



Thursday, April 21, 2022 via ZOOM



Our Coordination Team





Rebecca Rubin,

Vice -Chair

Soquel Creek

Water District

Rupam Soni, Chair Metropolitan Water District of Southern California



Patsy Tennyson Katz and Associates



Gina AyalaOrange County
Water District



Mark Millan
Data Instincts



Melanie Mow Schumacher Soquel Creek Water District



Agenda



12:00 P.M. Welcome: Rupam Soni | Metropolitan Water District

12:05 P.M. Best Practices for Advanced Water Treatment Exhibits: Eric Eckl | Water Words That Work

Water Words That Work will provide a preview of the results of WRF Project #4979. The study identifies strategies for public engagement elements at potable reuse demonstration facilities and offers pre-planning worksheets and sample RFPs to help utilities get these projects off on the right foot.

12:50 P.M. Update from California WateReuse Association's Managing Director: *Jennifer West | WateReuse California*

1:05 P.M. Report from WateReuse Symposium: Conference Session on the Communications Collaborative Group: Mark Millan | Data Instincts and Patsy Tennyson | Katz and Associates

1:15 P.M. Tool Time: Tips for Using Canva: Rebecca Rubin | Soquel Creek Water District

1:20 P.M. Round Table Discussion: Gina Ayala | Orange County Water District

1:30 P.M. Wrap Up: Rupam Soni | Metropolitan Water District



BEST PRACTICES FOR ADVANCED WATER TREATMENT EXHIBITS





WRF 4979 Water Reuse 2021
Presentation to California Water Reuse



AGENDA

- Welcome & Introductions
- Statement of Research Need
- Purified Recycled Water
- Advanced Purified Water (not "potable")
- Not a California project
- Overview of Research & Methods & Release Date
- Top Findings and Recommendations
- Getting Help: RFI vs. RFP, Introduce RFPs
- Q&A



<u>Acknowledgements - Water Research Foundation</u>



Water Words That Work gratefully acknowledges that The Water Research Foundation are funders of certain technical information upon which this presentation is based. Water Words That Work thanks The Water Research Foundation, for their financial, technical, and administrative assistance in funding the project through which this information was discovered. This material does not necessarily reflect the views and policies of the funders, and any mention of trade names or commercial products does not constitute the funders' endorsement or recommendations thereof.



WRF Project 4979 Link

Research Team









Why do agencies build exhibits and demonstration facilities?



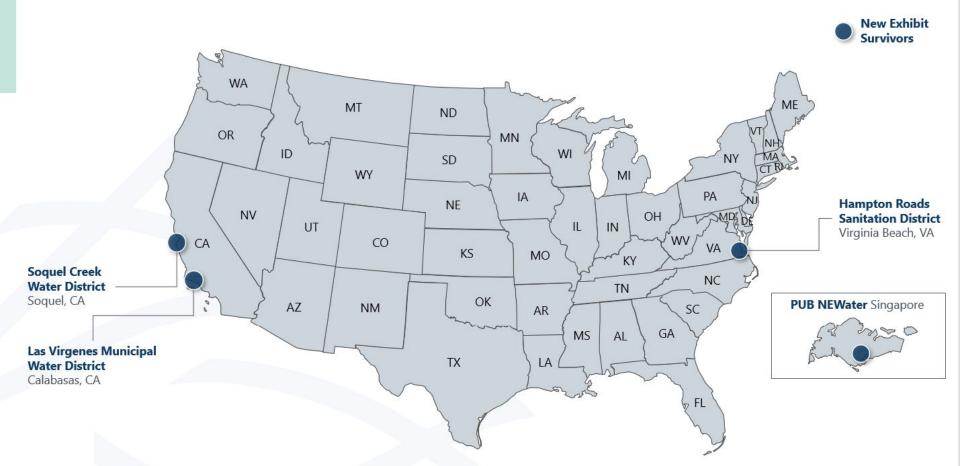
- To train staff
- To demonstrate regulatory compliance
- To educate the public

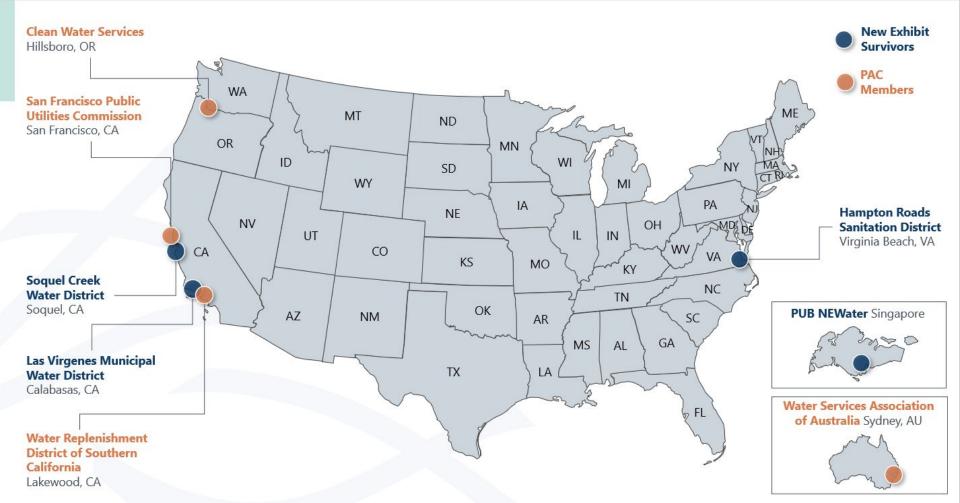
A rose by any other name would smell as sweet...

