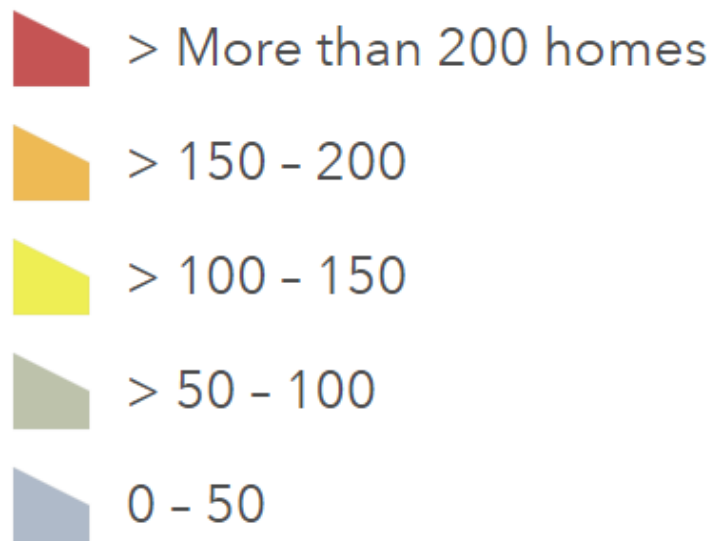


# Addressing water access challenges in the Navajo Nation

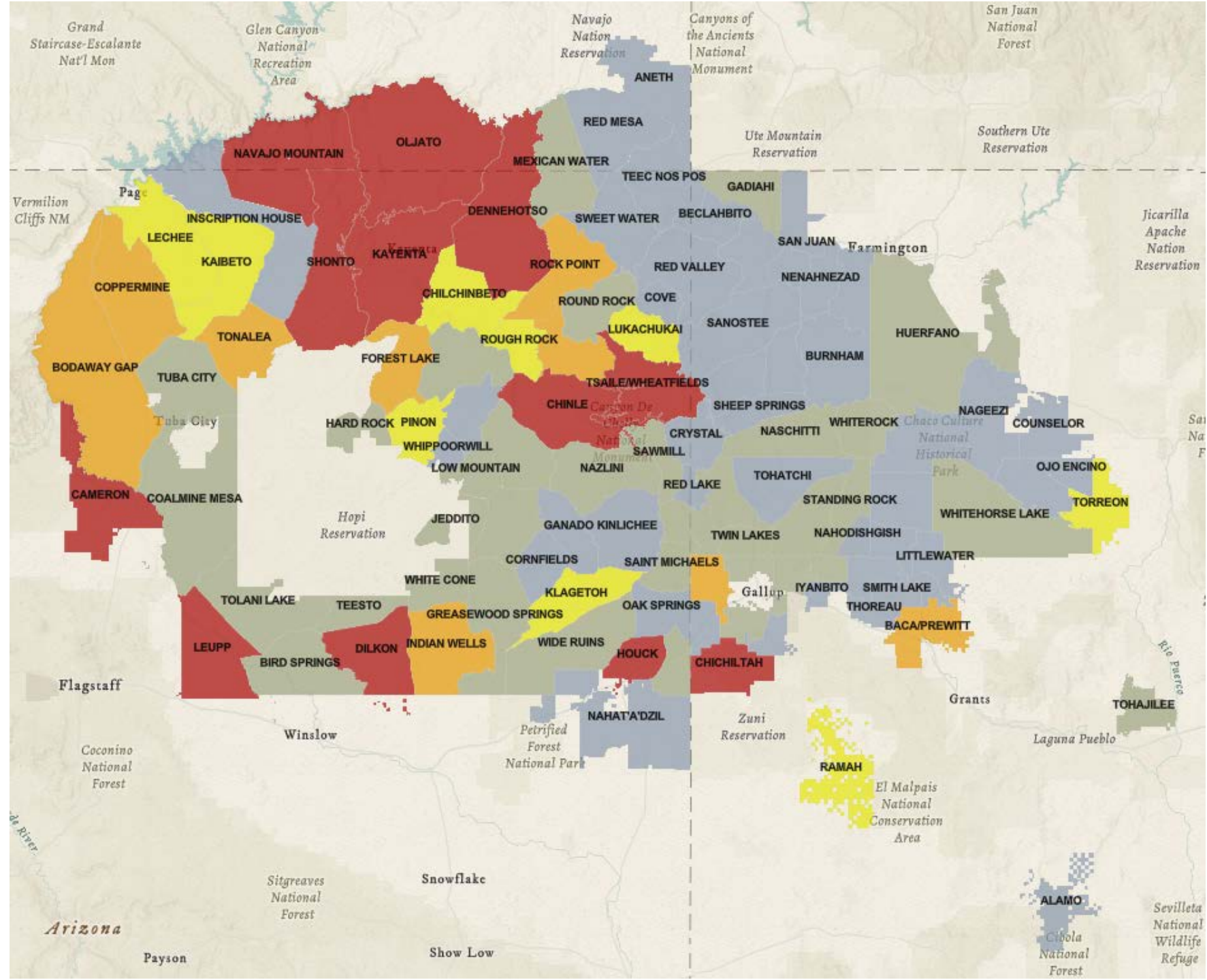
Crystal Tulley-Cordova, Ph.D., Principal Hydrologist



