

iAgua es Vida: Do your Part! May 16<sup>th</sup>  
Speakers Series Chat Transcript

- 18:29:20 From Betsy Diaz to Everyone:  
Betsy Diaz NM Water Advocates, IPL
- 18:29:23 From Susan Gorman to Everyone:  
Susan Gorman, Albuquerque
- 18:29:36 From Phil King to Everyone:  
Phil King, one of the usual suspects.
- 18:29:39 From Jennifer Kruse to Everyone:  
Jennifer Kruse, Corrales
- 18:29:58 From Stefi Weisburd to Everyone:  
Stefi Weisburd (she) 350 NM, Tijeras
- 18:30:10 From Corbin Carsrud to Everyone:  
Corbin Carsrud, Bernalillo County
- 18:30:44 From Dan Mueller to Everyone:  
Dan Mueller, working on PW issues in NM and TX
- 18:30:50 From Carol Hazel to Everyone:  
Carol Hazel Portales, New Mexico
- 18:30:50 From Norman Norvelle to Everyone:  
Norman Norvelle, San Juan Watershed Group, Secretary
- 18:31:24 From John Dickel to Everyone:  
John and Lanie Dickel – retired in Albuquerque
- 18:32:03 From Lauren Forbes to Everyone:  
Lauren – water conservation in East Mountains and Santa Fe
- 18:32:05 From Oscar Esparza to Everyone:  
Oscar Esparza, ISC, Las Cruces, NM
- 18:32:17 From Rex Myers to Everyone:  
Rex Myers, Friends Bosque del Apache, Amigos de la Sevilleta
- 18:32:22 From Mike Davidson to Everyone:  
Mike Davidson, Portales, NM
- 18:32:49 From Donna Detweiler to Everyone:  
Watershed Way, Albuquerque Mennonite Church
- 18:33:01 From Jeanne Logsdon to Everyone:  
Jeanne Logsdon, League of Women Voters Central New Mexico.
- 18:33:07 From William Turner to Everyone:  
Bill Turner – WaterBank

18:33:15 From Brad's OtterPilot to Everyone:

Hi, I'm an AI assistant helping Brad Armstrong take notes for this meeting. F

Follow along the transcript here: [https://otter.ai/u/JsoNsf0FwoWv8e0i9Yu13KmDxWo?utm\\_source=va\\_chat\\_link\\_1](https://otter.ai/u/JsoNsf0FwoWv8e0i9Yu13KmDxWo?utm_source=va_chat_link_1)

You'll also be able to see screenshots of key moments, add highlights, comments, or action items to anything being said, and get an automatic summary after the meeting.

18:33:30 From Bill Haneberg to Everyone:

Bill Haneberg, geologist and geohazard-climate-policy consultant, Albuquerque

18:33:57 From Ella Joan Fenoglio to Everyone:

Ella Joan Fenoglio, Albuquerque, NM Water Advocates, IPL, La Mesa Presbyterian Church

18:35:36 From Brittany Gaume to Everyone:

Welcome everyone! If you just joined us please introduce yourself in the chat and post any questions you may have in the chat

18:36:02 From Bradford Armstrong to Everyone:

Bradford Armstrong, New Mexico Angels

18:36:45 From Brittany Gaume to Everyone:

If you have missed any of our previous speaker series recordings of those meetings can be found here: <https://mrgwateradvocates.org/prior-workshops/>

18:37:08 From ralph wrons to Everyone:

Not to take away from Bruce speaking now, but wanted to thank Brittany for reading the Land Acknowledgement on behalf of the Water Advocates

18:37:11 From William Turner to Everyone:

Bill Turner – WaterBank Water rights brokers, validation, valuation, escrow agents, hydrogeologic consulting, water law, expert witness, 50+ years experience.

18:37:26 From Jennifer Kruse to Everyone:

Reacted to "Not to take away fro..." with 👍

18:37:37 From Brittany Gaume to Everyone:

Reacted to "Not to take away fro..." with ❤️

18:38:37 From William Turner to Everyone:

1 af = 325,828.8 gallons

18:39:01 From ralph wrons to Everyone:

thanks Bruce, very important to distinguish, because I often cite about 90,000 AF/yr consumption

18:39:48 From Brittany Gaume to Everyone:

Leap ahead: <https://geoinfo.nmt.edu/publications/monographs/bulletins/164/>

18:40:02 From Brittany Gaume to Everyone:

50 year water plan: <https://www.nm.gov/wp-content/uploads/2024/01/New-Mexico-50-Year-WaterAction-Plan.pdf>

18:40:44 From Phil King to Everyone:

Nelia was honored with a resolution by the NMISC today. Well deserved.

18:40:58 From Sigmund Silber to Everyone:

This is Sig Silber sigmundsilber@q.com Bruce is not talking about cloud seeding but anyone wanting information can contact me.

18:40:59 From Brittany Gaume to Everyone: Congrats Neila!

