



INDIGENOUS FOOD, ENERGY AND WATER SECURITY AND SOVEREIGNTY DURING COVID-19

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THE UNIVERSITY OF ARIZONA
RESEARCH, INNOVATION & IMPACT

Arizona Institutes
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*2021 Symposium on
Resilience Research for
Global Development
Challenges Sept 30-Oct 1*

COVID-19 IMPACT ON INDIGENOUS PEOPLES

United Nations Special Rapporteur On The Rights Of Indigenous Peoples calls for input on COVID-19 impacts on the rights of Indigenous peoples



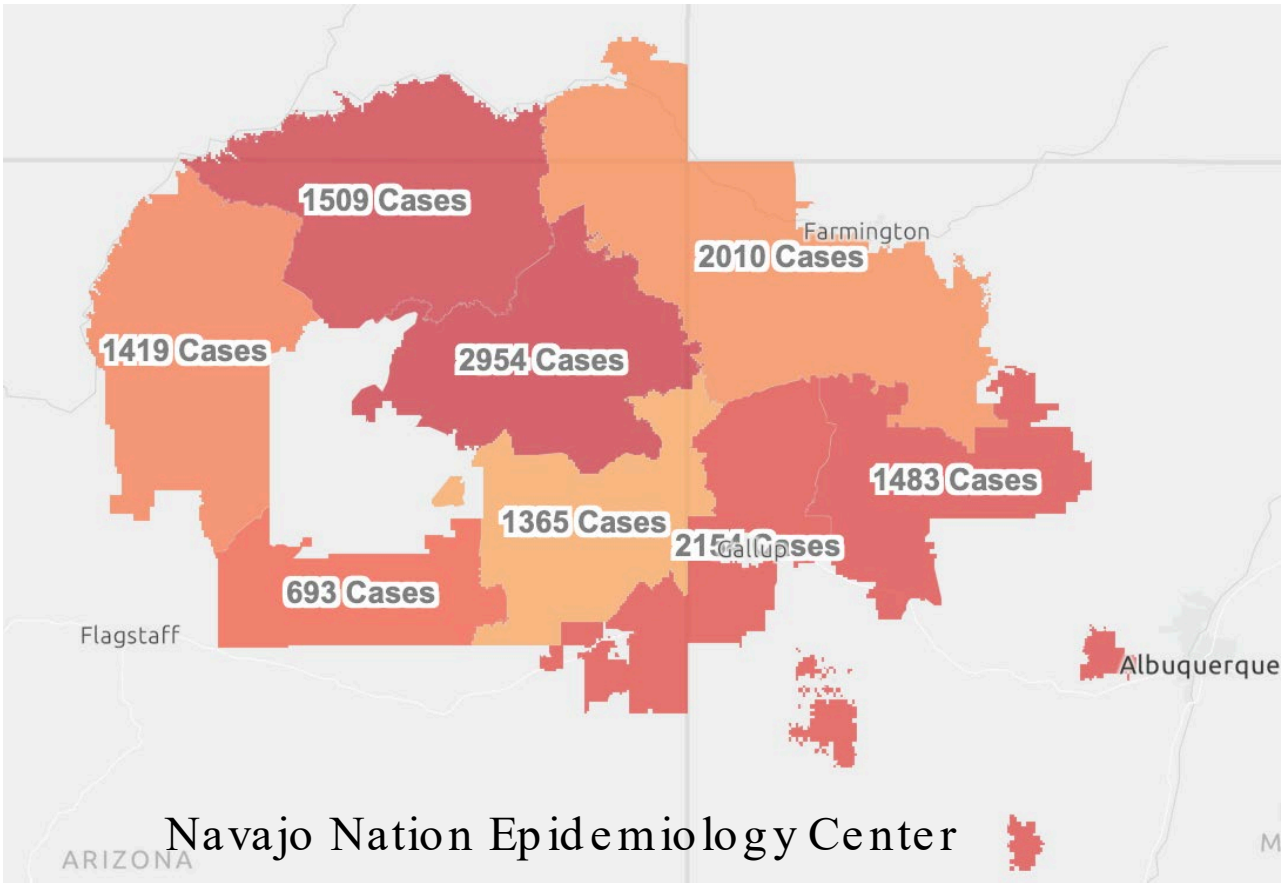
Pictured: Francisco Cali Tzay, United Nations Special Rapporteur On The Rights Of Indigenous Peoples (Photo: Andrea Carmen, International Indian Treaty Council)