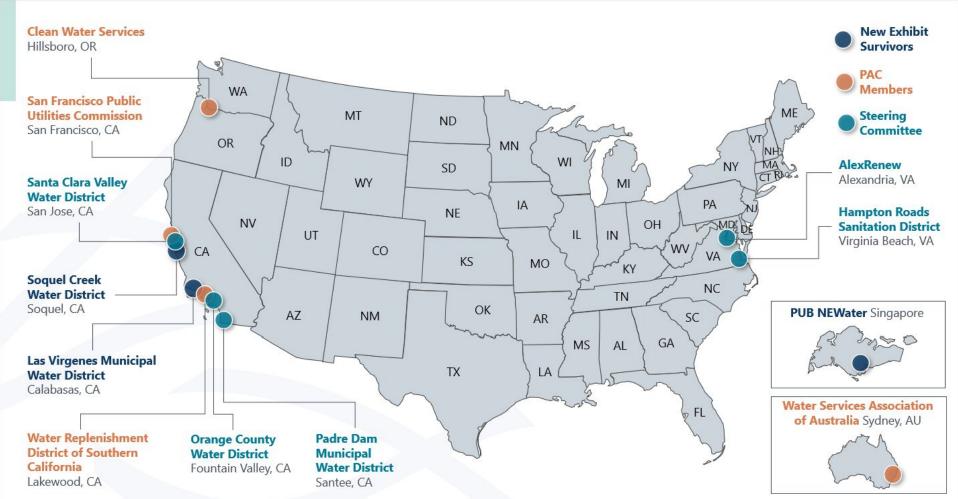


- Advanced treated recycled water
- Advanced treated water
- Recycled drinking water
- New water
- Reclaimed water
- Direct potable reuse water

- Indirect potable reuse water
- Reused water
- Purified water
- Purified recycled water
- Certified water
- Potable reuse water







Overview & Methodology



Research Methods:

- Interviews with exhibit veterans from within the water utility community
- Interviews with professionals from the exhibit design community
- Resource Compilation
- Literature Review
- Message Testing with U.S. and Australian ratepayers

Final Deliverables Will Include:

- Pre-Planning Worksheets
- Sample RFPs
- Collection of virtual tours and videos

Report Cover Screen Shot Coming Soon!

Because we are still drafting our final deliverables, I'm very interested in your reactions to our presentation!







Model Communication Plans for Increasing Awareness and Fostering Acceptance of Direct Potable Reuse







A key finding from the focus groups and telephone surveys showed that after receiving additional information about potable reuse and the multi-stage treatment process used to make the water safe to drink, most participants became more comfortable with the idea of potable reuse. In addition, the use of "purified water" and of "certified water" were favored by participants as terms to describe the potable reuse water.



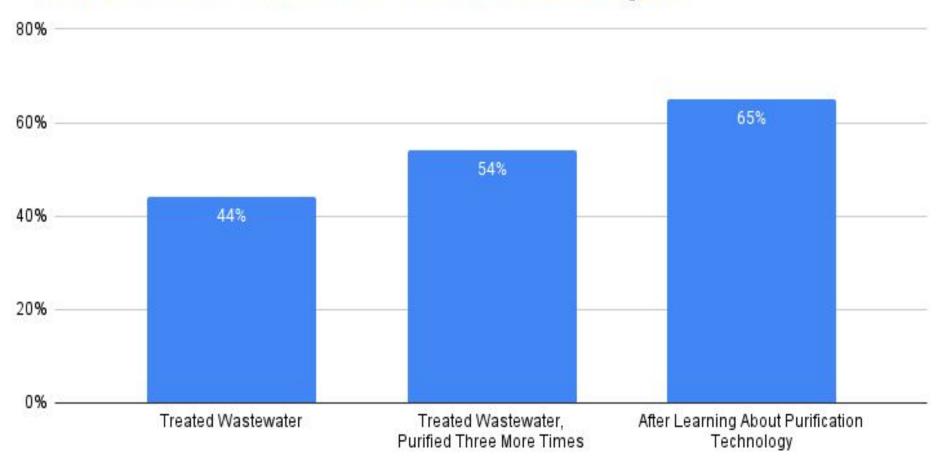




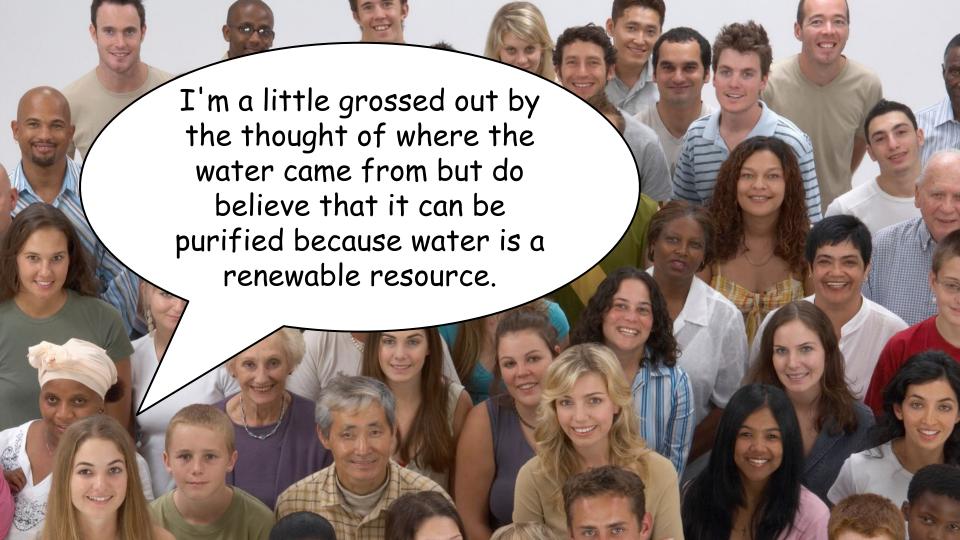
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We showed print and video messages to 450 American and 450 Australian ratepayers and they confirmed this finding.

% Who Believe the Water is Safe for Human Consumption





















A key finding from the focus groups and telephone surveys showed that after receiving additional information about potable reuse and the multi-stage treatment process used to make the water safe to drink, most participants became more comfortable with the idea of potable reuse. In addition, the use of "purified water" and of "certified water" were favored by participants as terms to describe the potable reuse water.

In our sample of 900 people, only <u>one</u> used the word "potable" in their answers

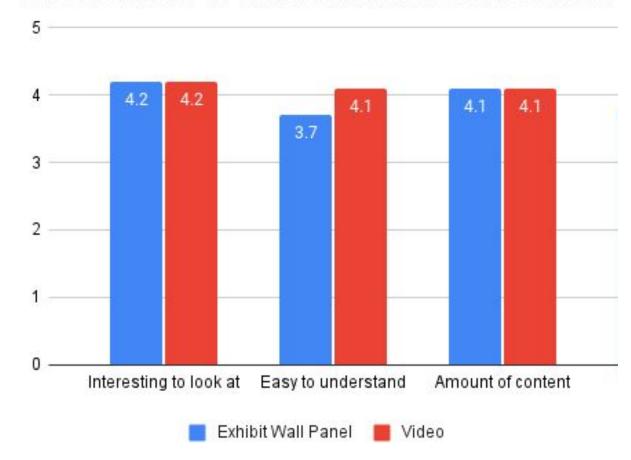
"Potable" is a dud. Please avoid this word.

