AWG WATER

HARVESTING THE FUTURE OF WATER

WATER PRODUCTION REPORT

[redacted] - US [redacted]

Proposed Location

[redacted] Texas

The report evaluates performance variability and viability for the proposed project across different humidity levels, providing a production scale from 10% to 100% relative humidity.

AWG Aqua Harvest

Atmospheric Water Production Report

Annual Relative Humidity, AWG Analysis

[redacted] Texas

Date: October 7, 2024

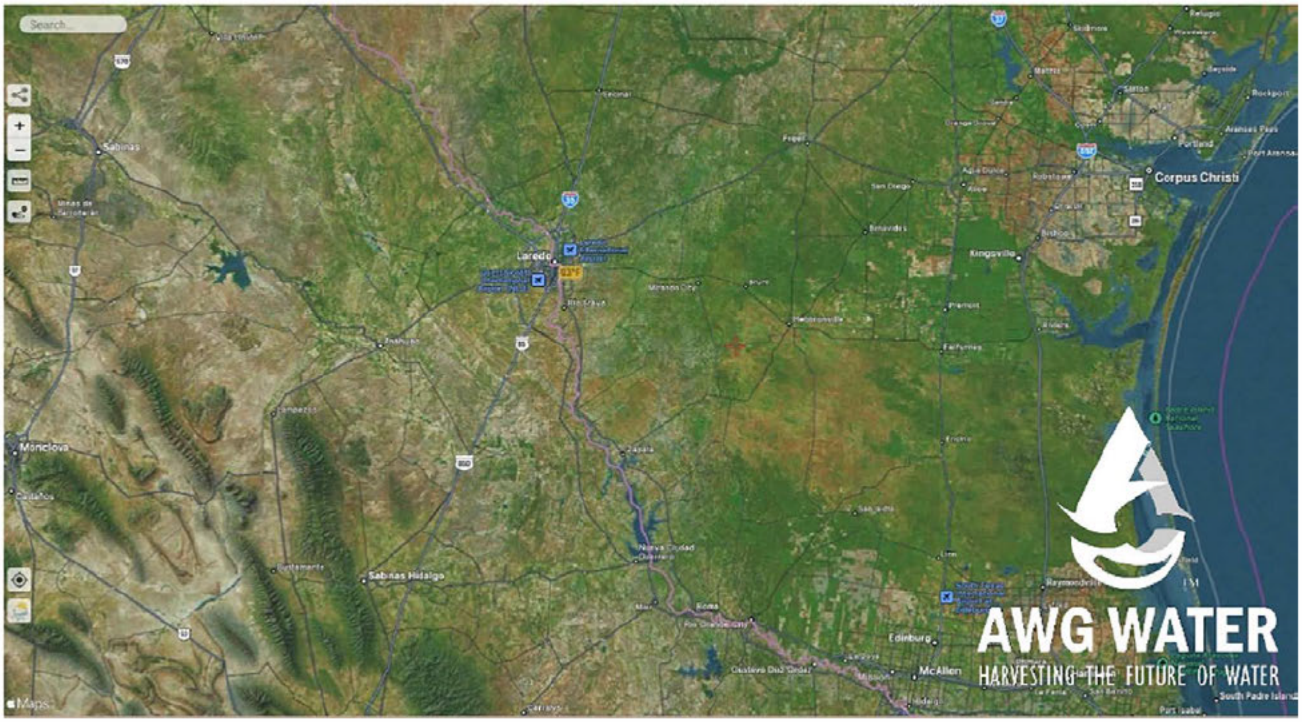
Introduction

This water production report focuses on the potential for atmospheric water generation (AWG) in [redacted] **Texas**, with an emphasis on studying the location's annual relative humidity. AWG technology extracts water from the atmosphere by condensing moisture from the air, making relative humidity a crucial factor in determining the feasibility and efficiency of water generation.

[redacted] **Texas**, situated in a semi-arid climate zone, experiences distinct dry and wet seasons, which significantly influences its annual humidity levels. This analysis examines the average humidity rates, seasonal fluctuations, and the feasibility of atmospheric water generation based on these climatic conditions.

Geographical Position

Latitude: 27.5036° N, Longitude: 99.5076° W



Geographical Context

- **Location**: [redacted] **Texas** is situated in the country of the United States, within a semi-arid region that experiences consistently high temperatures and varying humidity throughout the year.

