



# Rain Enhancement Technologies

Management Presentation



# Why We Are the Best Solution to Solve the Global Water Crisis NOW!



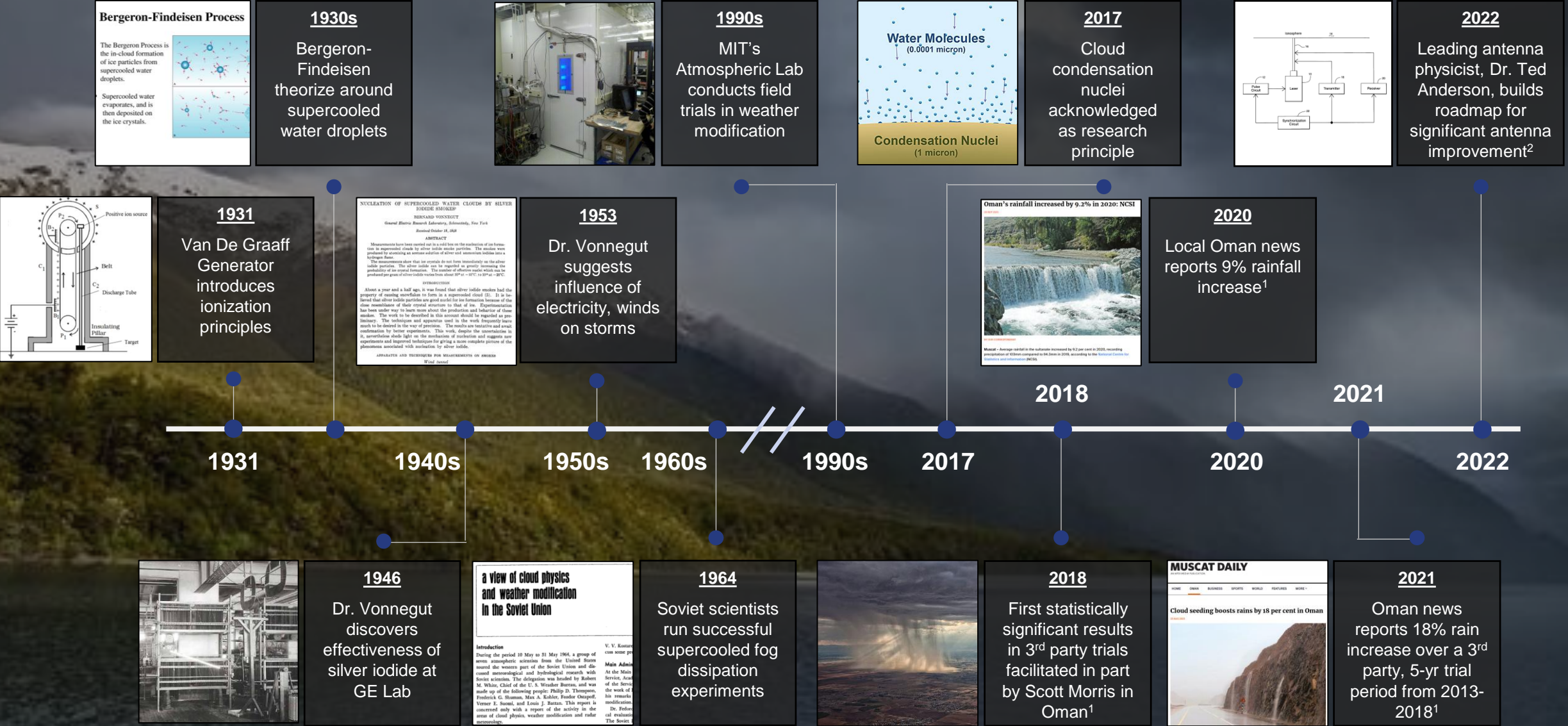
## Key Highlights of RET

- ✓ Our mission is to **serve all regions devastated by drought** and **companies with products and services** that **rely on an ever-decreasing supply of water**
- ✓ **Proven technology solution - statistically documented efficacy** over extended trial of 6 years. Complimentary to **any water-stressed area's broader water supply strategy**
- ✓ Environmentally friendly that **uses no chemicals** and **contributes to decarbonization goals**
- ✓ **Well-capitalized, publicly listed company** – NASDAQ: RAIN supported by an **impressive leadership team and board**
- ✓ Lowest-cost alternative, near-term ROI is under **6 months**. Potable water at under **\$0.10 / m<sup>3</sup>**
  - ✓ 15-year lifespan for arrays with minimal maintenance costs
  - ✓ No ongoing capex allows customers to allocate capital efficiently into additional geographies
  - ✓ Easy to install and trial – easy to remove
- ✓ **Technology is cost-efficient** compared to other water production alternatives





# Rainwater Tech Ionization Cloudseeding; Proven, Reliable Technology with Demonstrated Results



Source: MDPI, ACS Org, Nature, Public websites, Plasma patents belonging to RET Senior Technical Advisor, Dr. Ted Anderson  
<sup>1</sup> Trials not performed by RET <sup>2</sup> RET has an exclusive perpetual license to the plasma patents



# How RWT Generates Rain Enhancement Using Ionization

## Technology Innovation

- ✓ Machine learning and advanced gauge monitoring allow for precise rainfall measurement
- ✓ Improving where and when to enhance rain
- ✓ Ongoing electronic monitoring to validate results

