

New Mexico Private Wells Program: Assessing Norms and Community Readiness to Create Education and Recruitment Strategies for Well Water Testing

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White Sands National Monument, R. Galbraith 2017.

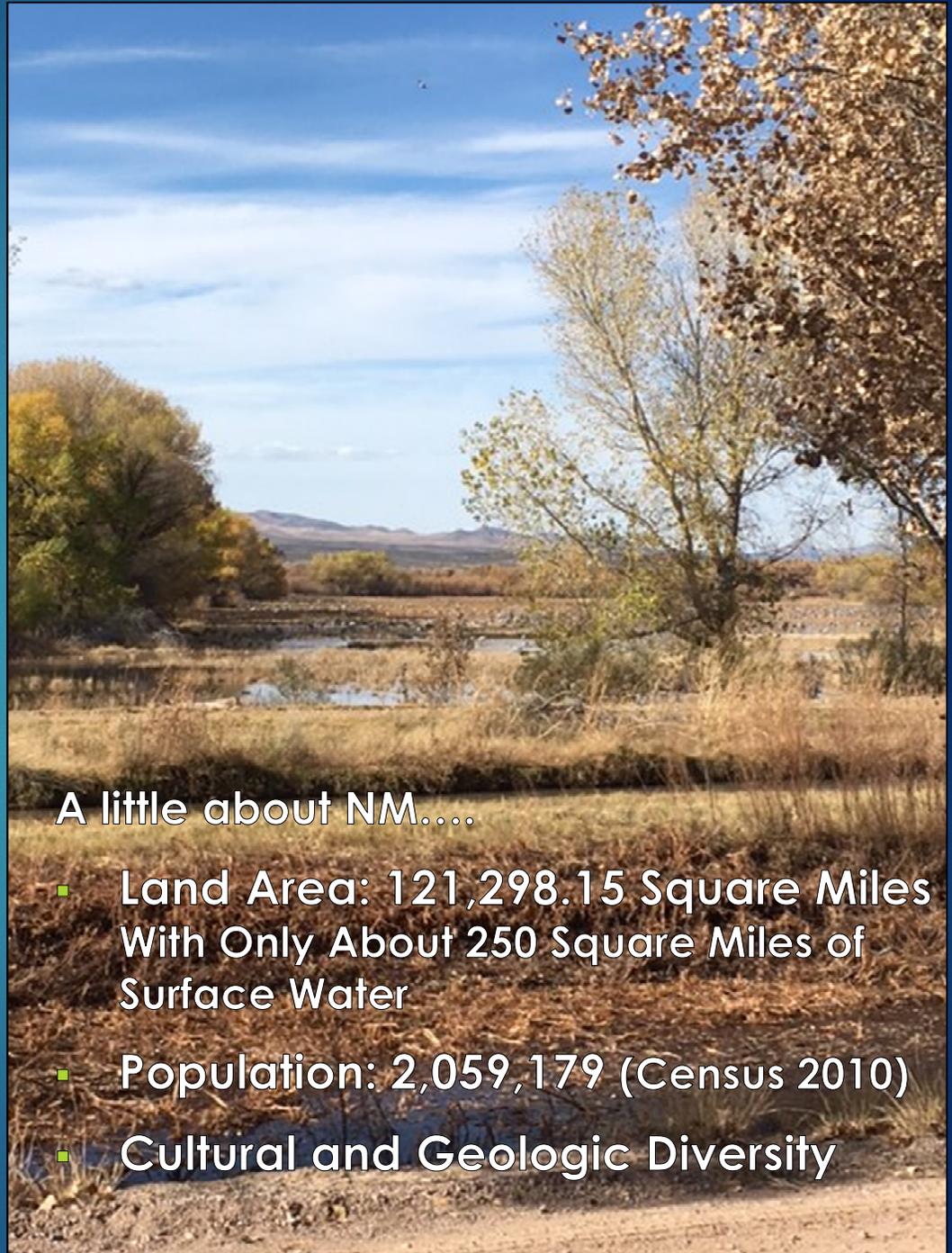
New Mexico

Land of Enchantment



A little about NM....

- Land Area: 121,298.15 Square Miles With Only About 250 Square Miles of Surface Water
- Population: 2,059,179 (Census 2010)
- Cultural and Geologic Diversity



New Mexico



San Antonio Springs, NM , D. Sandoval 2017.