- **Climate**: [redacted] climate is dominated by hot, dry conditions with limited rainfall, making it a semi-arid environment with notable seasonal temperature fluctuations and modest humidity levels.

Annual Climate in [redacted] Texas

[redacted] Texas, has a semi-arid climate, characterized by hot summers and mild winters, with low overall humidity and precipitation levels throughout the year.

Summer (June to September):

Temperature: Summers in [redacted] are extremely hot, with average highs ranging from 35°C to 40°C (95°F to 104°F). Heatwaves can push temperatures even higher, often exceeding 40°C (104°F).

Humidity: Humidity levels tend to be low due to the dry conditions, though it can rise slightly during occasional thunderstorms.

Precipitation: Rainfall is limited but increases during late summer with thunderstorms. July and August are the wettest months, though the total annual rainfall remains modest.

Winter (December to February):

Temperature: Winters are mild, with average highs around 18°C to 23°C (64°F to 73°F) and lows ranging from 7°C to 11°C (45°F to 52°F).

Humidity: Humidity is generally higher in winter compared to summer, though still relatively moderate compared to coastal or tropical regions.

Precipitation: Winter is relatively dry, with little rainfall, and snow is rare.

Spring and Fall (March to May, and October to November):

Temperature: Transitional seasons are warm, with spring temperatures rising quickly to summer levels, while fall sees a gradual cooling. Average highs range from 25°C to 30°C (77°F to 86°F).

Humidity: Humidity remains moderate, with occasional increases during brief rain showers.

Precipitation: Rainfall is sparse but can occur during these periods, often in the form of brief storms.

Annual Rainfall: [redacted] receives an average of about 20 to 25 inches (500 to 640 mm) of rainfall per year, with most occurring during summer thunderstorms. Despite some periods of rain, the region remains mostly dry.

Winds: [redacted] often experiences moderate winds, especially in the spring and early summer, contributing to the dry conditions and dust storms that can occasionally occur.

Annual Monthly Relative Humidity for [redacted] Texas:

- [redacted] Texas, experiences relatively low humidity levels throughout the year due to its semi-arid climate. However, humidity levels fluctuate slightly depending on the season, with higher humidity in the cooler winter months and lower levels during the hot summer months. The average relative humidity ranges from around 50% to 80% in the mornings, but drops significantly during the afternoons, especially in the summer.

[redacted] Texas

Month	Average Morning Humidity (%)	Average Afternoon Humidity (%)	Overall Monthly Average (%)
January	82%	42%	62%
February	80%	40%	60%
March	78%	35%	57%
April	75%	33%	54%
May	73%	32%	52%
June	72%	30%	51%
July	71%	28%	50%
August	72%	30%	51%
September	75%	35%	55%
October	77%	38%	58%
November	79%	40%	60%
December	81%	42%	62%

Key Observations:

- **Winter Months (December to February)**: Relative humidity is highest during the winter, with morning humidity reaching around **80% to 82%** and overall averages around **60% to 62%**. This is due to cooler temperatures and less evaporation.

- **Spring and Fall (March to May, September to November)**: Humidity remains moderate, with an overall average of **57% to 60%**. Morning humidity can still be relatively high, but afternoons tend to be drier.

- **Summer Months (June to August)**: Humidity levels are lowest during the summer, with morning humidity around **70% to 72%** and afternoon humidity dropping as low as **28% to 30%**. The dry heat causes significant evaporation, reducing relative humidity.

Despite fluctuating humidity levels, the overall climate in [redacted] is typically dry, particularly during the summer when low afternoon humidity is common.

Atmospheric Water Requirement for the [redacted] - US [redacted]

Estimated to be 220,000 gallons (8,403,614.16 liters) annually, and 602.74 gallons (2,281.62 liters) daily to be used primarily for laundry services. By running the system only during the highest humidity during the day, the system will have the ability to produce the volume demanded in just a couple of hours. As a result, the life of the system will be greatly increased and the AWG system will have the ability to run completely on our Power Max hybrid solar power systems, with 50 hours of battery power and Cummins diesel backup power when the running hours exceed the stored power.