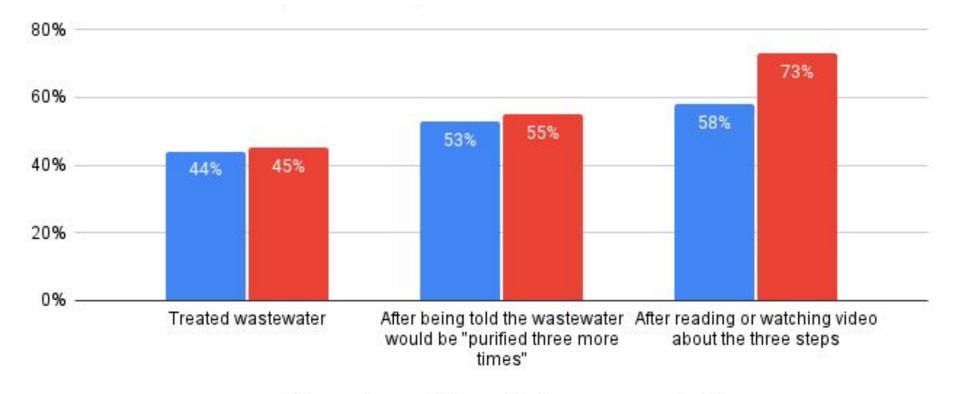


So let's talk specifically about telling your story in some kind of exhibit!

Video is **substantially** more persuasive than panels on the wall

Video is Easier to Understand than Static Content





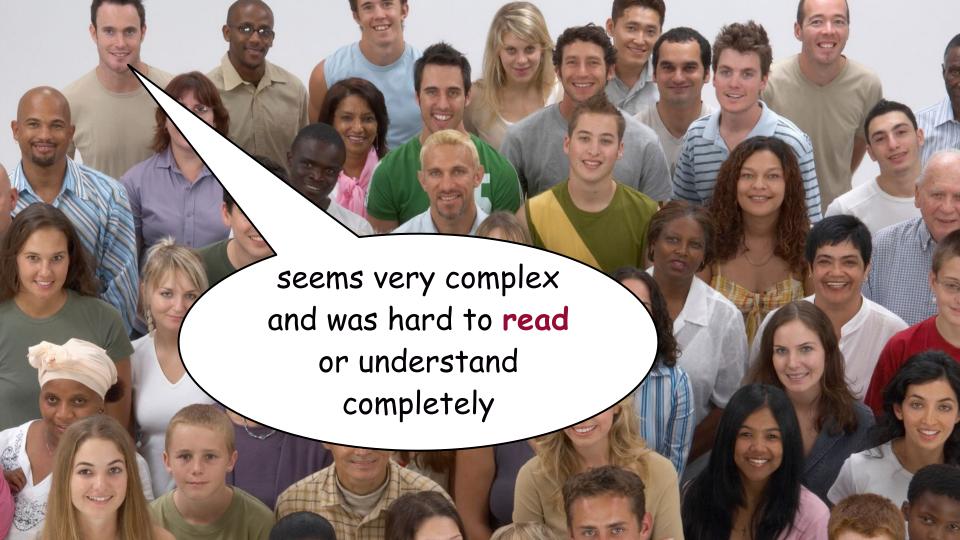
Believe water could be used for "human consumption"











More video kiosks and fewer wall panels please!



We will share a collection of virtual tours and videos to inspire you!



AlexRenew Lobby Tour







1 · 60 Views



We will share a collection of virtual tours and videos to inspire you!



D 656 ♥1 ♦0 P 0

Comments are disabled.

♦ Share

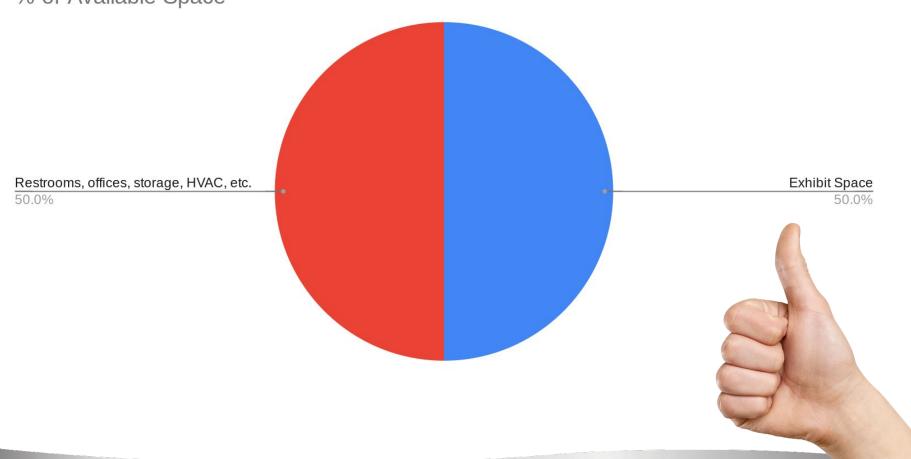
GCDWR

GCDWR

DWR Workforce 3

We found some rules of thumb that can really help you formulate your vision at the beginning







Covid takes **an extra bite** of your square footage: You have to give 'em room to spread out.

(even better, put the exhibit outside)

Covid also takes **an extra bite** of your budget: The HVAC system better be great.

