capacity and a self-sustained governance structure to operate and maintain a safe and reliable drinking water service resulting in ongoing low compliance rates. By the end of FY2021, approximately:

- **89%** of the systems did not comply with one or more SDWA regulatory requirements.
- **75%** of the systems (180/240) have disinfection equipment, but not necessarily are in use or operating adequately.
- Only **48%** of the systems (115/240) took monthly bacteriological samples.
- **24%** (58/240) have licensed operators.
- **13%** (12/96 surface water systems) provide filtration.
- Information about chemical contaminants is scarce.



# COMMUNITY DRINKING WATER SYSTEMS SUPPORT AREAS / BENEFITS

- Capacity Building and Technical Assistance
- Community Organization
- Infrastructure Design and Construction
- Capital improvement plans
- Maintenance
- Equipment and Materials
- Operator Certifications
- Emergency Management Plans
- Water Quality Monitoring Analysis
- Compliance with SWDA and local DOH Regulations
- Finance Structure / Budget Bookkeeping / Accounting
- Outreach and Education and many others





# EFFECTIVE PARTNERSHIPS

## COMMUNITY ORGANIZATION AND NGO SUPPORT

- Non-operating systems needed generators and support activities (bulk water, water purification tablets, water filtration systems, etc.)
- Solar PV with batteries at the Buenos Aires community water system Caguas and Sabana community water system in Orocovis.



**WATER  
COALITION**



# LEVERAGING FEDERAL FUNDING PROGRAMS

TOTAL FY22	DWSRF	Lead Replacement	DW Emerging Contaminants	CWSRF	CW Emerging Contaminants
\$78,404,000	\$17,955,000	\$28,275,000	\$7,540,000 [+ \$11,374,000 (FY23) = \$18,914,000]	\$23,405,000	\$1,229,000



- **Bipartisan Infrastructure Law (BIL) Funding**
- **American Rescue Plan (ARP)**
- **Inflation Reduction Act (IRA)**
- **Disaster Recovery Funding (FEMA, HUD, USDA, etc.)**

# FINAL STATEMENT



"Regarding the nexus of energy and water, to achieve Puerto Rico's energy, health and equity goals, a critical obstacle to collectively overcome in 12 months is:

**how to facilitate and deliver the overall benefits from Federal investments in water and clean energy infrastructure to disadvantaged communities in Puerto Rico.**

GRACIAS...



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