1 System releases electrically charged negative ions into naturally occurring wind updrafts

## No Feed Reagents

- ✓ No AgI, Gas or other CN agents – reduce maintenance, no chemicals required
- ✓ Uses naturally occurring processes

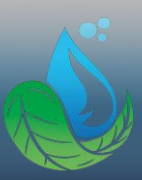
2 Negative ions attach to air particles and expand into charged ion plumes as they reach cloud layer

3 Plumes attach to cloud nuclei and pass along charge stimulating growth into larger rain drops

## Key Requirements

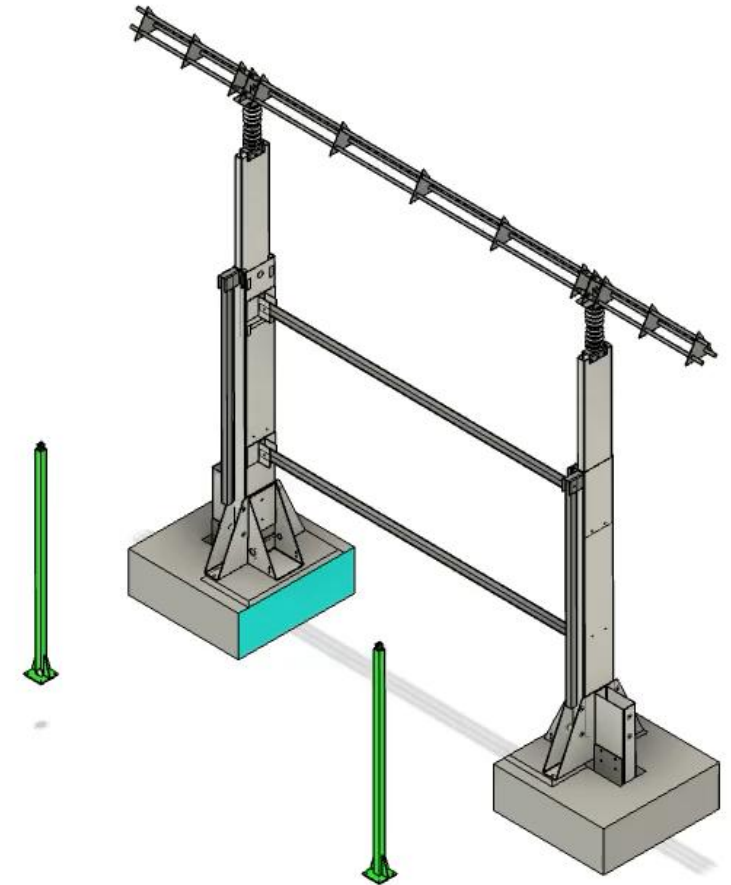
- ✓ >40% chance of rain
- ✓ 2000W solar panel energy requirement
- ✓ Proven operations above 32°F and potential for colder temperatures
- ✓ 1/10 of an acre fenced in area
- ✓ Install upwind of target area





# WETA – Weather Enhancement Technology Array

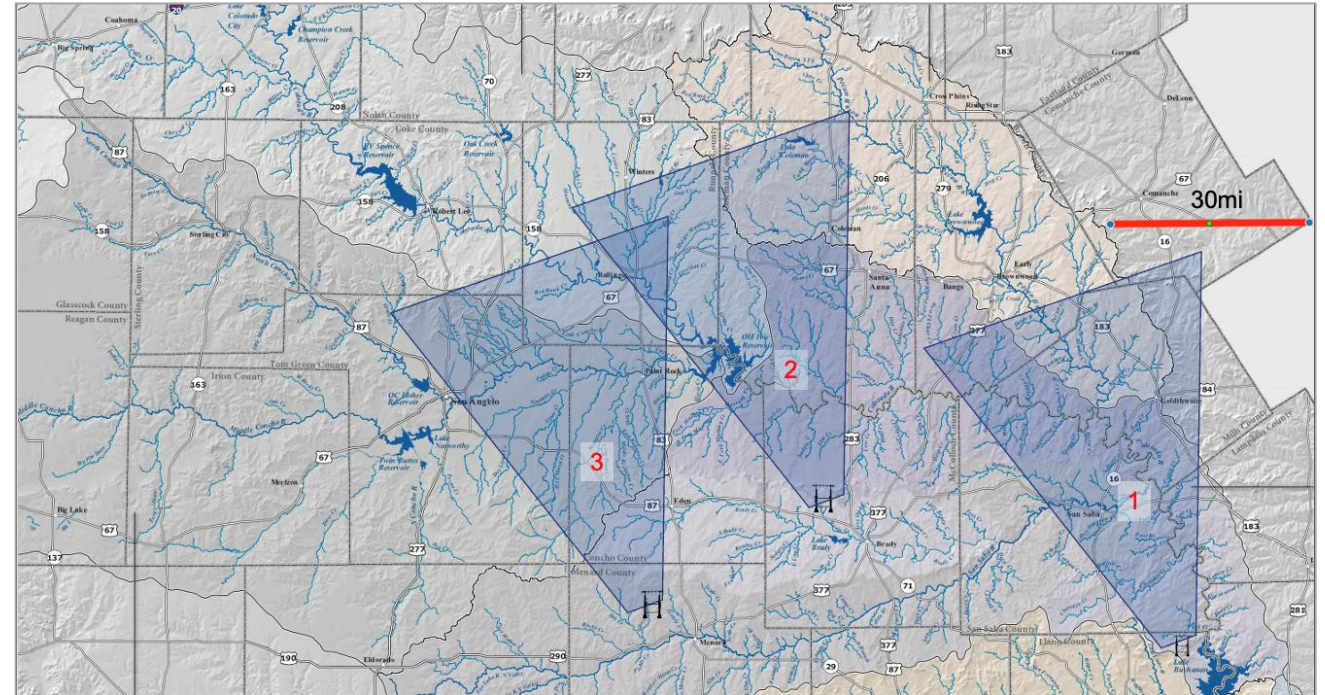
- A WETA system is constructed of composite materials including fiberglass and ceramics.
- The ionization "antenna" of the WETA array is approximately 39 feet (12m) wide, constructed of fiberglass composite and attached to ceramic insulators designed for high voltage operation. When fully extended, the antenna is approximately 26 feet (8m) above installed ground level.
- A -100,000V DC energy source is applied via shielded and insulated high voltage cable to the top triangular section of the WETA array. The source typically provides between 0.01mA and 2mA but can provide higher currents in high humidity and rain events.
- The voltage supplied is constant during operation. Our control system increments from 0V DC to -100kV DC to avoid excessive current and leakage events. The system automatically detects faults and can reduce voltage to a lower level if conditions require.
- The top section of the array is wrapped in a stainless-steel wire with many kinks and frays. The nature of this wire increases corona inception points, providing high rates of ionization in a relatively small area.
- Our control system automatically monitors operating voltages and currents from the high voltage source, allowing for confirmation of operation when comparing enhancement events.
- The system requires low power in both standby and operating modes. Typically using under 1000W during enhancement and 48W in standby.