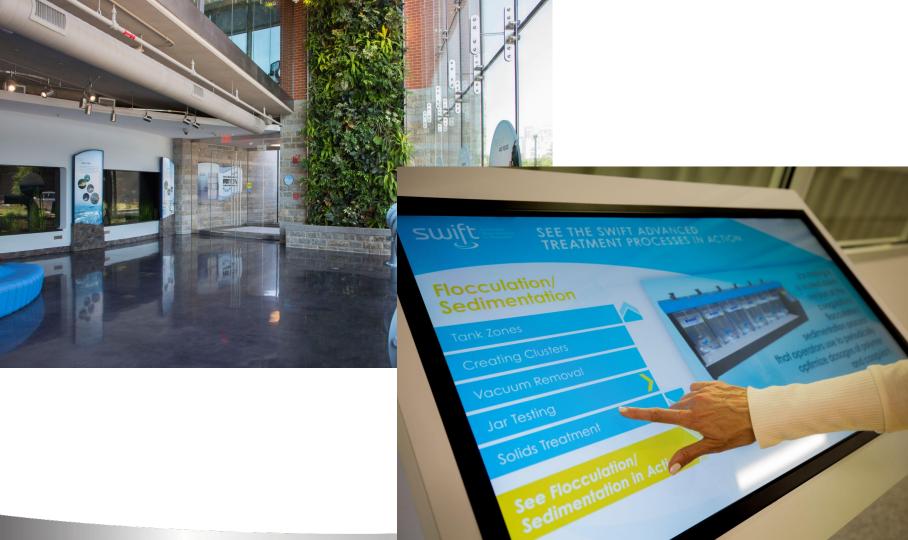
(even better, put the exhibit outside)

You can ballpark your fabrication budget by square foot and level of polish









Useful Rules of Thumb



| Budget Range | What You Get | Fabrication \$/Square Foot | |
|--------------|---|--------------------------------|--|
| Low | Static panels mounted on the wall and other very simple presentations | < \$150 | |
| Mid | Some custom-design fabrication, possibly including 3-D models, aquariums, and electronic kiosks | \$150-\$550 | |
| High | Museum Quality | \$550 to "the sky's the limit" | |

Budget 8-10% of your fabrication budget for annual maintenance.

We looked for — and did not find — rules of thumb for the staff time and cost that precede the fabrication



We heard that at least some water utilities are jumping quickly from "it would be cool to have an exhibit our demonstration plant" to "let's do it"

| Virtual Tour State | Year Posted | # of Views |
|--------------------|-------------|------------|
| California #1 | 2021 | 562 |
| California #2 | 2017 | 155 |
| Georgia | 2020 | 656 |
| Texas | 2020 | 123 |
| Virginia | 2020 | 60 |

Virtual tours posted to the web — very convenient to watch — often have very low numbers of views.



Pre-Planning Worksheets



Self-guided exercises for internal use at the earliest stages of considering an exhibit:

- Evaluating your available space
- Identifying necessary human resources for the project
- Ballparking your budget
- Ballparking the development timeline
- Projecting visitation
- Assessing the opportunity cost vs. alternative forms of E&O

We heard that water utilities could take more advantage of the skills available in the exhibit design community

· United States (459)

· South Carolina (3)

· Tennessee (7)

Texas (27)

· Virginia (29) · Washington (7)

· West Virginia (2)

· Wisconsin (9)

Vendors

Browse Vendors

Browse by Country

· Australia (1) Canada (21)

· Colombia (1) · France (1)

· India (1) · Mexico (2) · New Zealand (1)

· United Kingdom (2)

Browse by State

· Alabama (3) · Arizona (7) · California (59)

· Colorado (3)

· Delaware (2)

· Florida (43)

· Connecticut (10)

· District of Columbia (9)

· Georgia (12) · Illinois (26) · Indiana (2) · Iowa (2)

· Kansas (3)

· Kentucky (2)

· Louisiana (1)

· Maine (2)

· Maryland (16) · Massachusetts (23)

· Nebraska (1)

· New Hampshire (3)

· Nevada (4)

· Michigan (9)

· New York (57) · Minnesota (8) · North Carolina (6) · Missouri (5)

· Ohio (12) · Oklahoma (1)

· Oregon (6)

· New Jersey (10)

· New Mexico (3)

· Pennsylvania (25)

THANK YOU 2022 SPONSORS!

Atomic Carrots 7

Oakland Park, Florida

We are a design and fabrication shop that encourages play in museums, organizations and brands so they may spread the roots of their mission. Play is a powerful tool because it tests assumptions, makes connections and establishes a positive emotional memory to concepts. Incorporating play (interactives) in your project can actually boost diversity, loyalty and engagement which will ultimately strengthen your mission.

atomiccarrots.com/

Browse by Vendor Category

- · Accounting (3)
- · Animals (6)
- · Appraisers (10)
- · Architectural Design Firms (22)
- · Archival (13)
- · Art (39)
- · Audio Recordings (7)
- · Audio Visual Equipment (13)
- · Audio Visual Programs (17)
- · Audio Visual Services (31) · Building Contractors (5)

- · Exhibit Fabrication & Supplies (91)
- Exhibition Services (55)
- · Fabric Supplies (6)
- · Financial Services (5) · Fire Protection Services (1)
- · Fire Protection Equipment (1)
- · Food Service (2)
- · Freelance Writers (3)
- · Fundraising Services (11)
- · Gift Shop Merchandise (57) · Gift Shop Supplies (25)

- · Packing Services (12)
- · Pedestrian Guidance (2)
- · Pensions/Retirement Planning (1)
- · Performing Arts (3)
- · Photographic Services (10)
- · Point of Purchase (12) · Posters (10)
- · Portable Partitions (3)
- · Public Relations (5) · Publishing (16)
- · Registrar (3)

MUSEUM CONFERENCES

Sunday, April 24 - Tuesday, April 26, 2022 — Harrisburg, Pennsylvania

PA Museums' 2022 Conference [2] PA Museums [7]

Harrisburg, Pennsylvania

Sunday, May 15 - Saturday, May 28, 2022 - Statesboro, Georgia Center of Excellence Tick Workshop 2022 Z

U.S. National Tick Collection [7] Statesboro, Georgia

Monday, May 16 - Wednesday, May 18, 2022 - St. Louis. Missouri





and Global Health

News & Views Community Calendar SUBMIT RESOURCES **DEVELOP PROJECTS** DISCOVER RESEARCH DESIGN EVALUATION Refine Your Search **Executive Director** Nia Abdullah MAPSCorps Enter Member Name Q YOUR SELECTIONS Amber Adgerson Graduate Assistatnt University of South Carolina X Other (Freelance, Consulting, Etc.) Rene Adriaans Environmental Engineer 2c science art INTEREST ∇ **EXPERTISE** ∇ idoodlEdu inc. Amber Agee-DeHart President INSTITUTION TYPE COUNTRY sian aggett Freelance Practitioner and Sussex University Doctoral Researcher Public and Community Engagement







Templates for You!