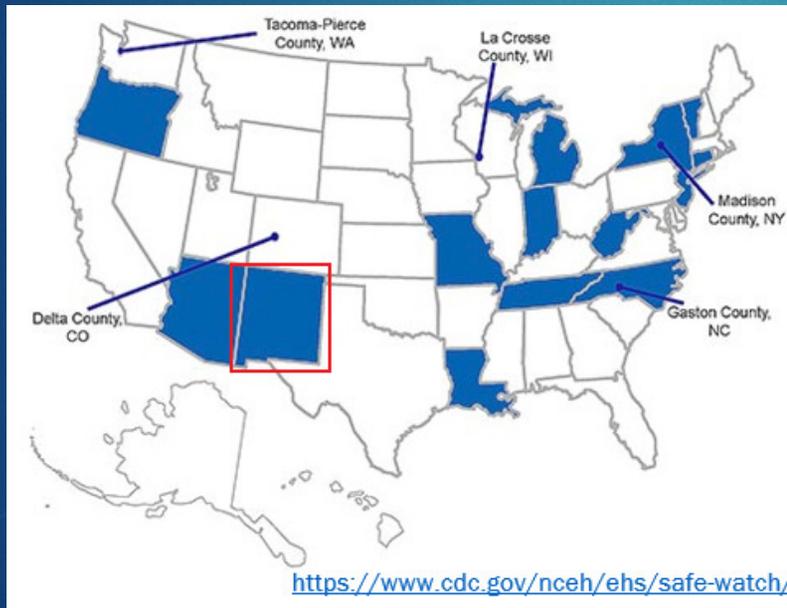
Deming, NM , R. Galbraith 2017.



T or C, NM , R. Galbraith 2017.

What is the NM Private Wells Program?

- One of 19 CDC Safe WATCH grantees.
- Helps residents reduce harmful exposures from wells and other private drinking water systems (CDC Funding).

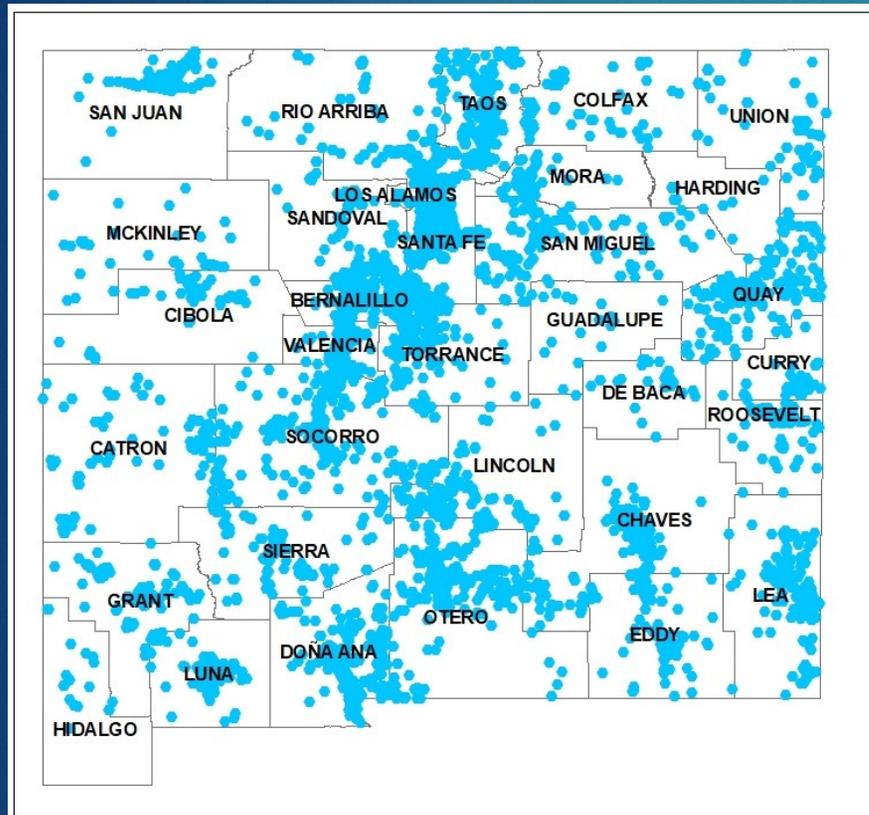


Empower New Mexicans to have access to safe drinking water.