18:41:46 From ralph wrons to Brittany Gaume(Direct Message):

Nelia 😊

18:42:13 From William Turner to Everyone:

Audio dropped

18:42:16 From Phil King to Everyone:

audio

18:44:00 From Norman Norvelle to Everyone:

How about graywater for non-portable use. Especially for rural people.

18:44:11 From Brittany Gaume to Everyone:

Reacted to "How about graywater ..." with ❤️

18:45:54 From William Turner to Everyone:

Through 15 sets of kidneys.

18:45:57 From Elaine hEBARD to Everyone:

True, about 95 kaf is diverted and about half is returned. BUT the wastewater has to be used to cover the ~50 kaf of river depletions rather than being available to reuse.

18:46:10 From William Turner to Everyone:

And twice the maintenance costs.

18:46:31 From Elaine hEBARD to Everyone:

Groundwater usage has to be reduced in order to reduce the depletions and enable more reuse.

18:48:32 From William Turner to Everyone:

But there is a reject amount of water which is more concentrated wastewater that must be disposed of.

18:49:41 From Brittany Gaume to Everyone:

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

18:50:05 From Brittany Gaume to Everyone:

That is the link that was on the last slide. After the question and answer session I will provide more information on joining the hearing and making comments

18:53:10 From Stefi Weisburd to Everyone:

Want to learn more about Green Stormwater Infrastructure and how Councilor Tammy Fiebelkorn and the Arid LID Coalition convinced a skeptical Albuquerque Council majority to adopt a green streets ordinance? Join 350NM on TUESDAY, May 28 at 6:30 PM: <https://350newmexico.org/calendar/>

18:53:13 From Elaine hEBARD to Everyone:

Case 2 reduces the amount of river flow depletions, enabling more recycling rather than pumping to meet demand.

18:53:32 From Brittany Gaume to Everyone:

Reacted to "Want to learn more a..." with ❤️ 18:53:38

From Corbin Carsrud to Everyone:

Reacted to "Want to learn more a..." with ❤️

19:01:51 From William Turner to Everyone:

As El Vado must be replaced and not repaired. No chimney Drain, no Blanket Drain and no Toe Drain.

19:02:15 From ralph wrons to Everyone:

declare eminent domain and we'll pay them pennies on the dollar for their expensive homes. Just kidding

19:03:22 From William Turner to Everyone:

Gallup Sandstone in the Rio Puerco is 11,000 mg/l and low transmissivity.

19:03:32 From Brittany Gaume to Everyone:

And need more money to adequately map our aquifers!

19:03:55 From Corbin Carsrud to Everyone:

Reacted to "And need more money ..." with 🙌

19:06:10 From William Turner to Everyone:

Try 1,000 feet of drawdown for the Gallup

19:07:10 From William Turner to Everyone:

We drilled a 3000 footer in 1997 in the Puerco

19:11:21 From William Turner to Everyone:

Where are we going to dispose of the reject water.

19:12:06 From Bradford Armstrong to Everyone:  
We can clean the produced water

19:12:49 From Bradford Armstrong to Everyone:  
Reacted to "And need more money ..." with 🙌

19:13:00 From William Turner to Everyone:  
We filed notice of intent statewide.

19:13:36 From William Turner to Everyone:  
Yes you can clean the produced water but you end up with a  
reject water stream that you must dispose of.

19:14:40 From Donna Detweiler to Everyone:  
Replying to "We can clean the pro..."  
...of some known contaminants only.

19:15:09 From William Turner to Everyone:  
WOR = about 7bbls H2O/bbl oil

19:15:12 From Elaine hEBARD to Everyone:  
re deep wells -- see presentation to Interim Committee on Oct

11, 2011 -- minutes cover the testimony on pages 5 and 6

19:15:46 From William Turner to Everyone:  
Just practical notes Norm

19:16:06 From Elaine hEBARD to Everyone:  
<https://www.nmlegis.gov/minutes/WNRminOct11.11.pdf>

19:16:41 From Bradford Armstrong to Everyone:  
The stream is reduced and harvested and less toxic.

19:19:44 From Ella Joan Fenoglio to Everyone:  
Reacted to "Not to take away fro..." with 🙄

19:20:27 From ralph wrons to Everyone:  
Q to BT: If the Permian basin is hardly (8%) using freshwater, where does the other 92% come from? I'm very surprised to hear you say that it's fracking waste water AKA "produced water" that is used for the drilling. It has to be "cleaned up" each time it would be reused, or else the concentration of crap (sand, chemicals, oil residue, etc) would just keep going up until it quickly becomes sludge.

19:20:35 From William Turner to Everyone:  
Target oil exports is 1,000,000 bbl per day. Thawt is 7,000,000 bbls of fproduced water per day or 294,000,000 gal or 902 acre feet per day.

19:27:24 From William Turner to Everyone:  
Great presentation Bruce. Every scheme seems unfeasable.

19:29:34 From William Turner to Everyone:  
So Bure, whose Ox is to be gored?

19:29:41 From Corbin Carsrud to Everyone:  
Thanks Bruce

19:29:48 From Mike Davidson to Everyone:  
Thank you. Mike Davidson.  
[portaleswater.com](http://portaleswater.com)

19:29:51 From Bill Haneberg to Everyone:  
Excellent discussion. There's a reason that unconventional sources are, well, unconventional. None of them will work well. Conservation with extensive re-use is really the only viable option.