- 1. RFP Plan, Design, Fabricate
- 2. RFP Fabricate and Install
- 3. RFP Virtual Tour Template
- 4. RFI Plan, Design, Fabricate





Physical

Creating a visitor experience through exhibits that will lead to awareness and acceptance.

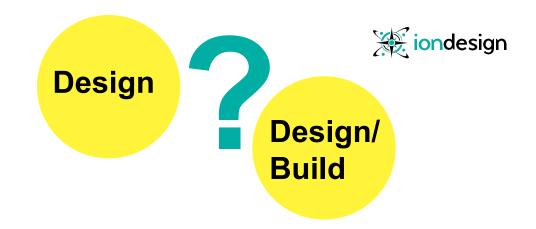
Virtual





Talk to the experts





Get help with your plan

Send the RFI out to discover what types of companies are out there to find the best match for you. Talk to them to understand how they work with clients.

Relationships matter. Exhibits take a year or more to develop. You will be working closely with these contractors.



It has never been more important for museums to stay on top of the latest technology trends.

New technology "affords new routes to interpretation, engagement and participation with an exhibit." New technologies that are being integrated into exhibits can create enhanced interactivity and different ways to model, present, and simulate scientific content.

The Center for Advancement of Informal Science Education (CAISE)

https://www.informalscience.org/news-views/new-technologies-exhibits





NORTHERN GREAT LAKES VISITOR CENTER Ashland, WI

Energy Conservation Exhibits

Ojibway Seventh Fire Prophecy Graphics and AV Presentation

You Choose?

"Human beings and Earth have the same destiny, and they face the future together—not separately. They must either take care of one another and thus guarantee a common future, or both take the risk to perish."

- Leonardo Boff. Professor Emeritas of Editor and Ecology

I. Decide What You Will Do

- Some Errorge
- I Sevent In Green Energy
- Consessive
- Reduce Watt
- Engage Localy