# WETA Coverage

- The effect can start within ½ mile of the array
- Ion plume extends out as far as 30 miles, depending on prevailing winds
- For any dominant wind direction, the plume expands around 1 mile on each side of the array
- At the furthest point from the array, the ion plume can reach 18 miles wide
- Operation in cross winds, not aligned with the array main cross section, still creates enhancement over a smaller area
- Our monitoring targets the area where more rainfall or snow is needed
- We establish a rain gauge network using WMO-compliant gauges to document water
- Existing local systems are integrated into our analysis to support integrity of our data

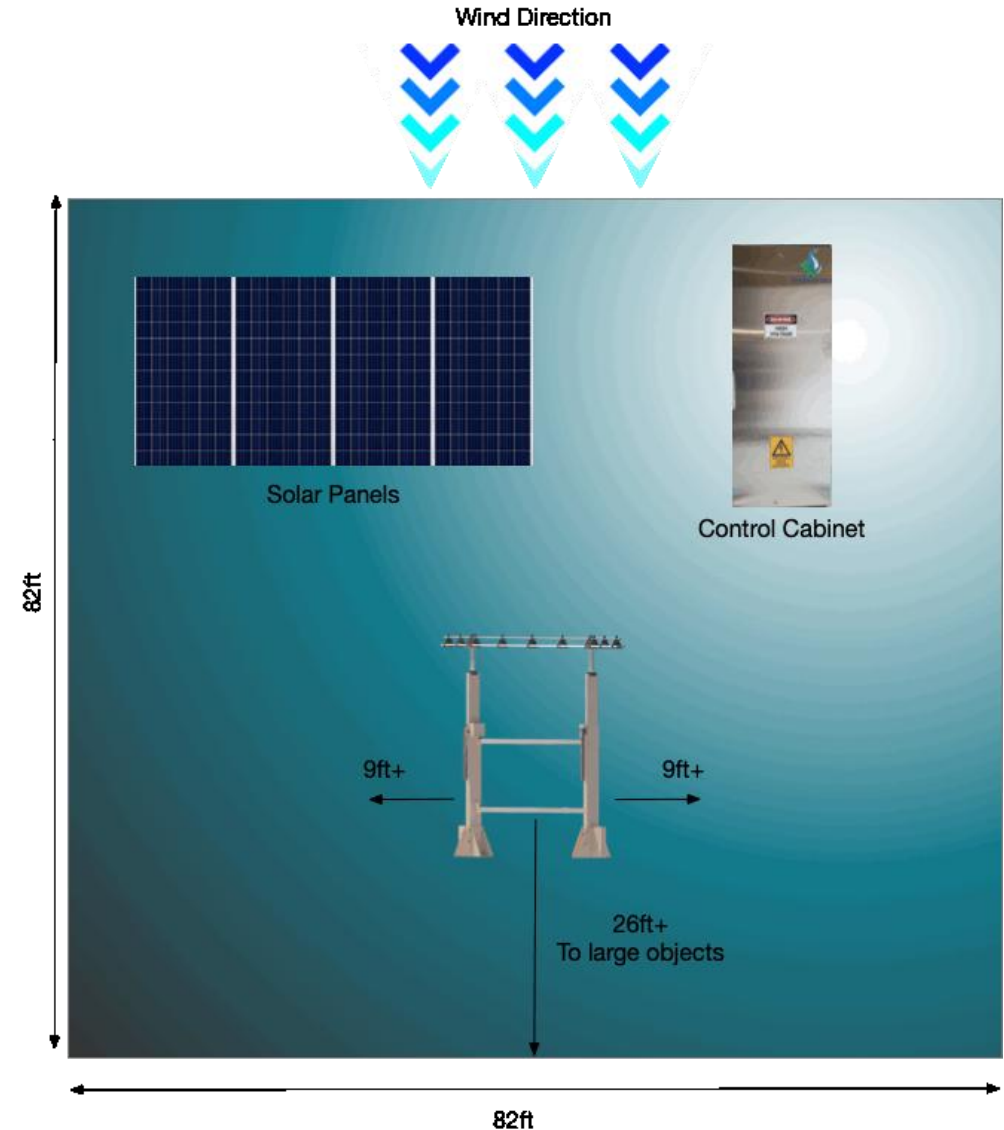






# Installing WETA

- Can be split – the main array section has one electrical connection.
- Prefer the array to be the highest point on the site.
- Arrays are aligned with dominant operating season wind patterns to maximize coverage and transfer.
- Meteorological analysis is completed to confirm local conditions.
- Locations that provide good sources of aerosols are preferred - near reservoirs, on the tops of cliffs, mountains etc.
- Can effectively operate on flat ground.
- Operation can be 24/7 but is normally only undertaken when local weather has moderate conditions to have rainfall (>40% relative humidity).
- In high wind, heavy rain and adverse weather events, the system automatically stops ion generation.
- Kit format – takes 2 days to install on site, operates for years. Individually replaceable components, low maintenance.





# Rainwater Technology Design for Viable Rainfall Enhancement



Proven design with demonstrated results



Increased average rainfall by ~18% over 6yr trial



Single system serves many customers over 70-mile radius



Fast deployment – 6 months to rain enhancement



Benefits from weather technology to predict rain conditions



15yr lifespan with minimal ongoing costs<sup>1</sup>



Scalable in all global regions - size of a goalpost