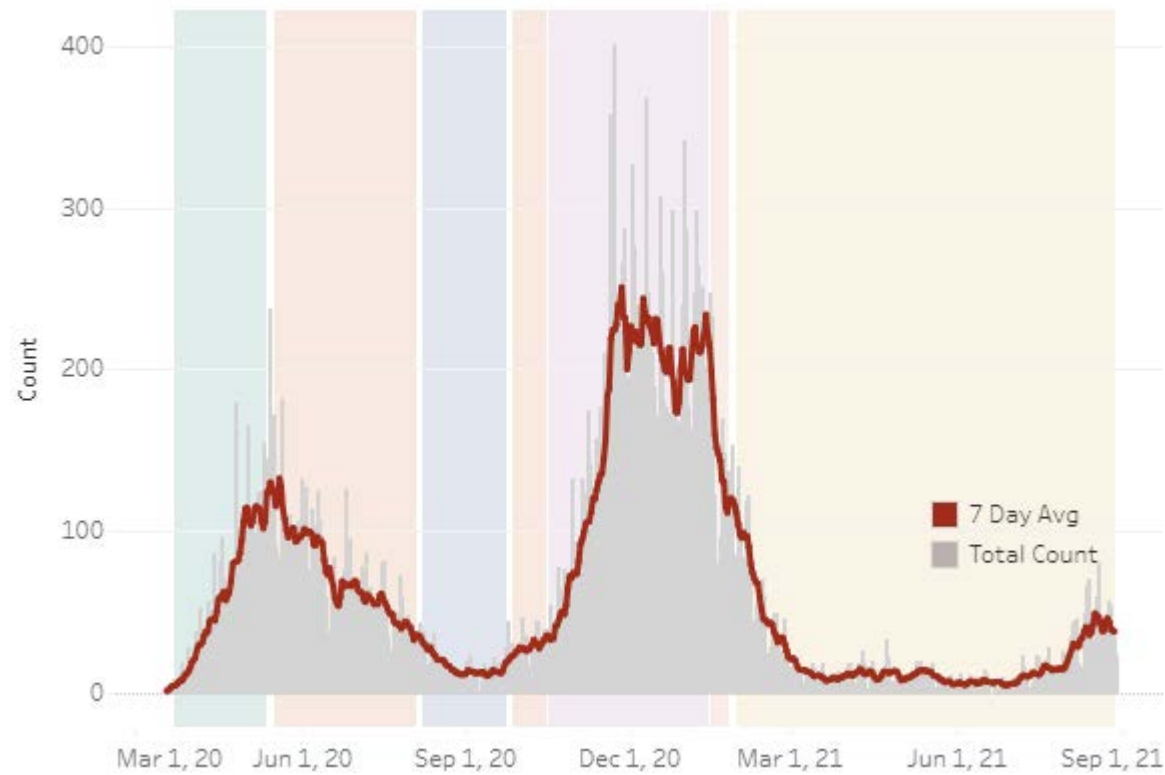
# Homes without piped water



[navajosafewater.org](http://navajosafewater.org)



# Daily Confirmed Cases on the Navajo Nation



[www.ndoh.navajo-nsn.gov/COVID-19/Data](http://www.ndoh.navajo-nsn.gov/COVID-19/Data)



# Coronavirus Cases Spike In Navajo Nation, Where Water Service Is Often Scarce

March 26, 2020 · 2:41 PM ET



## Coronavirus hits Indian Country hard, exposing infrastructure disparities

"You're saying 20 seconds of wash your hands with water," a Navajo doctor in Arizona said. "We do not have plumbing. And that's how I grew up."

The coronavirus is taking its toll on the Navajo Nation

APRIL 19, 2020 / 03:56



Navajo Times  
DINÉ BI NAALTSOOS

PIPE DREAMS: COULD CORONAVIRUS FINALLY  
BRING WATER TO REZ?



# Navajo Safe Water: Protecting You and Your Family's Health

Last Updated | October 9, 2020



**SAFE CHAPTER WATER POINT USE & RESTRICTIONS**

- Practice physical distancing by getting water when fewer people are around. Do not gather in groups.
- Remain in your vehicle until your turn to fill your water container.
- Cover your mouth and nose with a cloth face cover if you need to get out of your vehicle.
- Stay at least 6 feet (about 2 arm lengths) from other people.
- Use disinfectant wipes or spray to clean commonly touched areas such as the watering point handle, spigot, hose, and card reader entry points.
- Hold the hose above the water container while filling. Do NOT put hose in the container.
- Disinfect your hands before and after using the watering point.  
(1) wash with soap and water for at least 20 seconds or (2) use a hand sanitizer that contains at least 60% alcohol.

**Water for in-home use only**  
⊗ NOT for livestock use  
⊗ NOT for agricultural use

Photo: Navajo Chapter of Community Development, June 2020



# WATER ACCESS MISSION

For Navajo residents living without piped water access



UP TO 59  
TRANSITIONAL  
WATER POINTS

PAID WATER FEES



37,000 WATER  
STORAGE  
CONTAINERS

3.5 MILLION DOSES  
OF WATER  
DISINFECTION  
TABLETS



These services will be provided for the duration of the Navajo Nation COVID-19 Public Health Emergency



[navajosafewater.org](http://navajosafewater.org)

Transitional Water Point



[illegible]

 Water Storage Containers Available

 Water Storage Containers Currently Unavailable

# Navajo Nation COVID-19 Water Access Coordination Group (WACG)

## Mission

“to identify, acquire, prioritize, and use available resources to increase access to quality water for tribal homes. The WACG is using available data to identify and design interventions to guide the mission.”



THE UNIVERSITY OF ARIZONA  
**Agnese Nelms Haury**  
Program in Environment and Social Justice



COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES  
COOPERATIVE EXTENSION

NBCS  
Navajo  
Birth Cohort Study



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**ASU** Ira A. Fulton Schools of  
**Engineering**  
Arizona State University