L. Take a Seiffe B









Questions & Discussion



WATEREUSE UPDATE



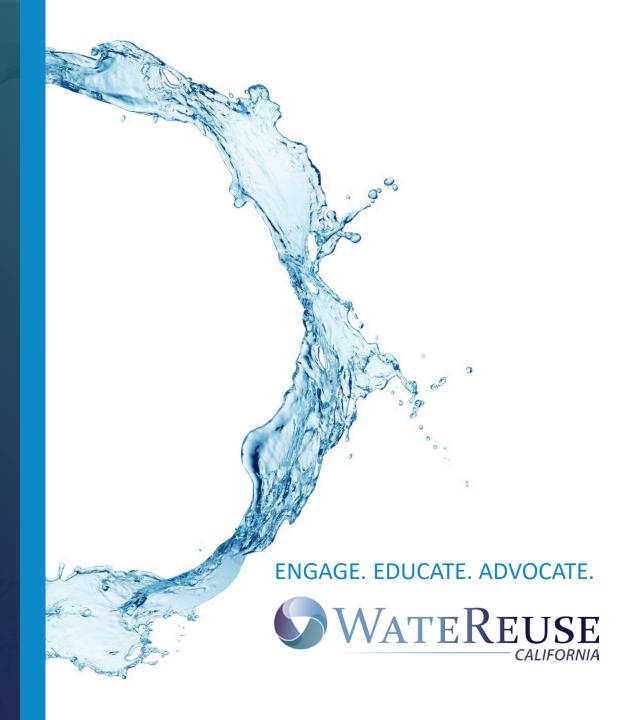
Jennifer West WateReuse California



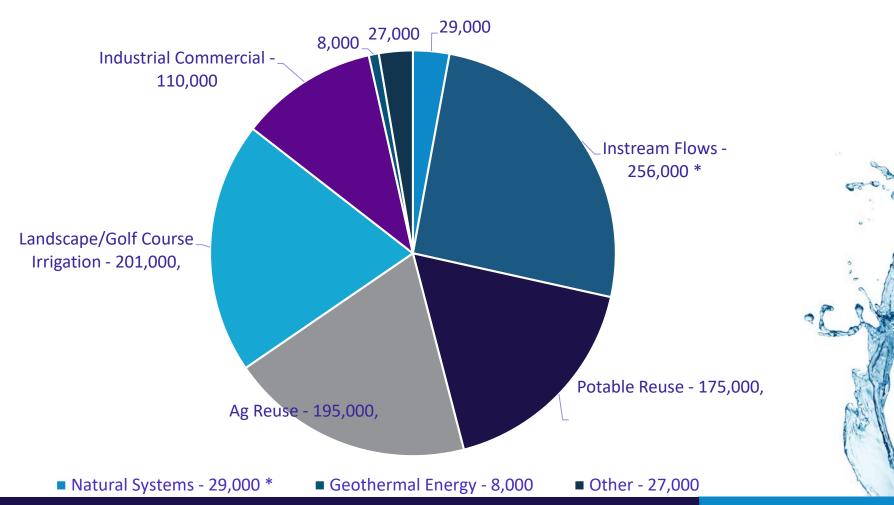
COMMUNICATIONS COLLABORATIVE GROUP

JENNIFER WEST
WATEREUSE CALIFORNIA

APRIL 21, 2022

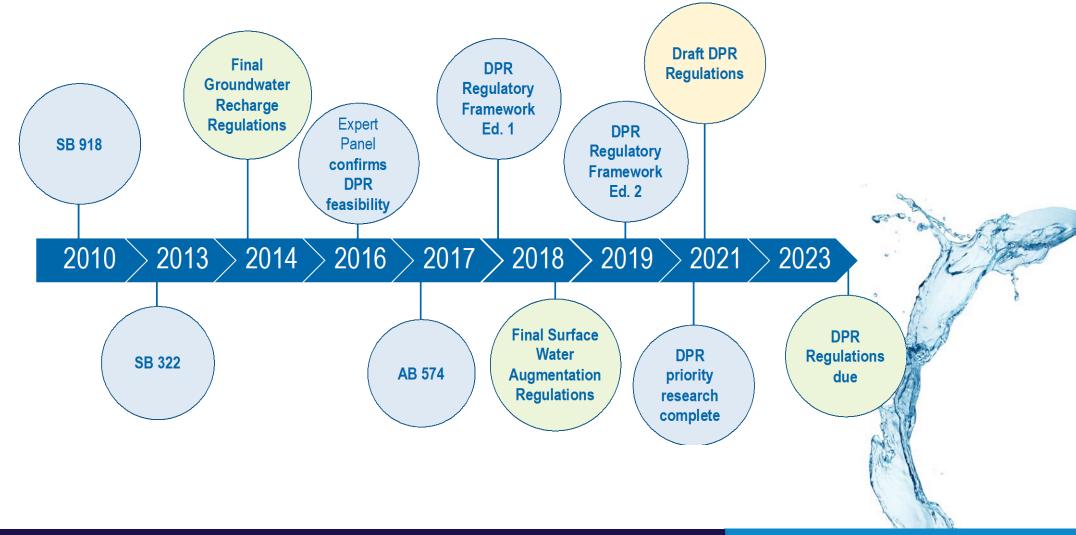


2020 California Recycled Water Hits 1 MAF (Title 22 + Environmental Purposes)



The Path to Direct Potable Reuse

9



STATE Water RESOURCES CONTROL

Process for DPR Regs

Expert Panel Meets 2021-2022

Formal
Rulemaking
/APA Process
2023

Final DPR Regs Due 12-2023



Other Major Regulatory Efforts

"WUE" Laws Implementation – Recycled Water Provisions

- 1.0 "ETF" for Landscape Irrigation Recycled Water and variance for high "TDS"
- Potable Reuse Credit
- SWRCB Adoption June 30, 2022?

Title 22 Update for non-potable (2022 late draft)

- AB 1180 (2019) required SWRCB to update regulations for non-potable reuse by 2023
- Add more Recycled Water uses, reduce complex unnecessary requirements

Cross Connection Control Policy Handbook (2020)

- AB 1180 (2019) required provisions for the use of a swivel ell
- Draft Handbook expected soon
- WRCA is meeting with the Handbook team on May 16th



California Legislation and Funding

WRCA Legislative Committee Reviews All Recycled Water Bills

AB 2811 (Bennett) -- Mandates onsite reuse for large commercial properties (WRCA oppose seeking amendments)

SB 1157 (Hertzberg) – Indoor Water Use Standard (WRCA oppose seeking amendments

State Budget (surplus) - Recycled Water funding





2021 Budget Funding Recycled Water

 SWRCB: Next three years \$1.8 billion need for Recycled Water

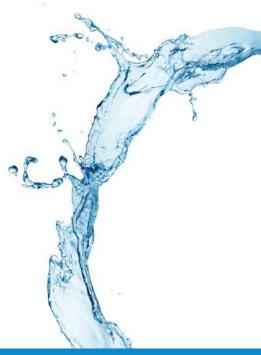
 Budget Contained \$330 million for Recycled Water and groundwater cleanup. Proposal:

- \$165 million Recycled Water grants (2022-24)
- \$165 million groundwater cleanup (2022-24)
- More is needed!

Budget Push Part II



- Ask \$750 million for Recycled Water grants statewide
 - Creation of large funding category
 - No more split with groundwater cleanup!
- Legislative Ask Letter: 14 Senators and Assemblymembers Have Signed On
- Outreach to Leadership and SWRCB









REPORT FROM WATEREUSE SYMPOSIUM



Mark Millan
Data Instincts





BRINGING COMMUNICATION PROS TOGETHER TO FURTHER WATER REUSE

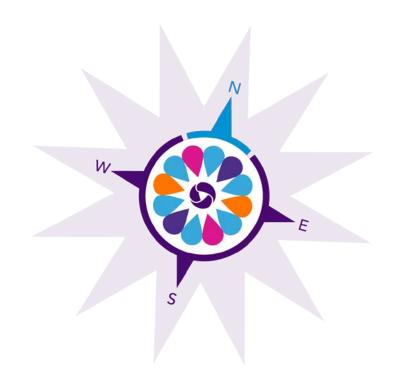
Patsy Tennyson/Katz & Associates

Ben Glickstein/WateReuse Association

Mark Millan/Data Instincts

Melanie Mow Schumacher/Pure Water Soquel

MARCH 7, 2022



WateReuse SYMPOSIUM

SHAPING OUR PAST &

CHARTING OUR FUTURE

Who We Are



Provides a forum to discuss and collaborate on potable water reuse communications.

Open to all WateReuse California members and we welcome fellow colleagues:

- to learn about current challenges facing reuse communications
- discuss tools and resources
- network with one another.

Topics & Areas of Focus



Case Studies and Facility Tours





Where Did the Term "Toilet to Tap" Come From?

Yuck aside, debate needed on toilet-to-tap

OUR VIEW: Some places, like Cloudcroft,

Skepticism greets LA's toilet-to-tap water project

By Harrison Sheppard and Michael Coit

LOS ANGELES-Sewage water flushed by San Fernando Valley residents will one day end up flowing from faucets throughout the East intens Valley and much of Los Angeles as would part of a new toilet-to-tap project Vicent that starts as early as Monday.

first glance, but state health offi-

begun the process rative solutions, too



from a tap at the wat treatment facility in § Diego last week. San Diego's partial succes 12 years after its City Council recoiled from the toilet-to-tap concept, offers a blueprint for other districts considering wastewate reuse for the fast-grow

tional Academy of Sciences, the Na- 2010. Only a handful of systems renonia acauemy of sciences, are car-tional Research Council, issued a plenish their reservoirs or groundwastudy finding that supplementing ter basins with treated wastream flows or reservoirs with this water, a process called indirect pota-about

ble reuse, was acceptable, although developers must pay the city to only as a last resort. Nor

LOS ANGELES DAILY NEWS

Toilet-to-tap or showers-to-flowers?

State to see more toilet-to-tap, aquifer storage

growing state's water woes.

lush a toilet-to-tap proposal that would mix a small amount of treated sewage with the city's

LUBBOCK — Texas would The concept seems repulsive at Country water and oth rely more on treated toilet rest glance, but state health offi

"This is the best plan yet, in my view," board chairman Bech Bruun said before the vote in Austin. "The most comprehensive,

detailed plan." Texas' population is projected to grow by 73

sevenfold - from 3.9 billion gallons to 28.3 billion gallons - by 2070. Some Texas cities turned

to toilet-to-tap reuse during 2011, the driest year ever in Texas. Big Spring in WestTexas uses a direct potable reuse, meaning the

plant will be the largest direct water reuse project in the U.S. when it begins operating in 2018.