Month	Average Morning Humidity (%)	Estimated Daily (6-hours) Production, Liters (Gallons)	Overall Monthly Target AWG Liters (Gallons)
January	82%	12780 liters (3,376 gallons)	69399 liters (18,333 gallons)
February	80%	12490 liters (3,300 gallons)	69399 liters (18,333 gallons)
March	78%	12201 liters (3,223 gallons)	69399 liters (18,333 gallons)
April	75%	12163 liters (3,212 gallons)	69399 liters (18,333 gallons)
May	73%	11477 liters (3,032 gallons)	69399 liters (18,333 gallons)
June	72%	11332 liters (2,833 gallons)	69399 liters (18,333 gallons)
July	71%	11187 liters (2,955 gallons)	69399 liters (18,333 gallons)
August	72%	11332 liters (2,994 gallons)	69399 liters (18,333 gallons)
September	75%	12163 liters (3,212 gallons)	69399 liters (18,333 gallons)
October	77%	12056 liters (3,185 gallons)	69399 liters (18,333 gallons)
November	79%	12345 liters (3,061 gallons)	69399 liters (18,333 gallons)
December	81%	12598 liters (3,326 gallons)	69399 liters (18,333 gallons)

Potential for Atmospheric Water Generation (AWG) in [redacted] Texas

The potential for atmospheric water generation (AWG) in [redacted] Texas, is influenced by its semi-arid climate, characterized by relatively low annual humidity and hot temperatures, especially during the summer months. Our AWG systems rely on the presence of atmospheric moisture, making humidity levels a critical factor in determining their overall efficiency.

Key Factors Influencing AWG in [redacted]

1. **Average Relative Humidity**:
   - [redacted] humidity levels are relatively low compared to coastal or tropical regions, with average morning humidity between 70% to 82% in the cooler months and afternoon levels dropping to 28% to 40% during the hot summer.

2. **Optimal Humidity for AWG**:
    - AWG systems typically perform best when humidity levels are 60% or higher. In [redacted] humidity exceeds this level mainly in the early mornings and during the cooler months (December to February), while afternoon humidity in the summer often falls below the optimal range for efficient operation. To enhance efficiency and water production, we recommend incorporating humidity sensors that automatically shut off the system when humidity drops below the optimal threshold. This would ensure the system operates only when conditions are favorable.

3. **Temperature**:
    - [redacted] experiences high temperatures, especially during the summer, with daily highs often exceeding **35°C to 40°C (95°F to 104°F)**. AWG systems are typically more efficient in warm and humid conditions, but in [redacted] high temperatures often coincide with low humidity levels, limiting AWG potential during the summer months.

    - **Best Seasons**: Spring and fall, when temperatures are moderate and humidity levels are slightly higher, present better conditions for AWG than summer, though these conditions are still less ideal compared to more humid environments.

4. **Seasonal Variations**:
    - **Winter Months**: From **December to February**, the relative humidity is higher, especially in the mornings, averaging around 80%, which provides favorable conditions for AWG. However, cooler temperatures during this time reduce the system's efficiency, as warm temperatures are ideal for higher water yields.

    - **Spring and Fall**: These transitional seasons, particularly **March to May** and **September to November**, offer moderate potential for AWG. Humidity levels are sufficient in the mornings but drop off in the afternoons. These periods could still produce reasonable water generation.
    - **Summer Months**: **June to August** are the least favorable months for AWG due to extremely low afternoon humidity (28% to 30%), despite the high temperatures. AWG efficiency would be significantly reduced during this time.

5. **Daily Variability**:
    - In [redacted] humidity is typically highest in the early morning and drops significantly by the afternoon, particularly during the summer. This daily variation means that AWG systems would produce the most water in the early part of the day when moisture levels are at their peak, but production would decrease sharply in the afternoons.

Annual Potential for Atmospheric Water Generation:

- **Winter Potential (December to February)**: AWG systems could operate relatively efficiently during these months, given the higher morning humidity. However, production would still be limited by lower temperatures.

- **Spring and Fall Potential (March to May, September to November)**: These periods provide moderate conditions for AWG, with morning humidity sufficient for reasonable water generation, though lower afternoon humidity would impact production.

- **Summer Potential (June to August)**: AWG potential is lowest in summer due to high temperatures paired with very low humidity, making it the least effective period for atmospheric water generation.

Conclusion:

Given the environmental conditions in [redacted] operating one Max Harvest 10000 system only during the morning, when humidity levels are most favorable, would result in the highest water production, particularly in the winter and spring. During these periods, when morning humidity is at or consistently exceeds 60%, the AWG systems could effectively serve as a daily atmospheric water generation source. Limiting operations to the morning hours is expected to meet the daily water demands year-round without additional AWG systems. Based on the current weather patterns, the system would be limited to operating approximately two to six hours daily, almost exclusively in the mornings.