- ▶ NMDOH- Epidemiology and Response Division
 - ▶ Environmental Health Epidemiology Bureau (EHEB)
- ▶ 2010-Private Wells Initiative (PWI) as part of the “sister” program to NM Environmental Public Health Tracking Program
- ▶ **2015- 5 year grant awarded (2015-2020)**

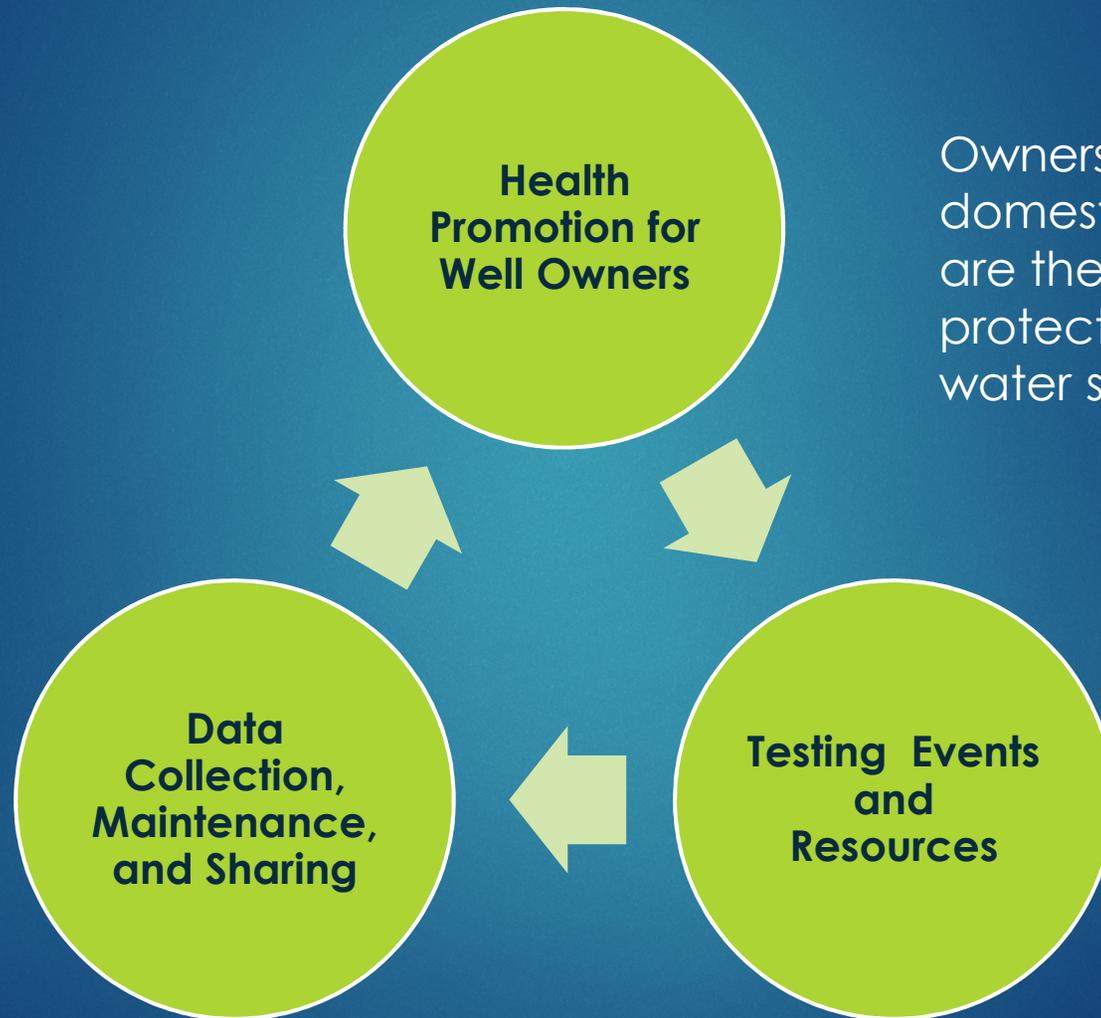
Why a Private Wells Program is Important in NM

Well Owners in NM (2017)



- ▶ Groundwater is a significant source of drinking water in NM
- ▶ Private well drinking water not regulated by the EPA to meet Safe Drinking Water Act standards for constituent concentrations
- ▶ 20 % of the NM population
- ▶ An estimated 400,000 people

NMPWP Primary Activities



Owners of private domestic water wells are the best protection of their water supply!