19:32:04 From Norman Norvelle to Everyone:  
Good Presentation Bruce. After years of working in both public water treatment and industrial water treatment, I totally agree with your presentation. Norman

19:32:25 From Elaine hEBARD to Everyone:

Reacted to "Excellent discussion..." with 👍

19:32:42 From William Turner to Everyone: pH of frac water must be reduced also the slightly acidic.

19:33:20 From Brittany Gaume to Everyone:

Frack Focus

19:34:15 From William Turner to Everyone:

The viscosifier is guar gum also used as a food additive.

19:34:56 From ralph wrons to Everyone:

Is it Frac Focus or Frack Focus

19:35:08 From Brittany Gaume to Everyone:

Thank you for that correction!

19:35:11 From Ella Joan Fenoglio to Everyone:

fracfocus

19:35:25 From Norman Norvelle to Everyone:

One of the problems of underground water injection is the formation can be contaminated by anaerobic bacteria, such as sulfate reducing bacteria (SRBs.)

19:36:09 From Bradford Armstrong to Everyone:

Thank you one and all. Outstanding!

19:36:45 From ralph wrons to Everyone:

Question from Norman Norvelle in the chat above: How about graywater for non-portable use? Especially for rural people.

19:36:55 From Elaine hEBARD to Everyone:

Please discuss the case 1 vs case 2 re wastewater reuse ... when considering depletions of river flows

19:37:14 From Norman Norvelle to Everyone:

SRBs (sulfate reducing bacteria) produce hydrogen sulfide, which is corrosive, will form sulfuric acid, and the gas is extremely poisonous.

19:37:50 From Brittany Gaume to Everyone:

<https://fracfocus.org>

19:39:11 From William Turner to Everyone:

To reuse frack water the H<sub>2</sub>S must be removed which requires an air quality permit from NMED.

19:41:36 From Norman Norvelle to Everyone:

Still, hydrogen sulfide, as a gas, is very poisonous and corrosive. It is usually formed downhole when there is no oxygen and sulfate is present.

19:41:45 From Stefi Weisburd to Everyone:

Will the high cost of water disposal affect the prospects for geothermal energy development in NM?

19:42:25 From Jeanne Logsdon to Everyone:

I have heard that many water systems are antiquated and waste a lot of water due to leaking pipes. Is there any estimate of how much water would become available if these leaks were eliminated?

19:42:53 From ralph wrons to Everyone:

Excellent question Jeanne!

19:43:32 From ralph wrons to Everyone:

Reacted to "I have heard that ma..." with 👍

19:45:04 From Mike Davidson to Everyone:

Is there a PDF version of your slide presentation?

19:45:28 From Brittany Gaume to Everyone:

Yes we post the slides on the water advocates website

19:45:35 From Elaine hEBARD to Brittany Gaume(Direct Message):

Please discuss the case 1 va case 2 re wastewater reuse ... when considering depletions of river flows

19:45:37 From Brittany Gaume to Everyone:

I hope to get them up this weekend

19:45:44 From Mike Davidson to Everyone:

Reacted to "I hope to get them u..." with 👍

19:45:50 From William Turner to Everyone:

Geothermal water is usually re-injected into the reservoir.

19:48:28 From William Turner to Everyone:

LA injects wastewater into the coastal aquifer to build a hydraulic barrie against saltwater intrusion.

19:50:10 From ralph wrons to Everyone:

Please post Bruce Thomson's email here in the chat

19:50:32 From Brittany Gaume to Everyone:

<https://docs.google.com/forms/d/e/1FAIpQLSdzLWK1pQ3RZjhqJg-VXW58ZwZeY23yWMJkjVW43lo4saHcYw/viewform>

19:51:30 From Elaine hEBARD to Brittany Gaume(Direct Message):

Bruce Thomson <bthomson@unm.edu>

19:52:20 From Brittany Gaume to Everyone:


<https://docs.google.com/document/d/1NVHVPNiZz1nKsWpSz-VSpM4n41FQRM1lILPnHmaPlfI/edit>

19:53:13 From Elaine hEBARD to Everyone:

Bruce Thomson <bthomson@unm.edu>



19:54:20 From ralph wrons to Everyone:

Reacted to "Bruce Thomson <bthom..." with 

19:54:24 From Brittany Gaume to Everyone:

[https://www.paypal.com/donate/?hosted\\_button\\_id=7P672QCNKJXF4](https://www.paypal.com/donate/?hosted_button_id=7P672QCNKJXF4)

19:54:30 From Sigmund Silber to Everyone:

Bye all. A good presentation.

19:54:44 From Corina Gomez to Everyone:

Thank you to everyone involved in making this presentation happen!

19:54:45 From ralph wrons to Everyone:

Water Advocates is needing a newsletter editor, if anyone can help

19:54:46 From Gillian Gonda to Everyone:

Wonderful! Thank you. 