"I can't be any blunter... if COVID-19 gets into our communities, we are gone."

» Pat Turner, Chief Executive, National Aboriginal Community Controlled Health Organization, Australia (Coletta and Traiano, 2020).

COVID-19 RAMPANT ON NAVAJO NATION



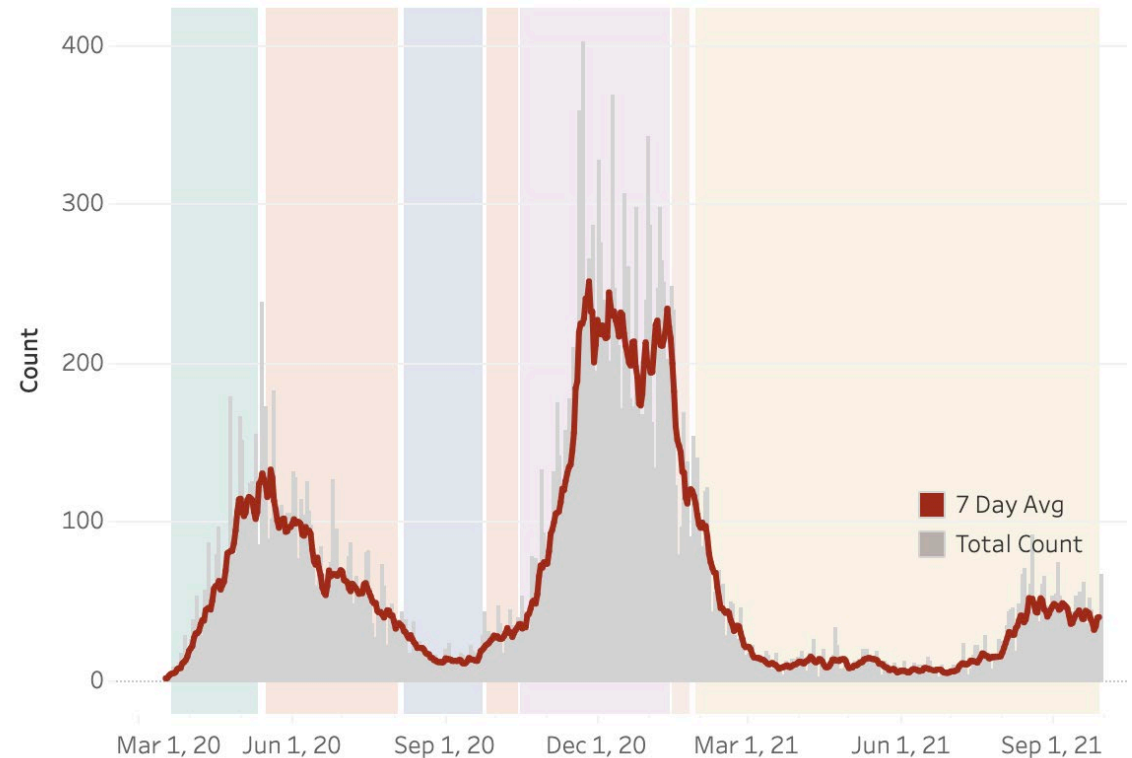
POLITICS MAY 5, 2020

Navajo Nation Is Behind Only New York and New Jersey in Rates of COVID-19 Infection. What Happened?