Potential for Atmospheric Water Generation

- The scale reflects 37,860 liters (10,000 gallons) of (24-hour) daily atmospheric water production at 60% relative humidity, with corresponding production levels for humidity ranging from 30% to 100%.

Relative Humidity (%)	Water Production (Liters/Day)	Percentage of Maximum Capacity (%)
30%	18,930	50%
40%	25,366	67%
50%	31,424	83%
60% (Base)	37,860	100%
70%	44,296	117%
80%	50,354	133%
90%	56,790	150%
100%	63,226	167%

Sustainability of Atmospheric Water Generation (AWG)

1. Introduction to Atmospheric Water Generation

Atmospheric Water Generation (AWG) is a technology that extracts water from humid ambient air. It has emerged as a solution to address water scarcity, particularly in areas lacking access to traditional water sources such as groundwater or surface water. The process involves cooling high volumes of the air to the dew point, causing water vapor to condense and be collected for purification and use.

2. Key Environmental Benefits of AWG

2.1. Water Security and Decentralization

AWG provides a decentralized water source that is not dependent on traditional water supply infrastructure, such as pipelines, reservoirs, or wells. This independence allows AWG to be used in remote or drought-prone regions, offering a reliable source of clean water.

2.2. Reduction in Water Transportation and Infrastructure

Since our AWG systems generate water locally, they reduce the need for extensive water transportation infrastructure, which can be energy-intensive and costly. This decreases the carbon footprint associated with transporting water, especially in water-scarce regions where water must be transported over long distances.

2.3. Mitigating Groundwater Depletion

AWG helps reduce the strain on over-exploited groundwater resources. In many parts of the world, unsustainable groundwater extraction is causing aquifers to deplete faster than they can recharge. AWG offers a sustainable alternative by tapping into the abundant supply of atmospheric moisture.

3. Energy Considerations in AWG

3.1. Energy Consumption Challenges

When AWG systems are powered by our Power Max™ solar hybrid power systems, which provide up to 50 hours of runtime, the energy intensity challenge is effectively addressed. The reliance on renewable solar energy significantly enhances the sustainability of AWG, even in dry or hot climates where energy demands are higher. By eliminating the need for fossil fuels, these systems operate without contributing to carbon emissions, ensuring that the environmental benefits of water generation are fully realized. This integration makes AWG not only energy-efficient but also a truly green solution for water scarcity.

3.2. Renewable Energy Integration

The sustainability of AWG can be significantly enhanced by integrating additional renewable energy sources, such as wind, or geothermal power. In regions with high solar irradiance, solar-powered AWG systems can operate with minimal environmental impact, reducing the reliance on non-renewable energy sources and making AWG a truly sustainable solution.

3.3. Energy Efficiency Improvements

Innovations in energy-efficient cooling systems, such as the use of our refrigerant-based AWG technologies, reduce the overall energy requirements of the process. These systems absorb moisture from the air using special materials and then release the moisture as water through less energy-intensive methods than traditional condensation-based systems.

4. Environmental Impact Considerations

4.1. Carbon Footprint and Greenhouse Gas Emissions

When integrating our hybrid solar power systems with AWG technology, the carbon footprint is minimized through the system's prioritization of renewable energy. Our solar hybrid systems rely primarily on solar energy and battery storage, ensuring that AWG operates on clean, renewable power for up to 50 hours. Fossil fuels are only used as a backup when both solar energy and battery power are depleted. This significantly reduces the reliance on non-renewable energy sources, limiting the greenhouse gas emissions associated with fossil fuel use. By maximizing the use of solar power, the overall carbon footprint of AWG is kept low, even in cases where fossil fuels serve as an emergency backup. This hybrid approach optimizes energy efficiency while maintaining environmental sustainability.

4.2. Water-Use Efficiency

AWG systems can be optimized for water-use efficiency, minimizing water losses through purification and delivery processes. Advanced filtration technologies can ensure that the water generated is safe for consumption without the need for water-intensive purification processes, contributing to resource conservation.