Environmentally sensitive with minimal energy usage



No chemicals during ionization deployment



Flexible elevation requirements



# 3<sup>rd</sup> Party Oman Case Study

## Background of Oman Trials

- Trials were carried out in the **Hajar Mountains from 2013-2018**; one of the **most water-stressed / rainfall-stressed areas in the world**
- **~20 Automatic Weather Stations** were set up to monitor atmospheric conditions and collected daily measurements
- Array of **~200 rain gauges** on a **6mi (10km)** grid to collect daily data
- **Radiosonde data** measured speed and direction of wind to help locate **where systems had rainfall enhancement effect**
- Trials utilized **12 devices over 6 years** – with **3 generations of systems designed** for improved ion generation and durability
- **Randomized operating schedule** was defined each year and system were switched on / off on designated operating days
- Total of **122,259 gauge-day** and **740 days of data collected**
- **Daily footprint** of each system is **18mi (30km) wide and 44mi (70km) long** with analysis applied to positive gauge day rainfall in footprint
- Modelling used to estimate rainfall enhancements in footprints attributable to systems. Tests **were not designed to optimize enhancement**, but for statistical measurement



Source: Royal Statistical Society and International Statistical Institute Journals

Note: 3<sup>rd</sup> party case study supported by Scott Morris not in capacity as RET senior technical advisor.

## Scott Morris – Rainfall Enhancement Expert

### MUSCAT DAILY

AN APEX MEDIA PUBLICATION

HOME OMAN BUSINESS SPORTS WORLD FEATURES MORE

Cloud seeding boosts rains by 18 per cent in Oman

*“Analysis shows that ionization led to statistically **significant enhancement** in positive rainfall”*

ROYAL  
STATISTICAL  
SOCIETY  
DATA | EVIDENCE | DECISIONS

*“The model-based & double robust methods both show enhancement with **highly significant results**”*

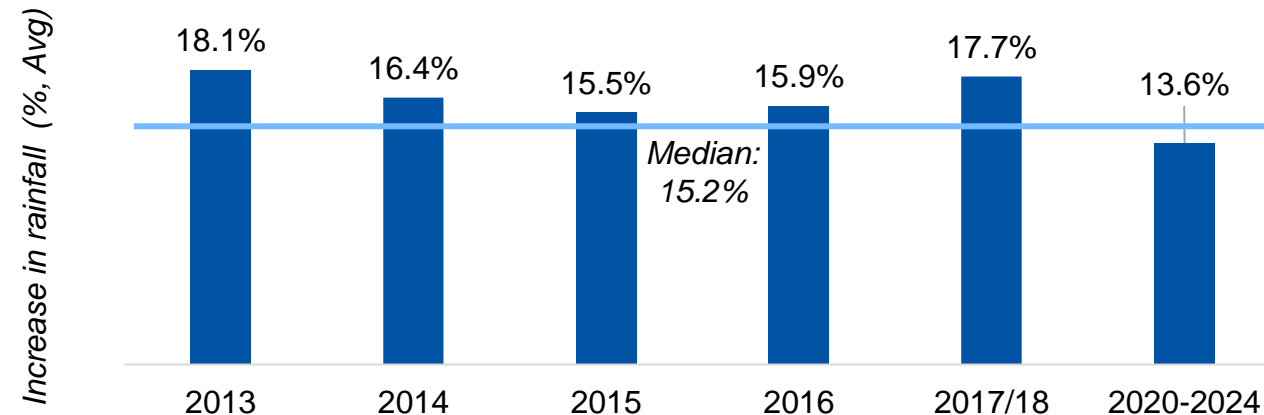
isi International  
Statistical  
Institute