DELILAH FRIEDLER
Fellow
[Bio](#)

Daily Confirmed Cases on Navajo Nation in All



Total Confirmed Cases¹

33,907

New Cases from Last Update: **67**

Total Confirmed Deaths

1,447

Death(s) Reported: **5**

Navajo Nation Epidemiology Center

FEWS IN SECURITIES AMPLIFIED



Photo: ABC News
Navajo Nation a Food Desert.

Cost of hauling water: **\$13.3/100 gal** (NNDWR, 2011) vs \$0.40/100 in Flagstaff, AZ



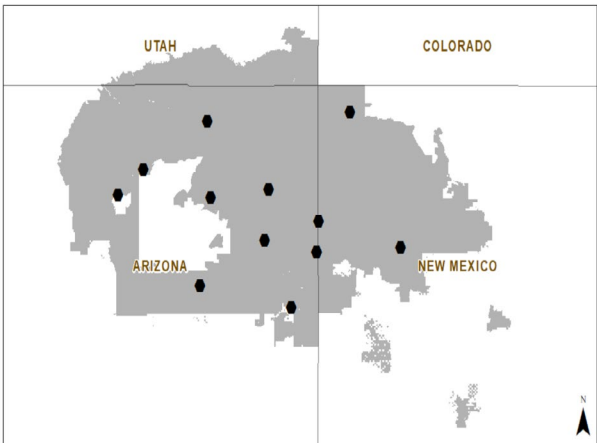
Photo: Navajo Nation



30% lack running water
40% lack electricity



Photo: ABC News



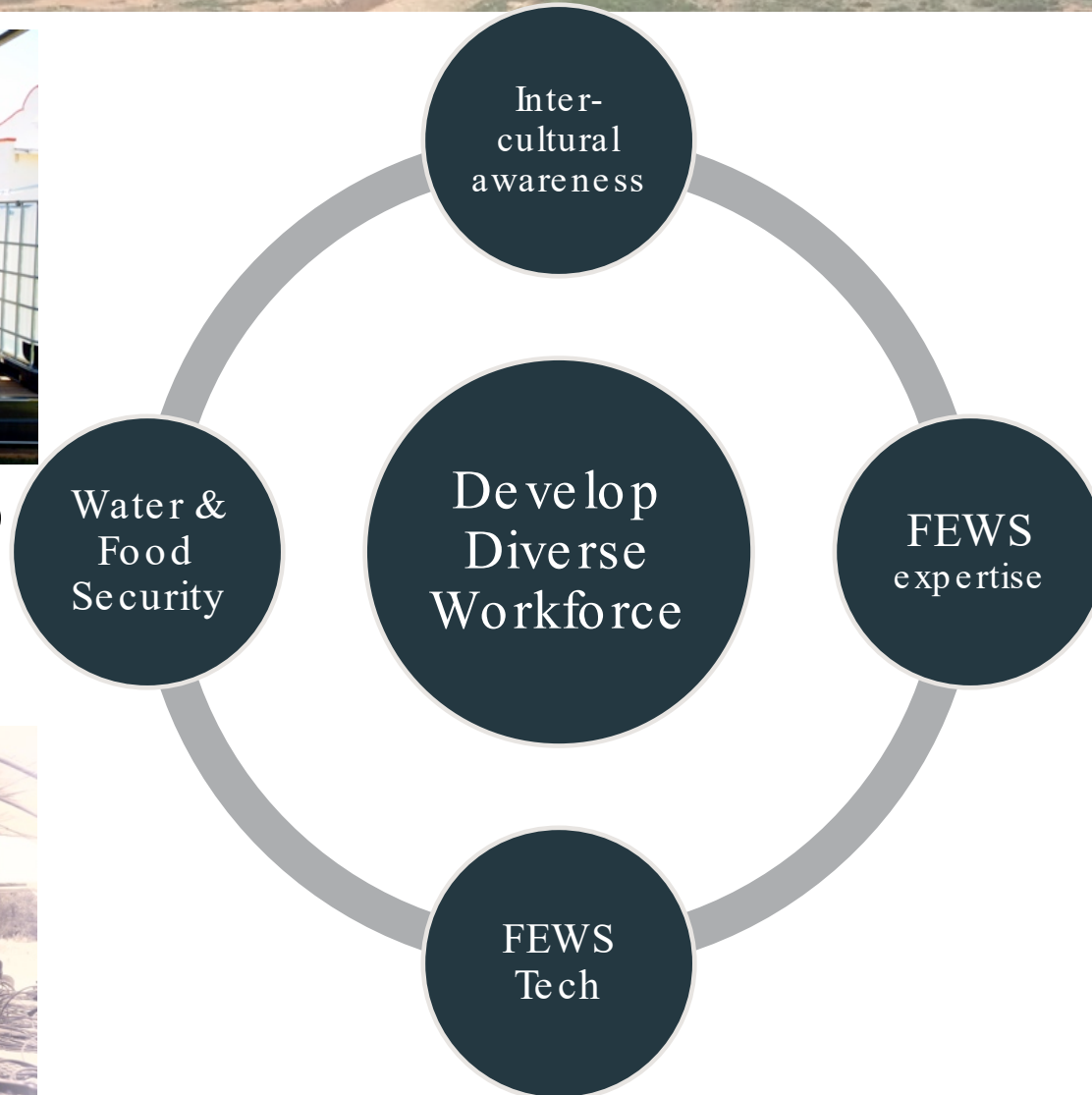
Legend
● Grocery Store

Hoover, 2020

NSF NRT: INDIGENOUS FOOD, ENERGY, WATER SECURITY & SOVEREIGNTY



26 trainees (15 PhDs, 11 MS)
31% Native American
54% Minorities
62% Female



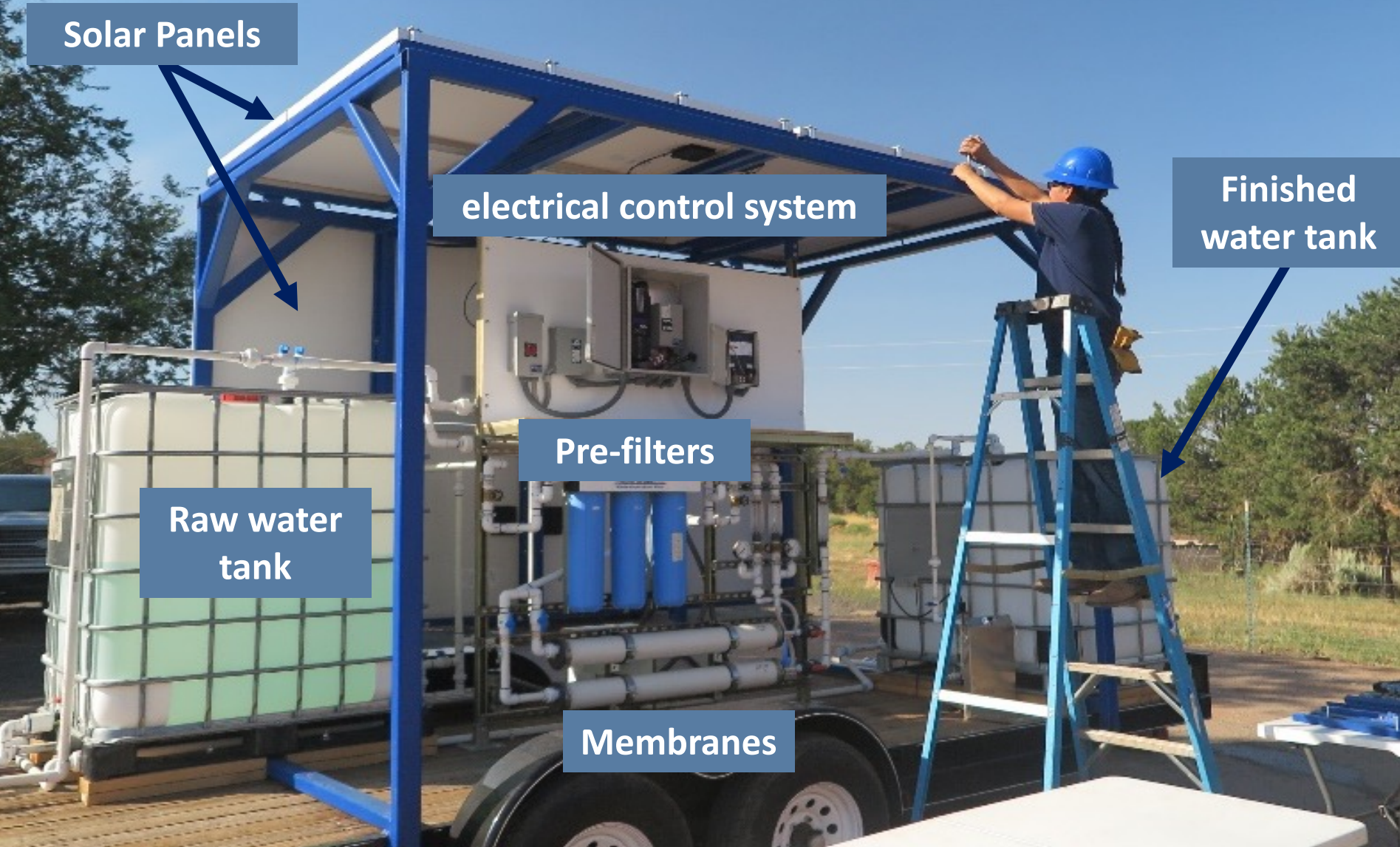