4.3. Minimal Environmental Disruption

Unlike traditional water extraction methods, such as drilling wells, damming rivers, or diverting surface water, Atmospheric Water Generation (AWG) offers a groundbreaking approach to water sourcing with an inherently minimal environmental footprint. Traditional methods often require significant alteration of natural landscapes, including the disruption of ecosystems, soil degradation, and loss of biodiversity. For example, drilling wells can lead to the depletion of groundwater reserves, which not only causes land subsidence but also disrupts the natural recharge cycles of aquifers, potentially threatening entire ecosystems. Similarly, the construction of dams can alter river flows, submerge vast areas of land, displace wildlife, and disrupt local communities, all while creating long-term environmental challenges like reduced water quality and fish population decline.

AWG, on the other hand, operates without causing such ecological disruption. Since it extracts water directly from the moisture present in the air, it does not interfere with the natural water cycles of rivers, lakes, or groundwater reserves. This method avoids the need for extensive infrastructure development—no large-scale construction projects, such as reservoirs or treatment plants, are required, which often contribute to deforestation, habitat loss, and the release of carbon emissions during construction.

Moreover, AWG systems can be deployed in a modular and decentralized manner, allowing for localized water production without disturbing local geography or requiring the diversion of natural water sources. This is particularly important in regions where ecosystems are fragile or where traditional water extraction methods would exacerbate environmental stress. The localized nature of AWG also eliminates the need for long-distance water transportation infrastructure, which can fragment habitats and require energy-intensive processes.

In coastal or arid regions where natural water sources are already scarce, the introduction of AWG can help preserve local ecosystems by reducing the pressure on overstressed water supplies. Additionally, AWG systems are scalable, allowing for strategic deployment in sensitive areas without imposing a large environmental footprint. Unlike desalination, which produces brine waste that can damage marine environments, AWG does not generate harmful byproducts, further enhancing its ecological sustainability.

By avoiding the major environmental impacts typically associated with traditional water infrastructure development, AWG ensures that water is sourced in a way that is harmonious with natural ecosystems. It represents a crucial solution for meeting human water needs without sacrificing environmental health, making it a truly sustainable and eco-friendly option for water generation.

5. Economic and Social Sustainability

5.1. Cost-Effectiveness in Remote Areas

In regions where building extensive water infrastructure is impractical or too costly, AWG is an economically viable alternative. By decentralizing water production, AWG reduces the need for large-scale investments in pipelines, water treatment plants, and reservoirs.

5.2. Job Creation and Local Industry Development

The deployment of AWG technologies can stimulate local economies by creating jobs in the manufacturing, installation, and maintenance of AWG systems. Additionally, localized water production can support agriculture and other industries dependent on reliable water sources, particularly in arid regions.

5.3. Social Impact: Access to Clean Water

One of the greatest advantages of our AWG systems is their ability to harness the ever-abundant water cycle to provide clean, safe drinking water in areas where access to traditional water sources is limited or unreliable. The Earth's atmosphere holds vast amounts of moisture, replenished constantly through natural processes like evaporation and transpiration. Our atmospheric water generation systems tap into this virtually limitless resource, making it a sustainable solution for water generation, even in regions suffering from chronic drought or depleted groundwater reserves. Unlike finite water sources such as rivers and aquifers, the atmospheric water cycle is renewable and unaffected by local water shortages, providing a continuous and dependable supply.

Furthermore, atmospheric water is inherently pure compared to surface or groundwater, which is often contaminated by pollutants, chemicals, and pathogens. AWG technology captures this atmospheric moisture before it can be exposed to potential contaminants, ensuring a higher level of water quality from the outset. By integrating advanced filtration and purification systems, our AWG technology produces water that meets or exceeds health and safety standards for drinking water. This makes our technology particularly valuable in regions where existing water sources are compromised by industrial pollution, agricultural runoff, or inadequate sanitation infrastructure.

In communities facing water scarcity or where existing water supplies are unsafe, AWG can be a transformative solution. Not only does it improve access to clean water, but it also promotes public health by reducing the incidence of waterborne diseases, which are often linked to contaminated water sources. By providing a reliable, local source of clean water, our AWG can also support poverty alleviation by freeing up time and resources otherwise spent on collecting water or treating illnesses caused by poor water quality. This leads to improved livelihoods, educational opportunities, and economic growth, as communities can focus on development rather than survival.

By leveraging the abundant water cycle and delivering pure, uncontaminated water, our AWG systems offer a sustainable and impactful solution to global water challenges, directly addressing the needs of vulnerable populations and improving overall quality of life.