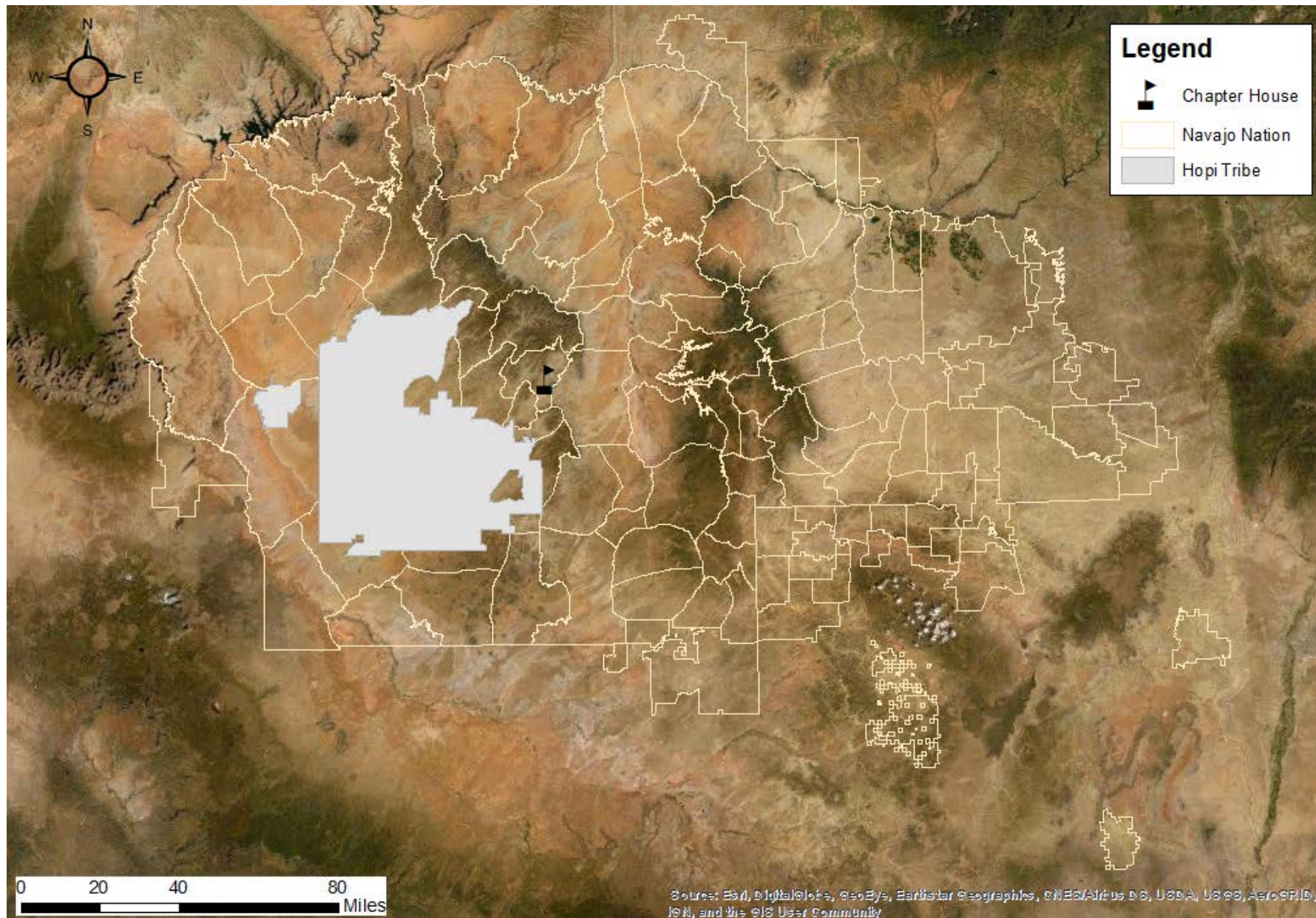


JOHNS HOPKINS  
CENTER FOR AMERICAN  
INDIAN HEALTH



JOHNS HOPKINS  
WATER INSTITUTE





- Population: Over 173,000 (Census 2010) throughout 110 Navajo communities



# Rural Living

## Blue Gap, AZ

**Assets:** good grazing land, red dog gravel.

**Issues:** bad roads, unremediated uranium mines, lack of employment

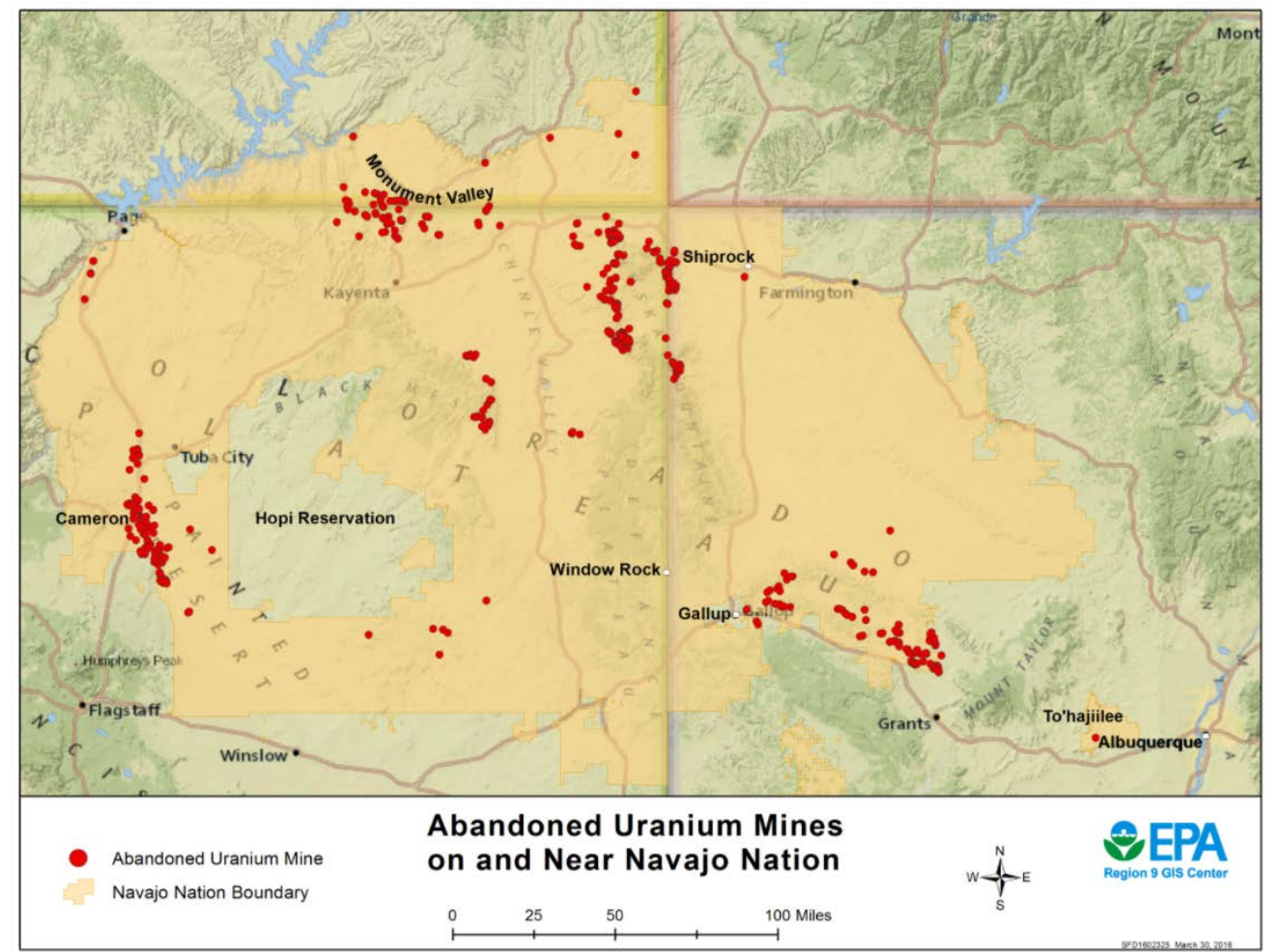