NSF NRT: INDIGENOUS FOOD, ENERGY, WATER SECURITY & SOVEREIGNTY

Development of novel and sustainable solutions for off-grid production of safe drinking water, brine management operations, and controlled environment agriculture systems.

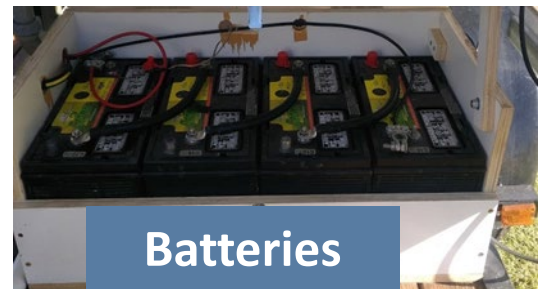
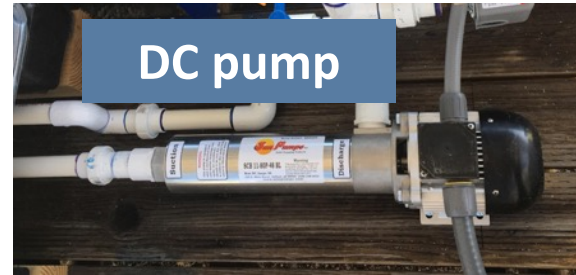


Figure 7: Indigi-FEWSS research efforts concentrating on water, energy, and food systems.