**Scott Morris**

Sr. Technical Advisor  
Rainwater Technologies

## Historical Oman Trial Results and Key Factors





# 3<sup>rd</sup> Party Oman Case Study 2022 Analysis

## 2022 Analysis

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- Analysis of the data collected in the trial shows that ionization led to a statistically significant enhancement in positive rainfall in gauges located up to 70 km downwind of the ionizers<sup>2</sup>
- A headline analysis specified prior to commencement of the trial resulted in an estimate of 16.23% enhancement relative to rainfall that would have fallen without any ionization, while a more sophisticated after the event analysis increased this estimate to **17.64% enhancement**, but for statistical measurement<sup>2</sup>



Source:

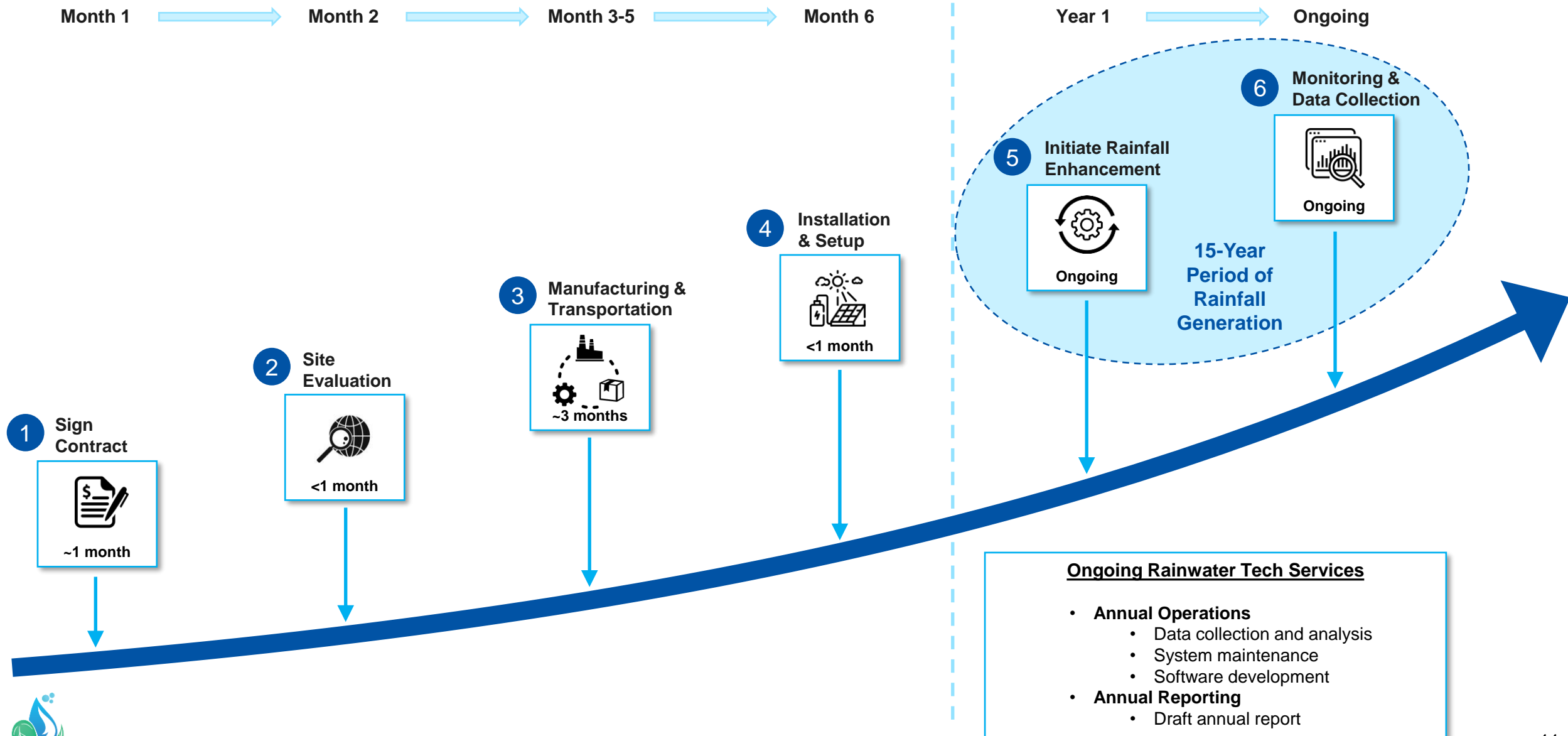
<sup>2</sup>Nudging a Pseudo-Science Towards a Science—The Role of Statistics in a Rainfall Enhancement Trial in Oman - Chambers - 2022 - International Statistical Review



# Rainwater Tech Deployment Timeline

## Installation & Setup Phase in <6 months

## Implementation & Deployment Phase





# Rainwater Tech Robust Platform Ready for Global Deployment

## Assessment



Detailed local physical and climatological diligence to assess effectiveness in various sites

## Data Analysis



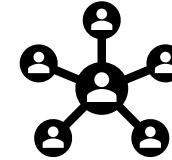
Understand the local weather patterns to determine best methods to create enhancement

## Monitoring



Perform continuous 360-degree review to optimize ionization and measure rain enhancement

## Communication



Augment autonomy with human intelligence to ensure systems are safely deployed at scale

## Infrastructure



Build and maintain infrastructure and tools to create reliable, systematic development

✓ **Optimized design** for all weather conditions

✓ Durability creates low **ongoing operational cost**

✓ **Modular manufacturing** for flexible scaling





# Landmark MOU for RET



## Discovery Land Corporation

- US-based real estate developer and operator of private residential club communities and resorts
- 30+ properties worldwide