Navajo Times April 17, 2014



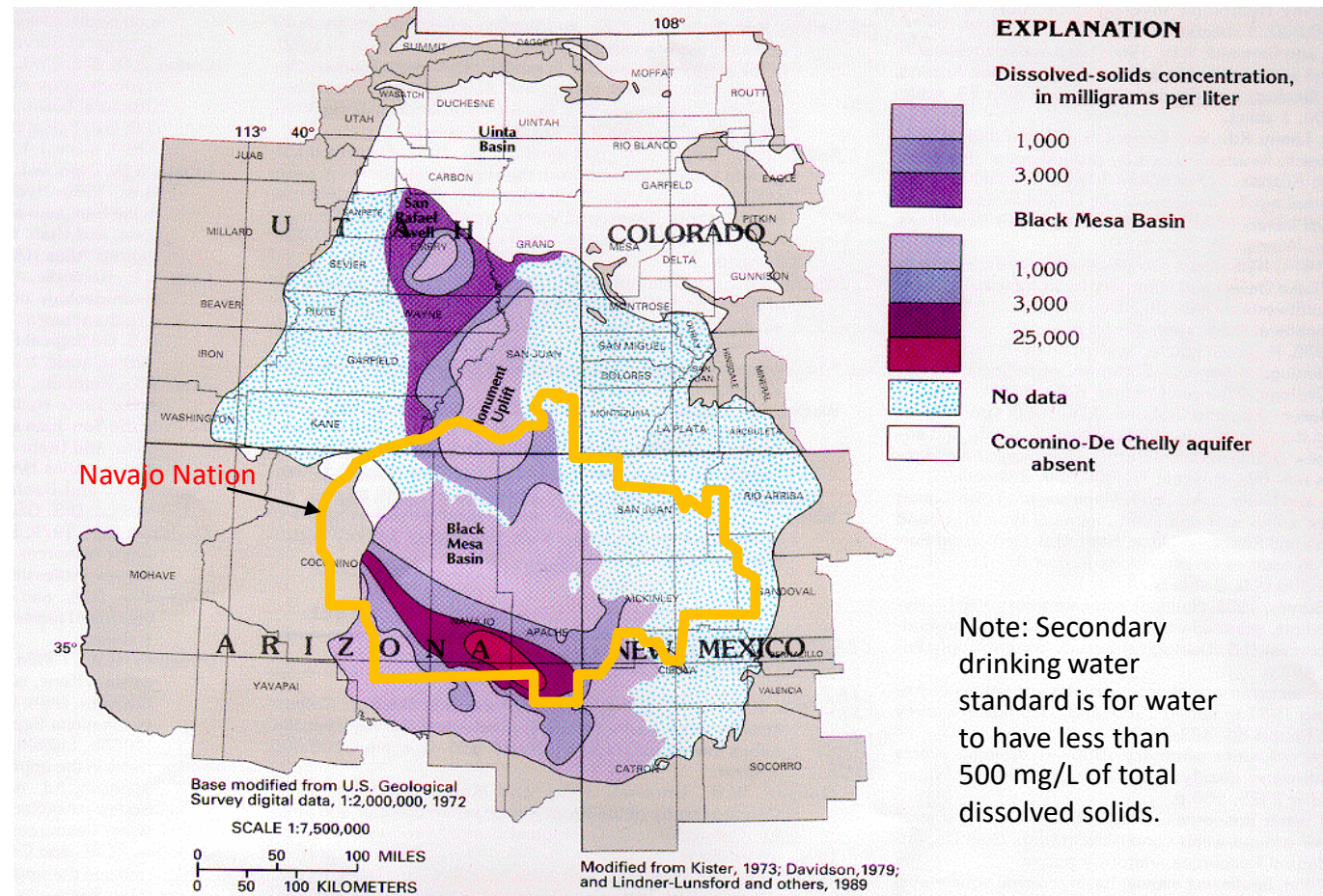


# Uranium Mines

- From 1944 to 1986, nearly 30 million tons of uranium ore were extracted from Navajo lands
- EPA has mapped 521 abandoned uranium mines located within the boundaries of the Navajo Nation.
- The Navajo Nation banned U mining in 2005.