6. Challenges and Limitations

6.1. Climate Dependency

AWG's efficiency is dependent on local humidity levels. In very dry climates, AWG may not be as effective, requiring more energy to produce smaller quantities of water. This makes AWG more suitable for coastal, subtropical, or tropical areas where atmospheric moisture is abundant.

6.2. Levelized Cost of Water

The AQV Aqua Harvest Max Harvest is a groundbreaking advancement in atmospheric water generation, positioning itself as the world's most prolific and efficient system. With the ability to produce a staggering 37,854 liters of water per day-—equating to an extraordinary 13,816,710 liters annually at just 60% relative humidity—this system offers an unmatched scale of production. The sheer volume of water generated makes it an ideal solution for large-scale industrial, agricultural, and municipal applications, capable of serving entire communities or industries in regions where water scarcity is an ever-pressing concern.

What sets the Max Harvest system apart is not only its high output but also its cost-effectiveness. With a levelized cost of under $0.03 per liter, the system delivers an economically viable solution that drastically reduces the cost burden of water production. This is particularly crucial for developing nations or regions grappling with unreliable water supplies and tight budgets. By leveraging the limitless atmospheric moisture available globally, the Max Harvest can ensure long-term water security without placing excessive strain on financial or environmental resources.

Additionally, the system's low operating costs coupled with its massive production capacity make it a desirable option for governments, NGOs, and corporations committed to sustainable development. Whether deployed in arid regions suffering from drought, urban areas with stressed infrastructure, or agricultural zones in need of reliable irrigation, the Max Harvest system offers a scalable and sustainable approach to water generation. Its ability to meet the growing demand for clean water while minimizing environmental impact makes it a transformative solution in the global fight against water scarcity.

In a world where fresh water is becoming an increasingly scarce resource, the AQV Aqua Harvest Max Harvest represents the future of sustainable water generation, providing a reliable, cost-effective, and environmentally friendly solution to meet the needs of populations and industries worldwide.

6.3. Scalability Concerns

Our high-volume AWG systems, including the revolutionary Max Harvest 10000, which produces an unprecedented 37,854 liters (10,000 gallons) of water daily, are setting a new standard for industrial, agricultural, and municipal water production. As the largest atmospheric water generation systems ever created, the Max Harvest 10000 is designed to meet the demands of large-scale operations, making it an ideal solution for industries that require substantial water volumes for manufacturing processes, cooling systems, and facility operations. In agriculture, the Max Harvest 10000 can ensure a consistent, sustainable water supply for crop irrigation and livestock, even in drought-prone areas, helping farmers safeguard their yields and maintain productivity without relying on overburdened natural water sources.

For municipalities, the Max Harvest 10000 provides a reliable and scalable solution to urban water shortages, offering an alternative to traditional water infrastructure such as reservoirs or aquifers, which can be susceptible to contamination or depletion. With the ability to generate significant amounts of water directly from the atmosphere, municipalities can secure water independence, even in regions with scarce rainfall or declining groundwater levels. This system is not only a breakthrough in terms of volume but also a milestone in sustainable water management, capable of addressing the growing global water crisis at an unprecedented scale.

By integrating the Max Harvest 10000, industries, farms, and cities alike can future-proof their water supply, reduce reliance on vulnerable natural water sources, and embrace a more sustainable, decentralized approach to water generation.

Challenges and Considerations

While [redacted] **Texas**, shows great promise for atmospheric water generation, a few challenges and considerations must be addressed:

1. **Energy Requirements**:
   - AWG systems require energy to operate, and electricity costs or availability could impact overall production efficiency and feasibility. We would recommend utilizing our Power Max hybrid solar power solutions to provide ample power for the systems, with 50 hours of backup power and hybrid diesel power to support power demand for short periods of daily operation.
   - The proposed AWG system is expected to operate only 2 – 3 hours daily off stored energy collected from our solar hybrid power systems. With 50 hours of backup battery power, the system will have enough stored energy to operate without solar energy for several days.
2. **Seasonal Variations**:
   - During the dry season, production rates may decrease slightly, which may necessitate storage (banking) solutions to maintain consistent supply.
3. **Maintenance and Durability**:
   - The semi-arid climate with heavy rainfall and storms may affect the operation of AWG systems. Regular maintenance and weather-resistant controls and equipment are suggested for reliable operation. We recommend our automatic storm mitigation systems that monitor wind speeds and weather conditions to control the operation of systems in times of storms automatically.