## The RET and DLC Arrangement

- Binding agreement pursuant to which DLC expects to deploy RET's platform across its properties
- RET expects to install rainfall generation technology in 3 of DLC's properties by 2025



## Synergies Between RET and DLC

- Arrangement reduces DLC portfolio's need for municipal water sources and enables positive contribution to local community water supplies
- Significant global expansion opportunities for RET

*"We are impressed with RET's solution given its short deployment lead time, ability to operate off the grid, and compelling ROI. We look forward to expanding our partnership with RET in the coming years to support DLC's sustainable growth plans worldwide."*

*Discovery*  
LAND COMPANY

CEO, Mike Meldman



# Addressing Key Questions Around Ionization Cloudseeding

## Key Questions



## Rainwater Tech Clarifications

Ionization is untested and relies on complex physics concepts



Rooted in simple, existing physics theory using natural conditions



Statistical approaches proving theory but no real-world data to support



Robust dataset produced and evaluated during prior trials



Technology is proof-of-concept and is not ready for commercialization



Technology has changed minimally since innovated in 1940s



Measuring attribution – how much rain is produced above baseline



Double-Blind, Randomized Sequence Study<sup>1</sup> Run for Control



Notoriously difficult to design experiments that demonstrate efficacy



Statistical trials supported by RWT Senior Technical Advisor<sup>1</sup>



<sup>1</sup> Study and trials performed by third parties. RWT has licensed the engineering designs for the rainfall ionization equipment and systems used in the study and trials



# Benefits That Set Us Apart

- Our mission is to **serve all regions devastated by drought and companies with products and services that rely on an ever-decreasing supply of water.**
- **Complimentary** to any water-stressed area's broader water supply strategy.
- **Proven technology solution** - statistically documented efficacy over an extended trial of 6 years. Complementary to any water-stressed area's broader water supply strategy
- **Environmentally friendly** - contributes to the decarbonization goals, low footprint, results without needing external feed material (e.g. Agl, Gas, or other CCN agents)
- **Lowest-cost alternative**, near-term ROI is under **6 months**
  - 15-year lifespan for arrays with minimal maintenance costs – no ongoing capex
  - 6+month service intervals - operate and monitor results
  - Off-grid stand-alone operation
  - Automatic Operation and Remote Control
  - Easy to install and trial
- **Rapid Deployment** - Can be installed in days and operational within hours of connection
- **Constant Operation** - can be run for hours, days, weeks, or months. Wide-ranging enhancement over even moderate conditions
- **Proven in challenging environments** - effective in warm, dry climates with seasonal rainfall patterns, unlike competing technologies that require cold temperatures and focus on winter operation
- **Powered by renewables** - utilizes solar energy to charge batteries, enabling operation when most effective, day or night, regardless of weather conditions





Thank you!



## Next Steps



# Today's Media Abundant With Warnings of Global Water Issues

## Europe's drought the worst in 500 years - report

1 day ago

Europe heatwaves



A boat trapped in the dried-out shore where the French-Swiss Lac des Brenets lake should be

Two-thirds of Europe is under some sort of drought warning, in what is likely the worst such event in 500 years.

## The drought in the western U.S. could last until 2030

After a brutally hot and dry 2021, the region is now in the worst "megadrought" in 1,200 years. Climate change is to blame.

BY ALEJANDRA BORUNDA

PUBLISHED FEBRUARY 14, 2022 • 10 MIN READ

There have been brief moments of reprieve in the drought that has stretched on since 2000 in the western United States—a water-rich 2011, snow-laden 2019—but those breaks have only highlighted the more dramatic feature of the last few decades: unrelenting dryness.

Without human-driven climate change forcing Earth's temperatures up, the ongoing drought would still be painful and parched. But it would be unexceptional in the grand scheme of the past 1,200 years. A new study in *Nature Climate Change* shows that Earth's warming climate has made the western drought about 40 percent more severe, making it the region's driest stretch since A.D. 800. And there's a very strong chance the drought will continue through 2030.

## The Colorado River is in the throes of a 22-year-old megadrought. What's at stake?

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The 100-year-old water treaty among seven states of the Southwest over the water to the Colorado River is in a tenuous position. As the drought deepens, the Colorado River is the most endangered in the Southwest, according to the conservation nonprofit American Rivers.

## Droughts Hurt World's Largest Economies

Unusually dry weather in the U.S., China and Europe further pressures global trade



of the Jialing River, a major tributary of the Yangtze River, in Chongqing, China, 21 August 2022. SHUTTERSTOCK

By Matthew Dalton (Follow), Jim Carlton (Follow) and Sha Hua (Follow)

Updated Aug 21, 2022 6:50 pm ET

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PHOTO

TEXT

540 REPRICES

Listen to article (8 minutes)

Severe droughts across the Northern Hemisphere—stretching from the farms of California to waterways in Europe and China—are further snarling supply chains and driving up the

## Drought declared across large parts of England

More than half of nation affected by second heatwave after driest July on record



The declaration of a drought, the first since 2018, does not automatically trigger new restrictions © Ben Birchall/PA

Camilla Hodgson in London AUGUST 12 2022

57

## When context is key: "Hunger stones" go viral, but news first broke in 2018

Landmark stones recorded low water levels during droughts to warn future generations.

AMERICAN OVERSIGHT - 9/16/2022, 3:53 PM



Orange: A hunger stone in the Elbe River in Datteln, Czech Republic. The oldest readable carving is from 1616, with older carvings 1747 and 1803 having been wiped out by anchoring ships over the years.