Health Promotion for Private Well Owners

Health Promotion Models and Theories We Applied

Diffusion of Innovation (Rogers)

Social Marketing Model (Maibach, Shenker, Singer, Lefebvre, Andreasen, Glanz, Weinreich, et al)

Aspects of Transtheortecial Model Constructs/ Constructs of Change (Redding, et al), **Health Belief Model** (Rosenstock), **Basic Public Principles, Basic Commercial Marketing Principles.**

Step 1: Audience Research/Segments

What do we know about well owners in New Mexico?



What are the cultural nuances in each region? What is the lifestyle?
What is the terrain? Who is a supporter/facilitator the area?
What is the access to internet? Use of technology?
How do they get their news, information, communicate?

New Mexico PW Owners



All 33 counties

Mountains, Desert, Bosque

Urban, Rural, Bedroom
Communities

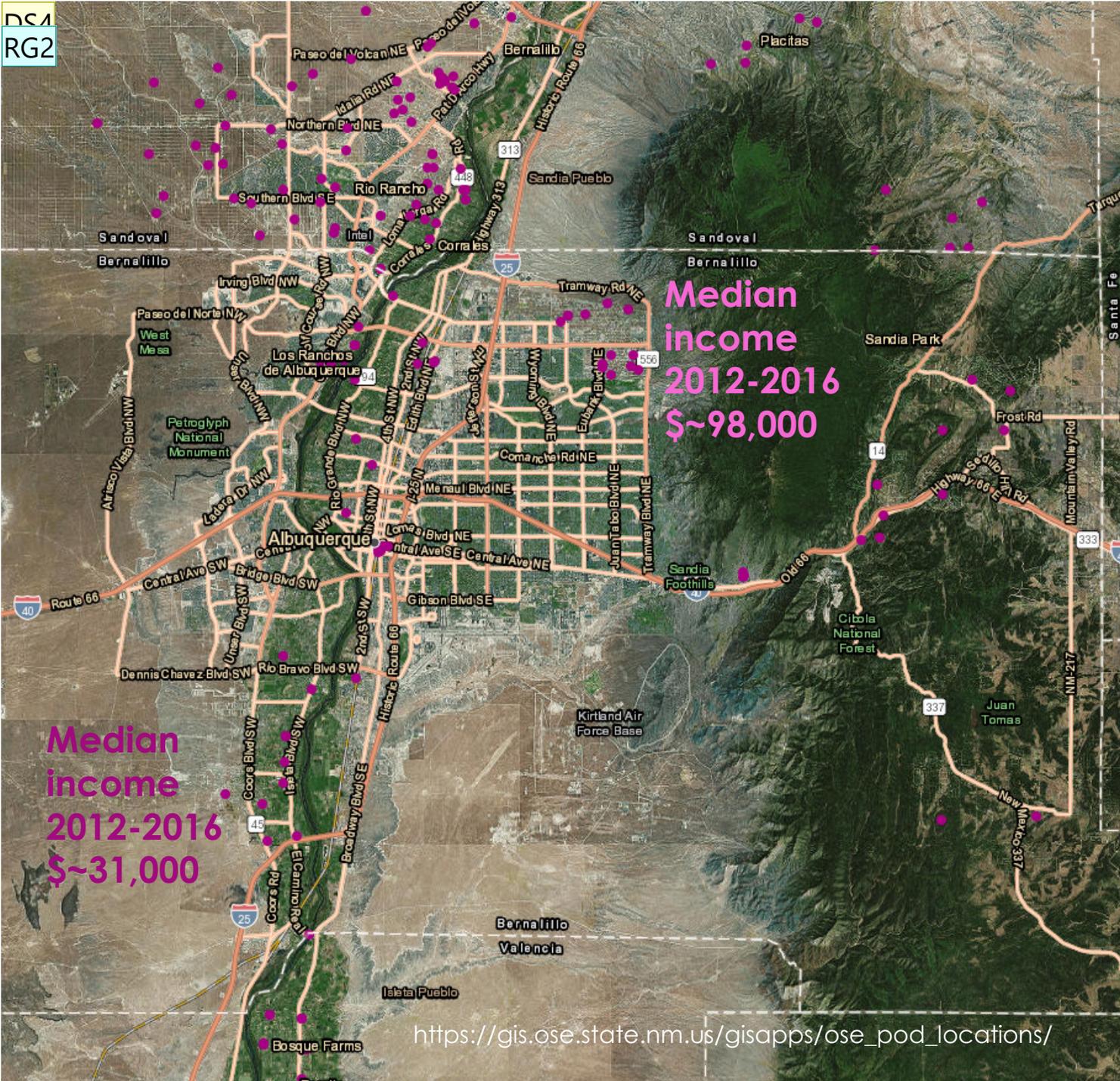
Range of cultural and economic
backgrounds