AWG Equipment Conclusion:

Given the environmental conditions in [redacted] operating one Max Harvest 10000 AWG only during the morning hours, when relative humidity levels are most favorable, would maximize water production, especially in the winter and spring seasons. Morning humidity typically exceeds 60% during these periods, creating optimal conditions for efficient AWG operation. By focusing on operating the systems only during hours of acceptable humidity, the systems would provide a reliable water source for the laundry operations.

It is recommended to use our humidity sensor control systems to automate the system's operations during peak humidity hours to optimize efficiency and resource utilization.

In addition to maximizing the efficiency of atmospheric water generation, cycling the systems to operate only during the morning hours will greatly extend the usable life of the equipment.

AWG Equipment Recommendations

1. **System Installation During any Season**: Based upon the historical climate in [redacted] the system could be installed in any season
2. **Energy Optimization**: Consider integrating our renewable energy sources, such as our Power Max hybrid solar power, to mitigate energy costs and increase the system's sustainability.
3. **Storage Solutions**: Implement water storage systems to capture surplus production during high-humidity cycles for greater efficiency and use in the laundry during drier periods.

By leveraging [redacted] **Texas's** natural humidity patterns, atmospheric water generation could provide an excellent, sustainable solution to the [redacted] - US [redacted] water needs.

AWG Aqua Harvest Equipment Recommendations

1. **Max Harvest 10000**: (1) modular system. The AQV Aqua Harvest Max Harvest 10000 is the highest production, state-of-the-art atmospheric water generator designed to deliver reliable, sustainable water production on a large scale. Capable of producing up to 37,854 liters (10,000 gallons) of clean, potable water when operated 24 hours a day, this powerful system extracts moisture from the air using advanced condensation technology.

   Ideal for both industrial and community use, the Max Harvest 10000 operates efficiently in varying humidity conditions, making it a versatile solution for water-scarce regions or environments with unreliable water infrastructure. Equipped with energy-saving features and a user-friendly interface, this atmospheric water generator offers a cost-effective and environmentally friendly solution to meet growing water demands.

   Key Features Include:

   a) High Capacity Production: Generates up to 37,854 liters of water daily, when operating continuously throughout the day,

   b) Advanced Filtration Systems: Ensures the water is clean, safe, and ready for consumption,

   c) Inline water production metering, real-time water quality monitoring, Ozone destruction, UV purification and reverse osmosis filtration,

   d) Energy Efficiency: Designed to minimize energy use while maximizing output.
   e) Scalable Design: Suitable for large-scale applications, including industrial, agricultural, and community use,

   f) Durable and Weather-Resistant: Built to withstand harsh environmental conditions.

2. **Water Storage Tanks**: Horizontal or underground storage tanks, capable of storing 10 days of water production. Include level monitors, filtration, UV-C destructive light, specifically at wavelengths between 200-300 nanometers (UV-C), disrupting the DNA of bacteria, viruses, and protozoa, rendering them unable to reproduce, and Ozone water purification referring to the process of using ozone (O_3) to purify or disinfect water by breaking down harmful contaminants, microorganisms, and organic materials.

3. **Storm Mitigation**: Automatic storm mitigation control systems.

4. **Power Max Portable Hybrid Solar Supply 10k:** (1) customized system per Max Harvest system with a secondary diesel power generation, and 50 hours of power storage.

5. **Rainwater Collection & Purification:** Customized system with rooftop collection and purification intended to reduce energy consumption during periods of rain.

6. **5-year Extended Warranty:** 5-year extended warranty on all system parts and components.

Estimated AWG Water Production Report Summary

This report provides an in-depth analysis of the water production capabilities of the AQV Atmospheric Water Generation (AWG) systems, with a focus on the Max Harvest 10000 model, which is designed for high-volume output. The individual system is capable of producing the required 220,000 gallons (8,403,614.16 liters) annually, and 602.74 gallons (2,281.62 liters) daily to be used primarily for laundry services.

Once the system is deployed, the atmospheric water generation system is expected to yield a minimum of 4,000 liters daily, when operated exclusively in the mornings during favorable humidity levels.

This report also evaluates performance variability across different humidity levels, providing a production scale from 50% to 100% relative humidity. Even at lower humidity levels, the system maintains substantial output, demonstrating its versatility at various times of the year.

With its minimal environmental footprint and ability to operate on our renewable solar energy sources, the Max Harvest system offers a sustainable, scalable, and economically viable solution for water security challenges worldwide.

A quotation will be provided, should you decide to proceed with the project.