Stones have been circling around the Internet this past week about the re-emergence in certain Czech and German rivers of so-called "hunger stones"—rocks embedded in rivers during droughts to mark the water level and warn future generations of the likely famine and hardship to come whenever the stones became visible again. The coverage has been fueled largely by an August 11 tweet noting one stone in particular.

## Climate is a supply chain problem that can't be ignored

The waterborne infrastructure of global trade could dry out or shut down as the world heats up

HELEN THOMAS

+ Add to myFT



## Empty canals, dead cotton fields: Arizona farmers are getting slammed by water cuts in the West

PUBLISHED SUN, APR 3 2022 8:00 AM EDT

Emma Newburger

EMMA\_NEWBURGER

SHARE

f t in

### KEY POINTS

- On the drought-stricken land where Pinal County farmers have irrigated crops for thousands of years, Nancy Caywood stopped her pickup truck along an empty canal and pointed to a field of dead alfalfa.
- "It's heart wrenching," said Caywood, a third-generation farmer who manages 247 acres an hour outside of Phoenix.
- An intensifying drought and declining reservoir levels across the Western U.S. prompted the first-ever cuts to Arizona farmers' water supply from the Colorado River.



## Germany's waterways are unsung, but essential

River freight is hard to beat



Aug 18th 2022 COLOGNE

Share

ROUGHLY A THIRD of Germany's coal, crude oil and natural gas—as well as a big chunk of its grains and chemicals—travel along inland waterways of one type or another. Traffic on the Rhine, which twists from the Swiss Alps to the

## For business, water scarcity is where climate change hits home

It brings material risks, regulatory overreach and reputational damage



Aug 17th 2022

Britt Rydner

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ONE OF YOUR columnist's favourite ways of passing a hot afternoon in Monterrey, three hours south of Mexico's border with Texas, is with a cold bottle of locally brewed Beck's beer. It's a place where the climate is just what the doctor ordered.