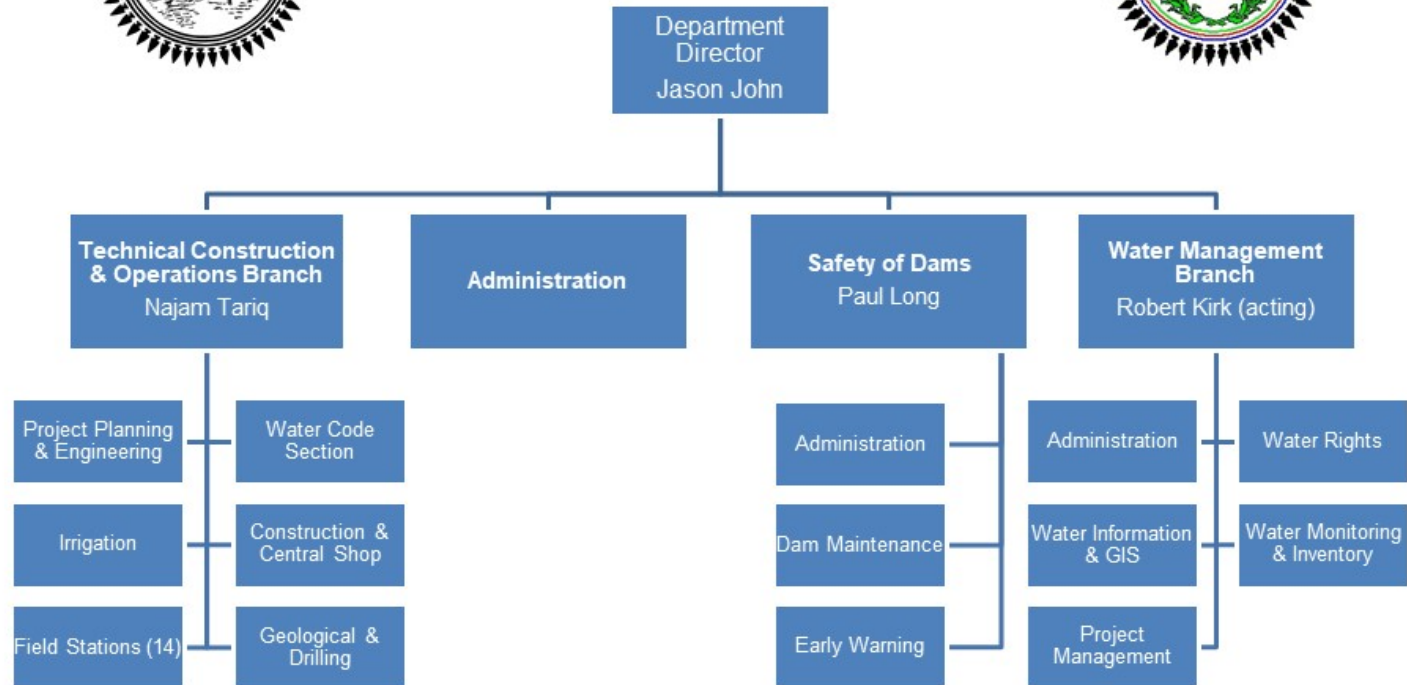


# Brackish Groundwater





# Department of Water Resources



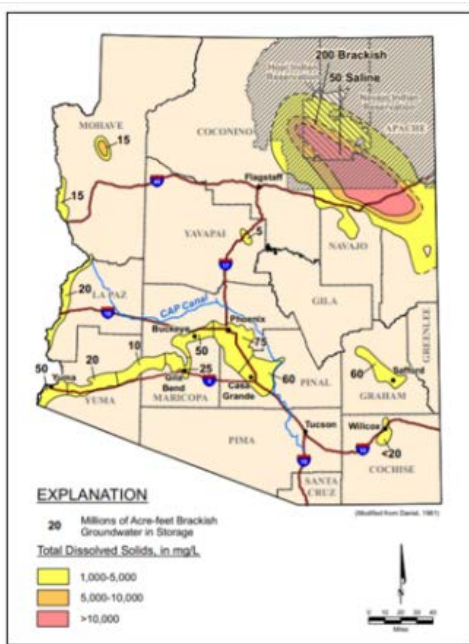
2/11/2021

# Water Management Branch Goals

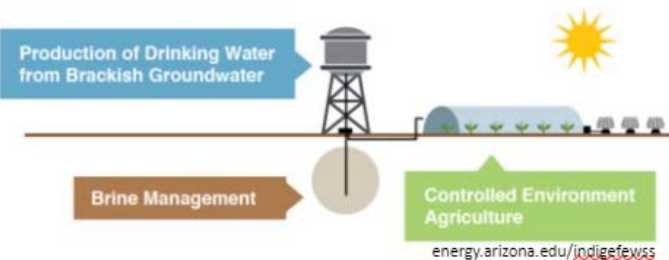
*To protect and manage the water resources of the Navajo Nation through development, reviewing and enforcement of sound water management, regulation, and planning policies. Support of the Navajo Nation Water Code, the monitoring and inventory of all water resources data, and technical support to the Navajo Nation on water rights litigation and negotiations.*







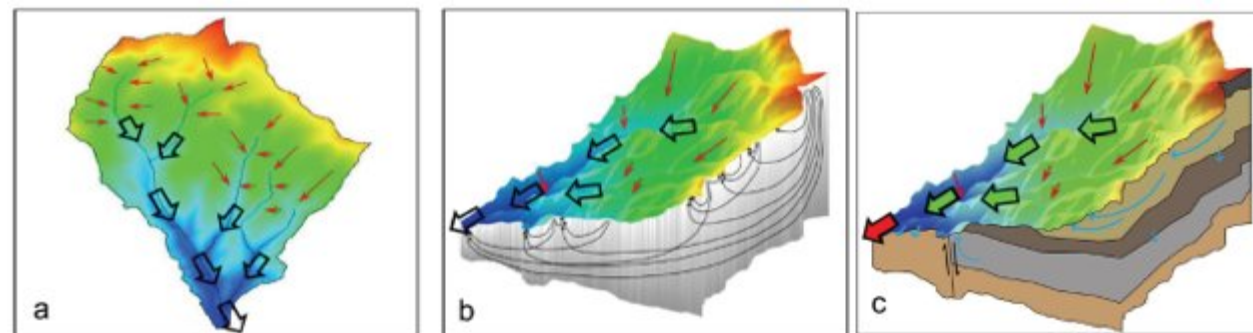
## Off-grid production of safe drinking water