Capital costs for conservation projects went from \$1 billion in the 2012 water plan to \$4 billion in the

ronmental group said the 2017 plan is a "big improvement" from the last one. "The last drought

exposed the huge amount of water waste in the Texas economy, from leaking water mains and irrigation

ects. They can apply for loans from \$2 billion from the state's Rainy Day Fund a move voters approved in 2013. That money, throug interest earnings and revenue bonds, could grow t \$27 billion over 50 years.

The state's water plan - five years, is

California's Water History: The Origin of 'Toilet-to-Tap' A timeline of the infamous, anti-potable reuse phrase

Comms Collaborative as a Model?



Open questions:

- Can the CA Communications Collaboration Group serve as a model?
- Would it work better at each state/regional section level, or one national convening?
- Large-group webinar format vs. Smaller advisory committee
- How else can we share our communications tools and successes?



By Collaborating – We are a Force!





Spread the love and hype for water reuse!







CCCG recently launched a design website that showcases water reuse merchandise.



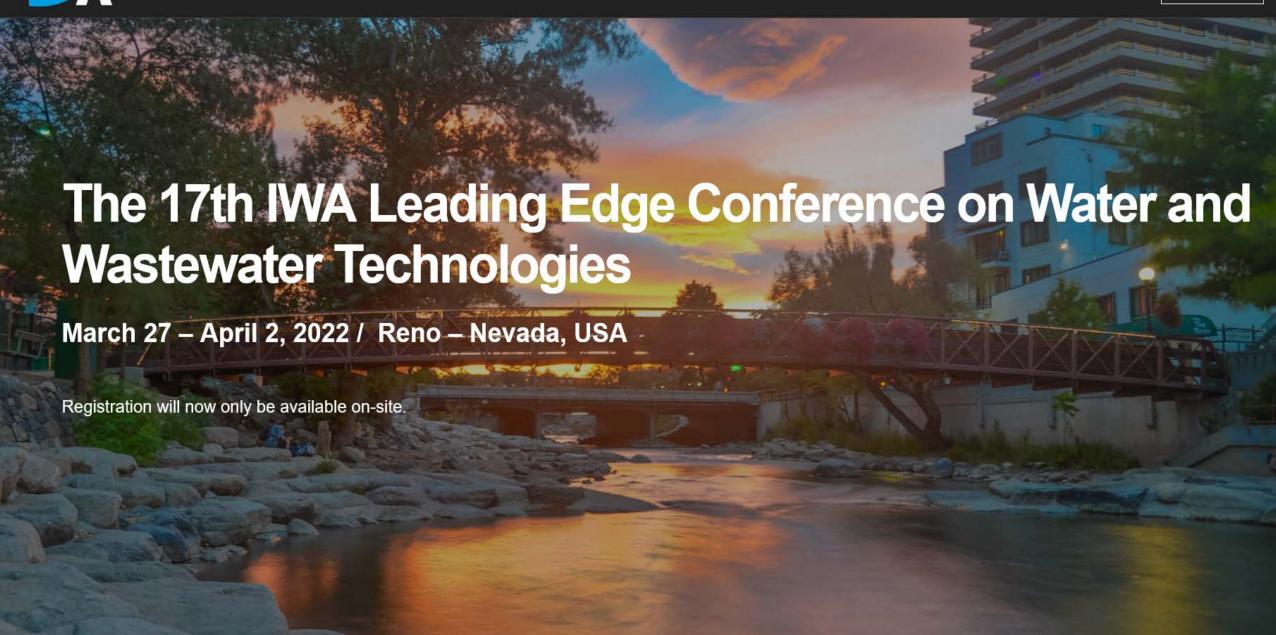
Water Nerds (water-nerds.myspreadshop.com)

International Water Association The Source IWA Connect IWA Publishing f



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REGISTER



International Perspectives





- New Treatment Trains
- Cyber Security
- Artificial Intelligence
- Sewage Surveillance





Thank you for participating!