Inherited well over generations

New resident of NM- never owned a
well before

Range in perceptions, norms, and
attitudes associated with water
quality from wells.

DC4
RG2



Disparities & Lifestyle Variances Among Well Owners

Albuquerque
NM
Metro Area
~600,000 2016

NM 2017-
2 million

Slide 10

DS4

What are we conveying?

Deyonne Sandoval, 6/12/2018

RG2

an illustration of the previous slide, that well owners cover a rage range of demographics, even in the metro- I'm fine if we lose it though.

Rose Galbraith, 6/13/2018

Step 2: Designing a health promotion plan for New Mexico.

What we want our audience to ultimately do:

Improve Water Quality
Therefore Improve Health Outcomes

How we want them to do it:

**Professional
Water Testing/
Treatment**

**Knowledge/
Empowerment**

How can we (NMDOH/PWP) influence that:

Health Promotion
**Field Water
Testing/Water Fairs.**
Increase Knowledge.

Product: What we are “selling?”

We are promoting (selling) the concept of water quality improvement.



How?

We use health promotion products to sell the concept.



Water
Fairs/Field
Testing



Resources on
NM Tracking
Web Site/Print



Direct
Education/
Working with
Influencers

Price: What are the barriers for the audience and how ready are they for this concept ?

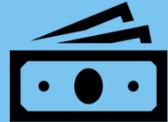
Market Analysis (Audience Research)



Community
Culture/
Historical
Context



Perceived Risks
Beliefs
Attitudes
Norms



**Costs/
Monetary**



Geography
Geology
Terrain
Access



**Receiving
Information**
Understanding
Information

Place and Promotion*: What can we do to make the health promotion more accessible to the audience?
How do we tell them this is available to them?



Access

Take the water tests to the field/ to the people.
Provide Education Via Electronic Communications.



Support and Reinforcements

Provide Direct Education.
Build Network of Stakeholders and Influencers.
Provide Resources.

Step 3: Implementing the Health Promotion. Water Fairs Component.

Water Fairs: A partnership between the **New Mexico Health Department's Environmental Public Health Tracking and Private Wells Programs** and the state **Environment Department**

- NMDOH/NMED water fair partnership since **2013**
 - **A unique NM partnership**
- 8-10 events a year
 - Free field tests for: **arsenic, fluoride, sulfate, nitrate, iron, electrical conductivity, and pH**



<https://www.env.nm.gov/gwqb/water-fairs>

Step 3: Implementing: What do we anticipate?