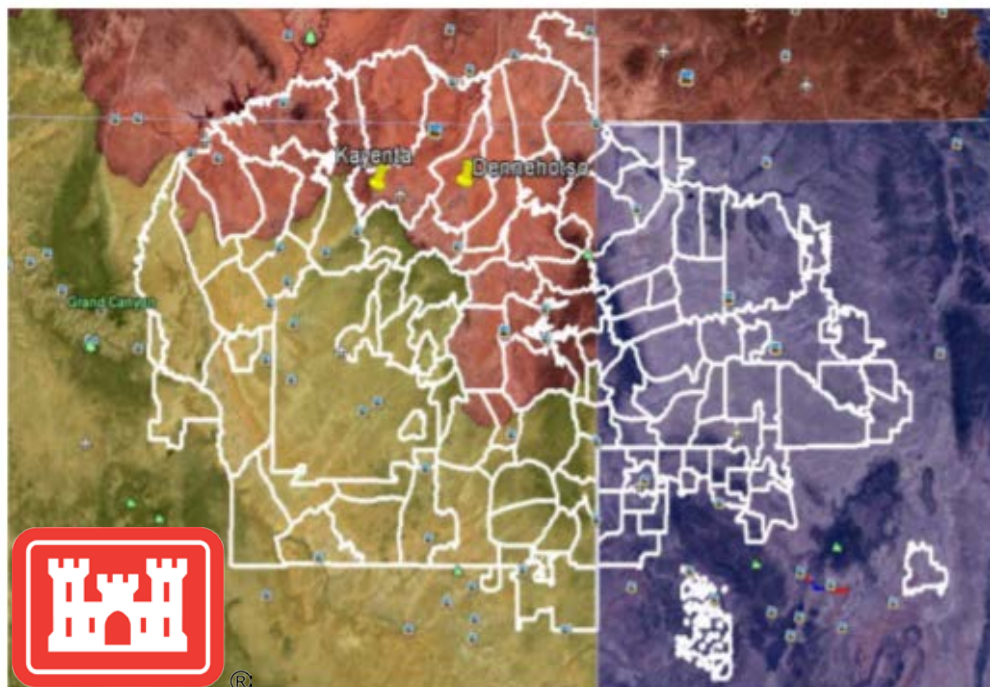
Groundwater, Surface-Water, and Water-Chemistry Data, Black Mesa Area, Northeastern Arizona