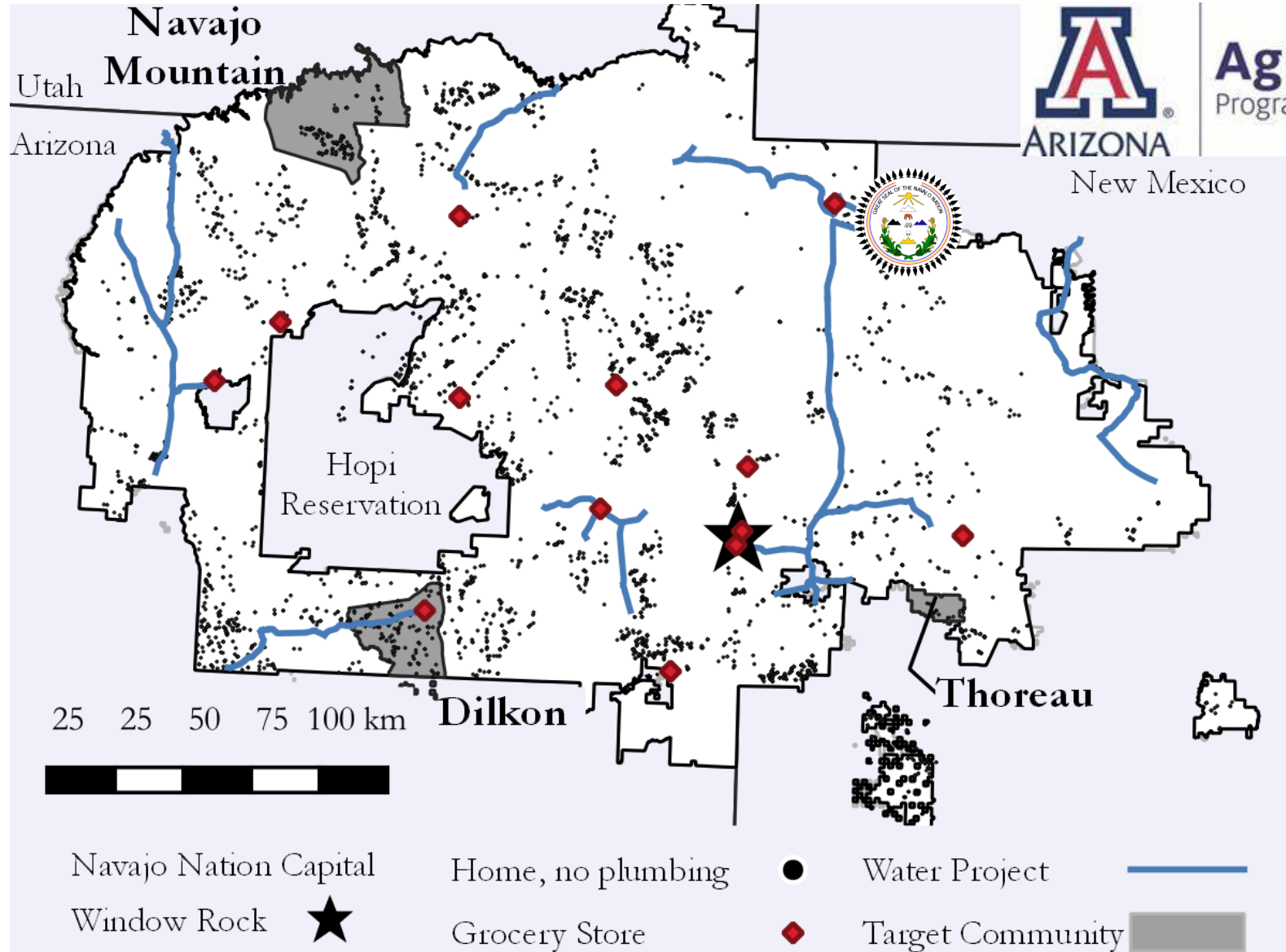
Full front view of mobile, solar-nanofiltration system