# Huge Global Need for Water



**Tourism and  
Recreation**



**Agriculture  
Industry**



**Hydro Power  
Plants**



**Nuclear Power  
Plants**



**Insurance & Re-  
Insurance**



**River & Water  
Authorities**



**Large  
Landowners**



**Oil & Gas  
Companies**



**Energy &  
Transportation**



**Forest  
Ministries**



**City, State and  
Federal Govts.**



**Cloud Data  
Centers**



**Social  
Philanthropists  
& Foundations**



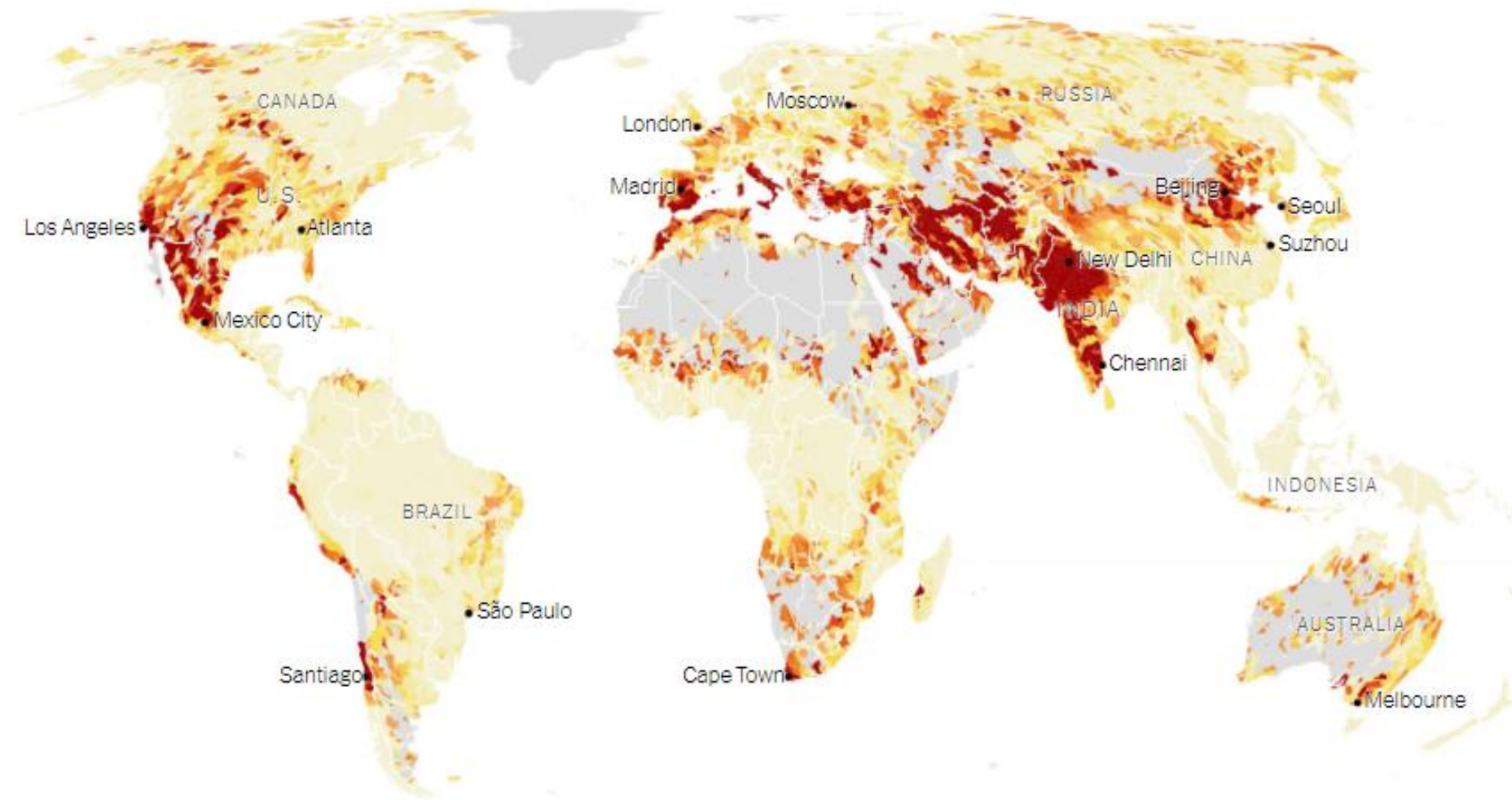
**Decarbonization  
Organizations**

*Note: Entities mentioned on this page are not affiliated with RET, nor is there any sponsorship or endorsement (or other) relationship between RET and any of the entities on the page.*

***Water underpins humanity***



# Much of the World is in a Major Water Crisis



**<1%**

of the water in the world is  
drinkable

**40%**

gap in the supply of water &  
demand by 2030

**20%**

drop in renewable water  
resources for every 1°C  
increase in global avg.  
temperature



Source: NY Times, Morgan Stanley, World Atlas, WHO



# Global Crisis with a Proven Solution



## 1 Massive Global Water Shortage

1. Water scarcity is a major global issue that is **dramatically worsening**
2. The **human impact** is devastating and the economic impact is staggering
3. It is top of mind across private and public markets, but there is **no de facto solution**
4. If prices continue to rise, over 3/4 of low-income US residents will face **unaffordable water bills by 2030<sup>1</sup>**



## 2 Current Water Supply Solutions

1. There are primarily 3 additional water supply solutions included in plans for water scarce regions:
  1. Desalination
  2. Chemical Cloudseeding
  3. Ionization Cloudseeding
2. Goal is to fill ~5-10% of estimated water demand with each solution
3. Each solution has pros and cons with all contributing to, not replacing, a comprehensive plan





# Ionization Rainfall Generation is the Least Expensive Potable Water per m<sup>3</sup>



Source: IOP Science, UCLA, Advisian research

Note: Cost of ionization rainfall generation calculated based on past, third-party trials. Cost of Desalination calculated using the maximum production volume per day. At minimum production, the cost is \$7.5 / m<sup>3</sup>. Water rates represent median of estimates from 2019 third-party analysis on cost of alternative urban water supply. IOP Science data limited to projects and measures implemented in California and related regions. UCLA data limited to Los Angeles County.



# Rainwater Tech Team



**Randy Seidl**  
Chief Executive Officer

- ✓ Four decades of experience across various technology sectors: cloud, security, server, storage, networking, services, and channel
- ✓ Unique ability to scale start up and Fortune 500 technology companies
- ✓ Led dramatic sales transformations at EMC, StorageTek, Sun, and HP
- ✓ Proven track record of driving revenue growth, gross margin, ecosystem partnerships, and fostering lasting executive relationships
- ✓ Co-author of Your Go To Sales Advisor



**Harry You**  
Board Director

- ✓ Over 150 M&A transactions and raised hundreds of billions in total capital
- ✓ Played a key role in structuring Dell's \$67Bn buyout of EMC as EMC's executive vice president
- ✓ Significant shareholder value creation at EMC, Oracle, Accenture, Korn Ferry and Broadcom
- ✓ Director on Board for Broadcom (Member of Executive Committee), Coupang, IonQ
- ✓ Deep banking & capital markets expertise



**Niccolo de Masi**  
Technical Advisor

- ✓ C-Suite / Board of 7 mobile app companies
- ✓ Deep track record in ESG focused value creation
- ✓ International expansion expertise – organic and inorganic
- ✓ Deep understanding of top and bottom of funnel techniques for optimizing retention, conversion, and LTV
- ✓ Overseen billions in mobile app revenue and advertising spend
- ✓ Pioneered incented mobile app and rewarded video advertising





# Rainwater Tech Team (Cont'd)



**Lyman Dickerson**

Board Director

- ✓ Over 30 years of operating experience in the water industry
- ✓ Founder of Ecolochem, a provider of outsourced industrial water treatment services for a wide range of industries including power, refining, chemical, pulp and paper, automotive, electronics and pharmaceuticals
- ✓ Sold Ecolochem to Ionics in 2003 which was ultimately acquired by General Electric



**Oanh Truong**

CFO & Board Director

- ✓ Impact-driven leader with a breadth of experience in financial and accounting operations, spanning ~10 years
- ✓ Impactful with supervising accounting operations and audits and providing guidance on metrics, and reporting
- ✓ Grew the SPAC business at Chord Advisors from inception to \$3M+ in revenue via referrals and repeat business



**Alexandra Steele**

Board Director

- ✓ Member of The American Meteorological Society since 1998 and was issued the AMS Seal of Approval in 1999
- ✓ Emmy nominated broadcast meteorologist with over 20 years of experience
- ✓ Worked at The Weather Channel for over 10 years anchoring their prime-time evening program
- ✓ Worked at both the network and local affiliates of ABC, CBS, NBC and CNN
- ✓ Climate specialist with an emphasis on climate communication and adaptation