USGS 2021



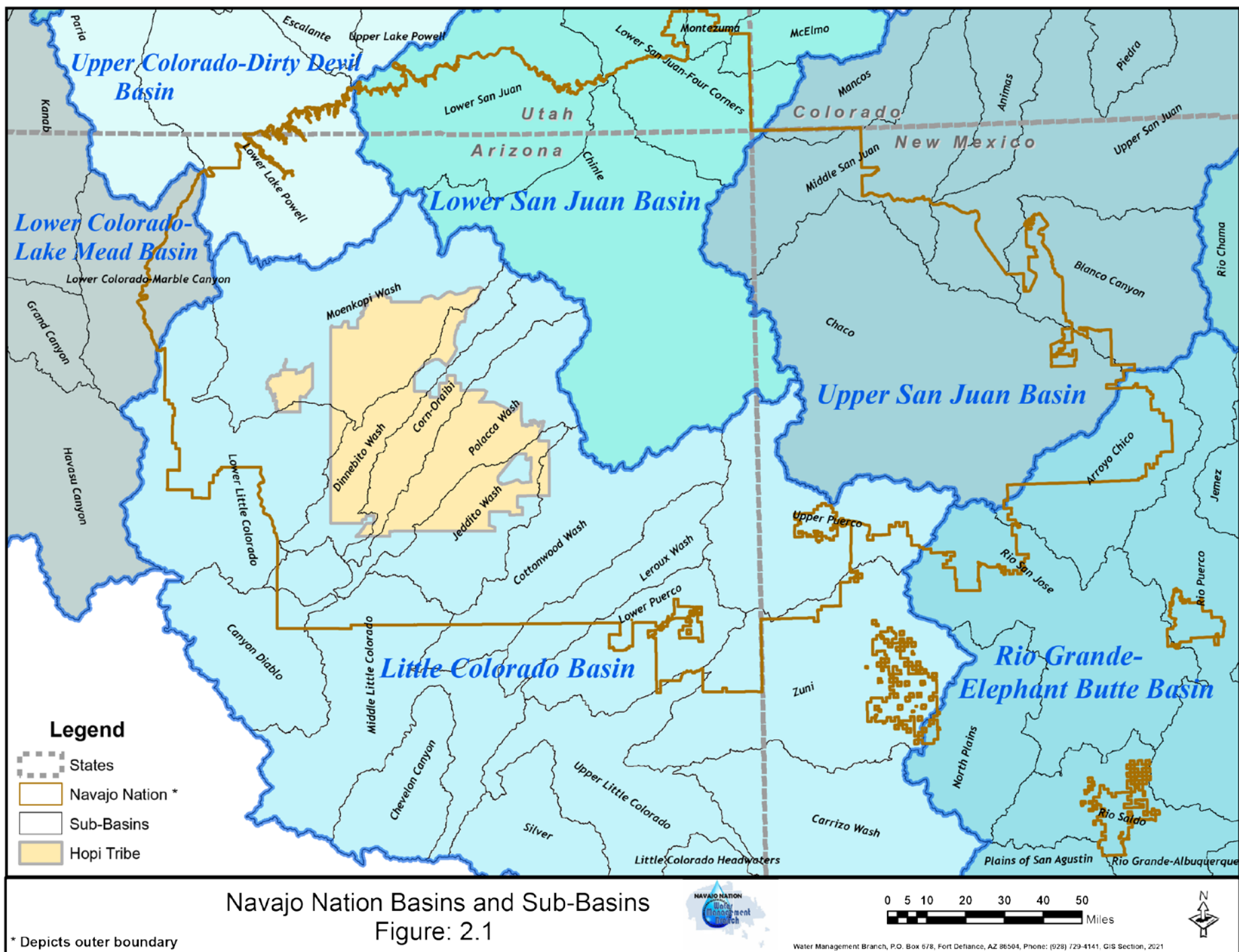
Tsinnajinnie



Lani Tsinnajinnie  
Assistant Professor  
School of Architecture and Planning

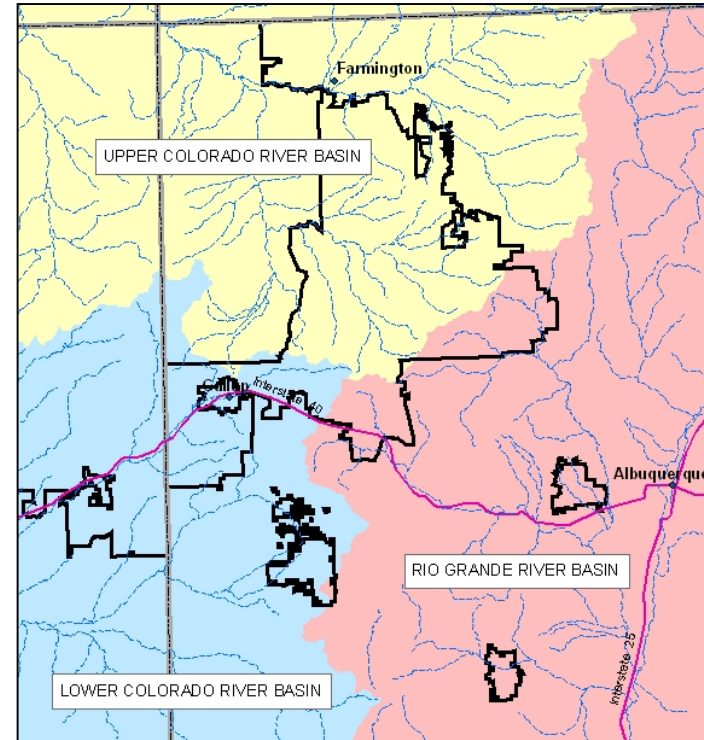
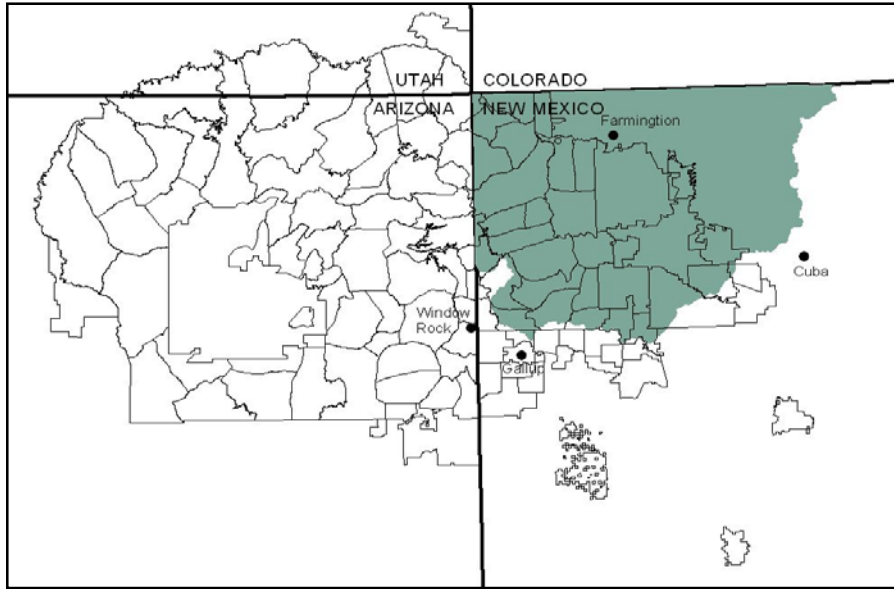