TOOL TIME: TIPS FOR USING CANVA



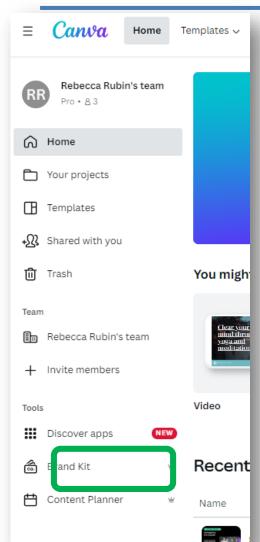
Becca Rubin Soquel Creek Water District

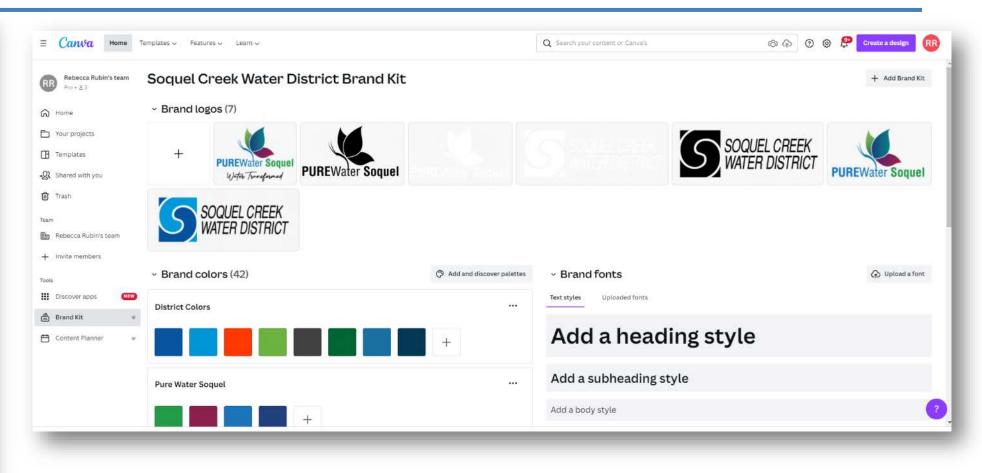






1. Set up Your Brand (pro)

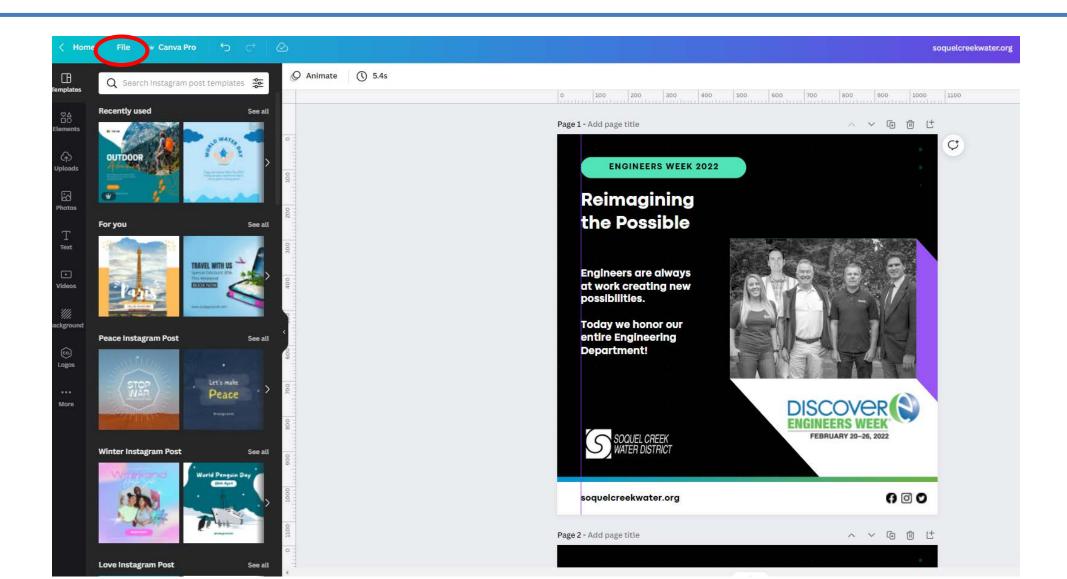






2. Display Ruler on Design Border

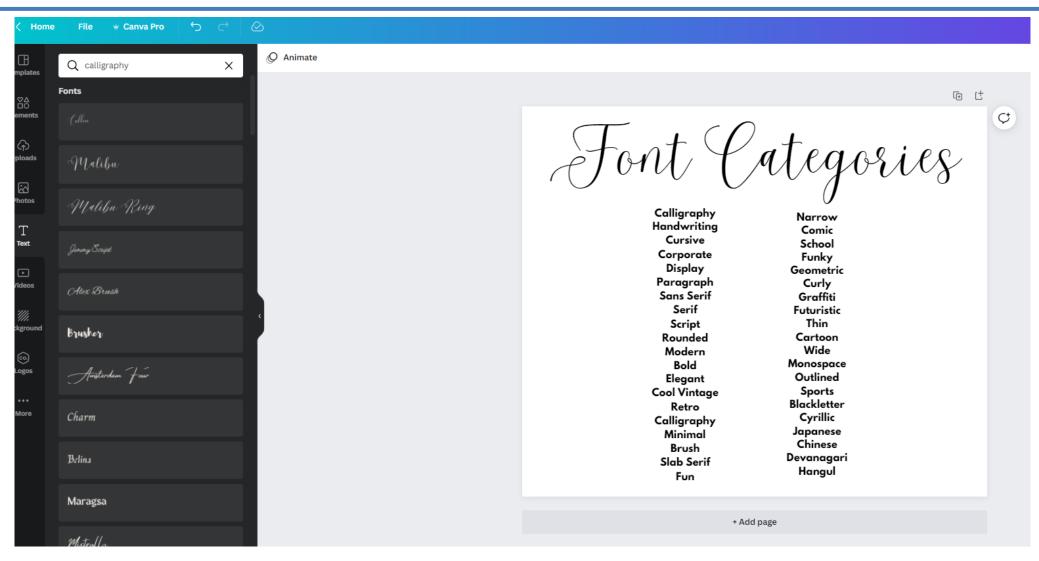










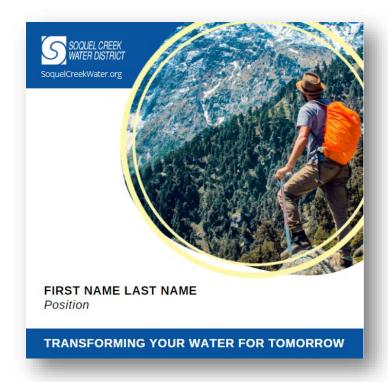




4. Start with a Canva Template





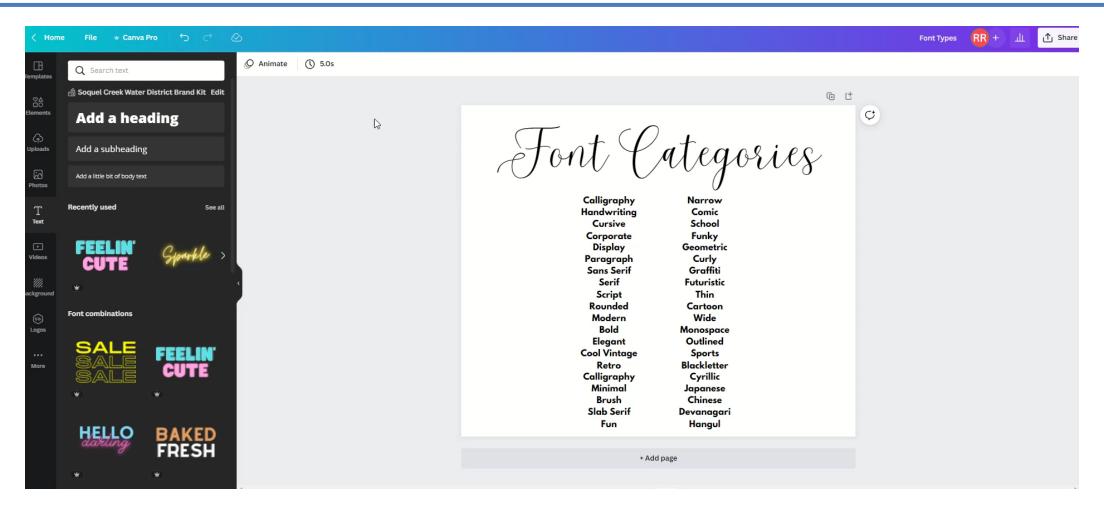














ROUNDTABLE DISCUSSION



Gina Ayala, Orange County Water District





Thank you for participating!