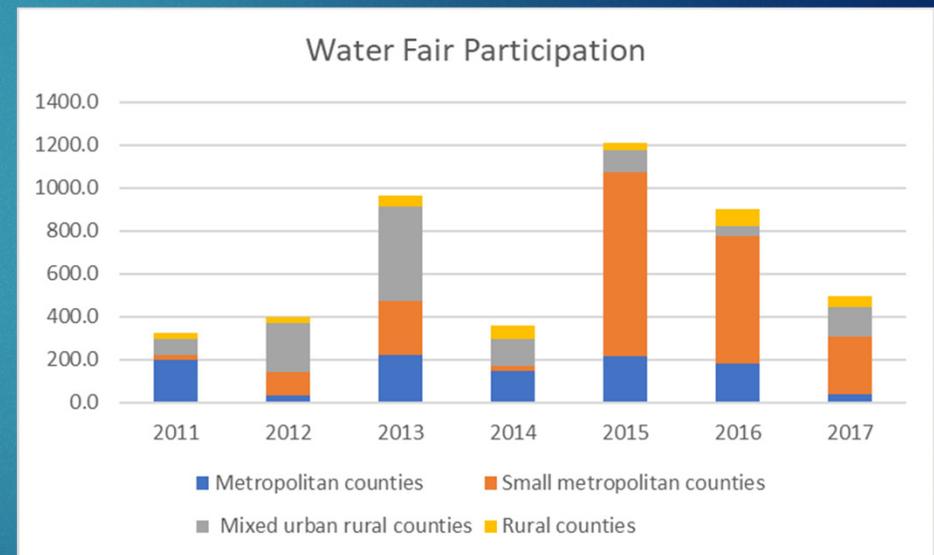
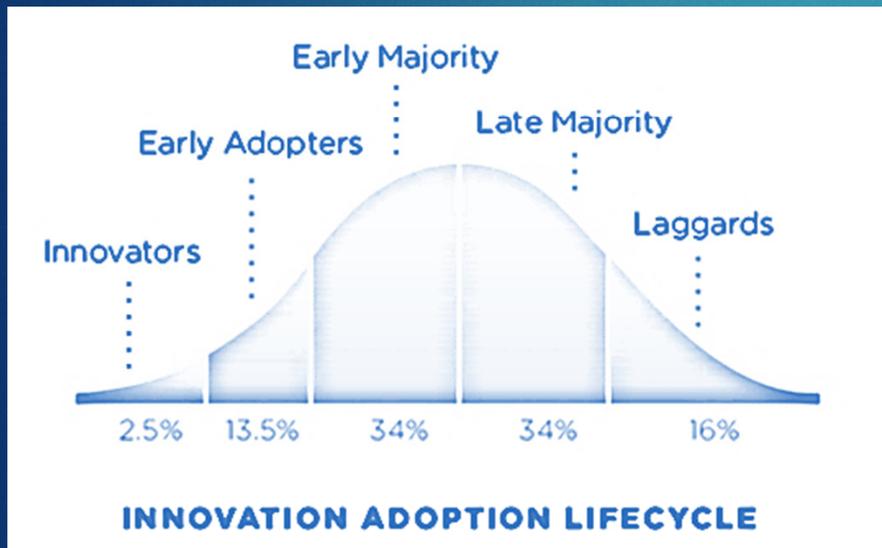
Diffusion of Innovation.

- We anticipate a Bell-Shaped Curve.
- First few years we will get the innovators and early adopters.
- Next time we will get return customers and the next phase of adopters/early majority.
- In certain communities we will “scratch the surface.” We expect a low turnout as we will be introducing a new concept.
- In certain areas, we will have a lower turnout, but need to keep in mind the size of that population and the size of the properties in that region (ranches for example).



Sandia Mt. Foothills, R. Galbraith 2017.

This is how it's looking.



Adapted from Rogers.

Step 4: Review and Lessons Learned. What to Consider for the Next Round



- ▶ We can't control how many water fairs will be hosted per year.
- ▶ Date, venue, and perceptions can influence turnout.
- ▶ We can't control when and how people use social media (fallout with Facebook, and religious and cultural events reduce use of social media at certain times of the year).
- ▶ We sometimes have influenced the locations, the dates, the venues sharing on our "audience" insight with the water fair organizers.
- ▶ Consider these factors when assessing turnout size: Population size, property size, is this first time there, what are outside influences/history that could influence perceptions.
- ▶ We cannot control when disasters will occur but we can see that disasters appear to influence behavior around water quality health behavior.

Conclusion and Future Steps



San Pedro, East Mts., NM, D. Sandoval 2017.

- ▶ Continue to consider community context.
 - ▶ “What does the government want now?”
 - ▶ “Well water is from nature.”
 - ▶ “Drinking it for generations/Hasn’t killed me yet.”
 - ▶ “Grand kids visiting.”
 - ▶ “Can’t do anything about it(cost).”
 - ▶ “I’ll do whatever is necessary to protect my family.”
 - ▶ “El agua es vida.”
- ▶ Location, location, location!
- ▶ Perceived vs actual risk.
- ▶ Large geographic and geologic variation.

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Thank You!



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<https://nmtracking.org/water>