Non visible components



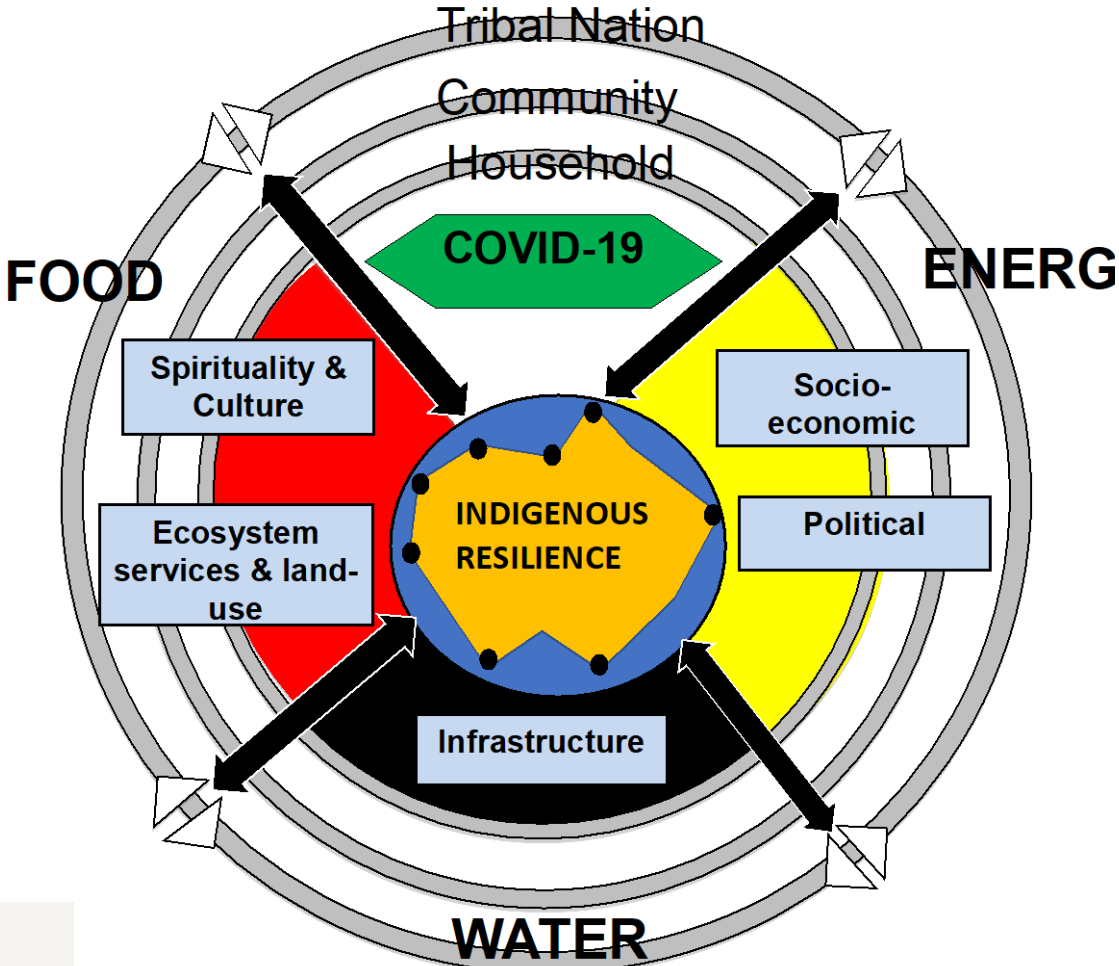
NAVAJO COVID-19 WATER MAPPING



Agnese Nelms Haury
Program in Environment and Social Justice



INTEGRATED AND CONNECTED RESILIENT FOOD-ENERGY-WATER SYSTEMS FOR REMOTE NAVAJO




	Perturbation		Resilience Indicator
	Resilience Indicators & Adaptive Capacity		Desired structure or function
	Performance Level for Component		Inadequate structure or function



Arizona Institutes for Resilience:
Solutions for the Environment and Society

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

Last Updated | November 12, 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

Navajo Nation Division of Community Development, June 2020



Hand Washing Station
Hand Washing Only

CONCLUSIONS

FUNDING



National Institute of
Environmental Health Sciences



Superfund Research Program
The University of Arizona



Agnese Nelms Haury
Program in Environment and Social Justice

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Society



Ahé'hee! Gracias! Arigatō gozaimashita