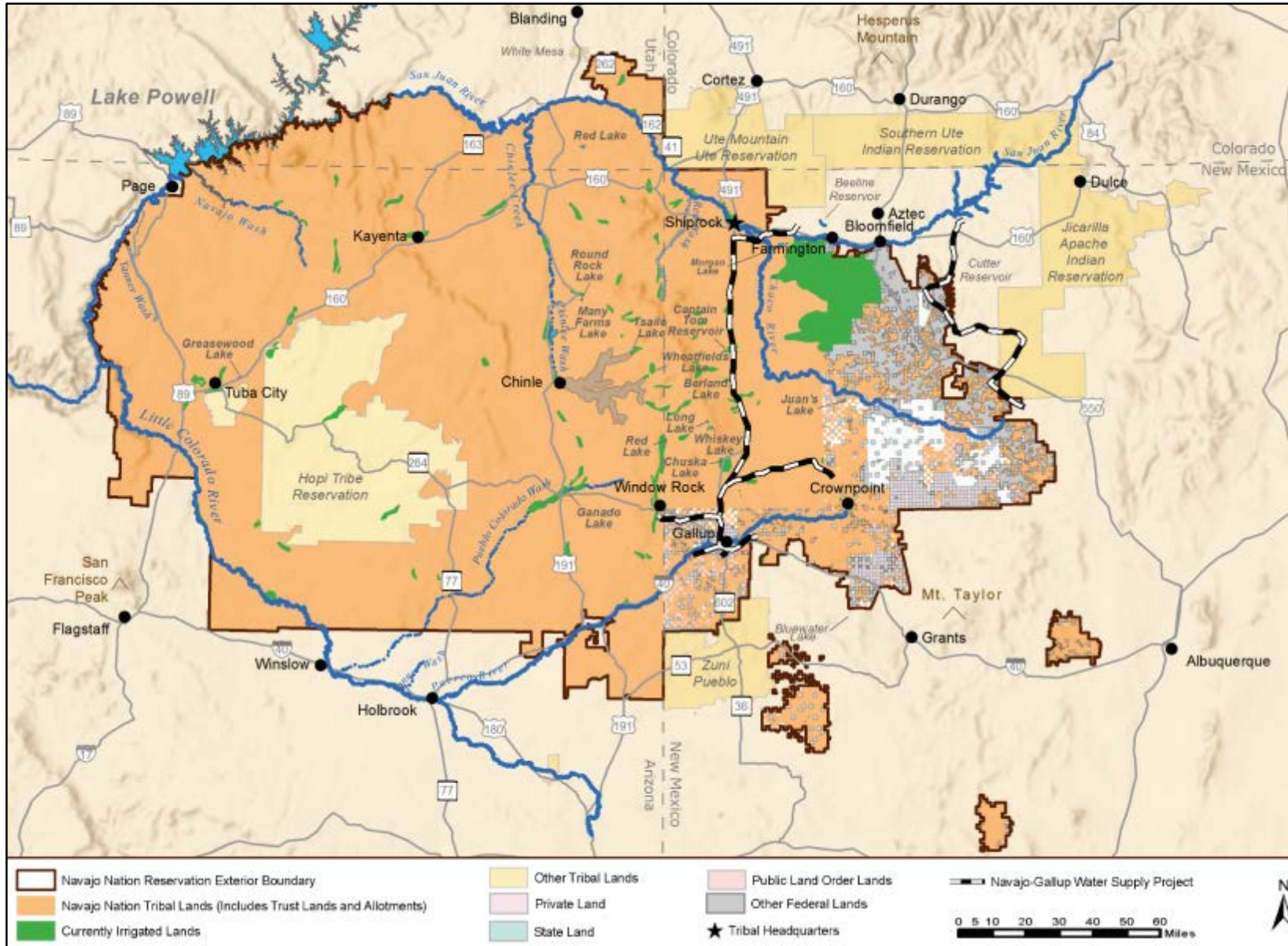




# A component of the San Juan River Basin of New Mexico Water Rights Settlement



# Navajo-Gallup Water Supply Project



**Navajo (AZ)**  
**6,410 Acre-**  
**feet (af)**

**Gallup**  
**(from Jicarilla**  
**or Navajo)**  
**7,500 af**

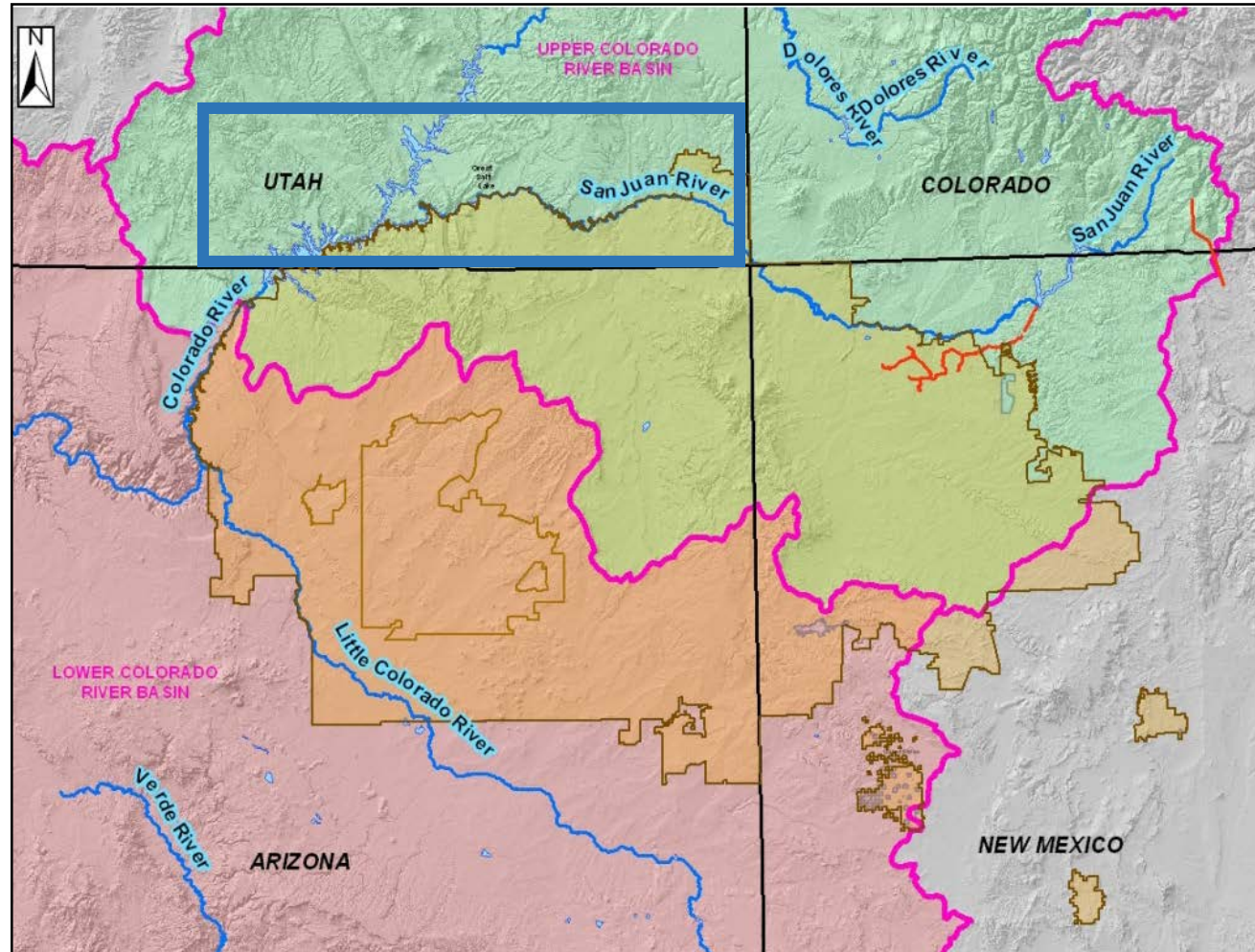
**Navajo (NM)**  
**22,650 af**

**Jicarilla**  
**1,200 af**

**Total**  
**37,760 af**



# Navajo Nation Lands in Utah



# Quantification of Navajo Nation Water Rights in Utah

- Right to **DEplete 81,500 AFY** of surface & ground water
- Right to **DIVERT & STORE** 435 CFS, potentially **as much as 314,851 AFY**
- Ability to **MARKET WATER RIGHTS** to the same extent as other Utah water rights holders
- Existing Navajo Uses surveyed and protected
- Navajo Nation Claims to Reserved Water Rights held in trust by the United States – not subject to loss through forfeiture, abandonment or non-use



# NAVAJO NATION/STATE OF UTAH WATER RIGHTS SETTLEMENT PROJECTS

## WHITE PAPER

*Prepared by Navajo Nation Department of Water Resources*

June 6, 2014

- Reviewing and updating projects in the White Paper
- Scheduling and conducting Navajo Utah Water Rights Settlement Technical Group Meetings
- Compiling Hydrographic Survey Report information
- Participating in Navajo Utah Water Rights Settlement Implementation Meetings





Ahéhee'