

# WATER WE DOING?

**An AguaClara Newsletter**



Patrick Sours (OSU), Santiago Garcia (APP) and Skyler Erickson (ACR) at a site visit in Honduras in January 2023.



# LETTER FROM THE EDITOR

Hello AguaClara partners, supporters, family, and friends,

We are excited to present you with the 2023 AguaClara Newsletter. In this edition, you will learn about a number of happy milestones. Dr. Monroe Weber-Shirk has been working full time for AguaClara Reach for over three years. Agua Para el Pueblo is constructing the 25th AguaClara plant in Central America and once that plant is completed, AguaClara Technology will reach its 100,000th person served. It has been a great year, and we have a lot more in store.

Thank to you to all the contributors for helping to make this newsletter.

Thank you for being a drop in the AguaClara bucket.

With love,  
Zoe Maisel, AguaClara Reach Board President  
and Monroe Weber-Shirk, AguaClara Reach  
Technical Director

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**We are having an End of Year Gala to celebrate all of our accomplishments!**

**Join us December 9th in New York City.  
Buy tickets and donate through [Givebutter](https://givebutter.com/ACRGala2023)  
<https://givebutter.com/ACRGala2023>**

# WHAT DO WATER PROFESSIONALS THINK ABOUT AGUACLARA TECHNOLOGY?

"AguaClara, to me, are the **best plants currently available worldwide**. They have already implemented many plants in Honduras. It's worthwhile learning about them. They are the only ones **still researching how to improve treatment processes**. And each time, the advantage is that it's a continuous learning process, and **they are getting better and better**."

English translation

-Pedro Ortiz: Technical Coordinator of the National Water and Sanitation Committee, CONASA, a specialist in water purification, in his introductory words at the Bi-monthly Assembly of Para Todos Por Siempre in Honduras on August 11, 2023.

"AguaClara para mi son **las mejores plantas ahorita que hay a nivel mundial**. Han hecho ya bastantes plantas en Honduras. Es bueno que las conozcamos. Son los únicos que **siguen investigando cómo mejorar los procesos de tratamiento**. Y cada vez la ventaja es que es un proceso continuo de aprendizaje y **están mejorando y mejorando**."

Original Spanish

# 25TH PLANT UNDER CONSTRUCTION IN CENTRAL AMERICA

## New 36 L/s Plant in Becerra, Honduras

Construction of the 25th AguaClara plant in Central America began in January. The plant will serve the municipality of San Francisco de Becerra in the Honduran department of Olancho.



Map of Central America with AguaClara Treatment Plans.

**This plant is designed to serve a current population of 6,000 people (future population of 9,450 people), providing them with safe, clean drinking water.**



Becerra construction team in July 2023.

The plant is designed by Agua Para el Pueblo and AguaClara Reach, and is being constructed by Agua Para el Pueblo, a non-profit organization that provides clean water to underserved communities in Central America through the use of AguaClara technology.

The project is being financed by SEDESOL, which is the Secretary of Social Development in Honduras, and it is expected to be completed by the end of this year.

This will be the second AguaClara plant to use components from the new designs produced by the AguaClara Infrastructure Design Engine. The Becerra plant will include the latest design for the flocculator and updates for the chemical dosing system.

# NEW HYDRODOSER PROJECTS COMPLETED IN INDONESIA

**Three Hydrodosers installed 2022-2023**



USAID Inauguration of Hydrodosers in June 2023.

Since 2021, Austin Ho (a then-senior at high school in Jakarta) has been working with AguaClara Reach to lead Hydrodoser installations in Indonesia.



Community celebration at Hydrodoser Inauguration in June 2023.

Over the past few years, he has worked with local NGOs to install three Hydrodosers. There are plans to continue working with USAID to expand treatment nationwide. These efforts are sponsored by Regional government institutions (Pemda) and Regional water companies (PDAM).

**AguaClara Reach is so excited to have Austin Ho as a partner and advocate for safe water on tap. Thank you to Austin, Habitat for Humanity, USAID, AWS, Pemda, PDAM, and the Ministry of National Development Planning.**

Check out our [blog](#) for more information!

# AGUACLARA REACH VISITED HONDURAS TWICE IN 2023

This January, AguaClara Reach sent a delegation to Honduras to visit various AguaClara plants. This is the first time AguaClara Reach has sent any representatives to Honduras since 2020. The purpose of the trip was to reconnect with our Honduran partner, Agua Para el Pueblo, and directly get operator feedback and suggestions for improvements on the design of our technologies.



Patrick Sours (OSU, left), Santiago Garcia (APP, middle) and Skyler Erickson (ACR, right) at a site visit in Honduras in January 2023.

The delegation included Izumi Matsuda, an AguaClara Reach employee who serves as the Design and Partnerships Officer, Skyler Erickson and Anna Doyle, volunteers and members of the board of directors, and Patrick Sours, PhD, Senior Lecturer at Ohio State University and friend of AguaClara Reach.

**The first visit focused on our partnership with APP and technical design feedback.**



Skyler (left), Anna (middle), and Izumi (right) in Honduras in January 2023.

**ACR site visits provide a critical opportunity for partnership development, innovation, and collaboration.**

This July, Izumi Matsuda and Dr. Monroe Weber-Shirk, Technical Director of AguaClara Reach, returned to Honduras, this time meeting multiple potential partners that were invited to Honduras by AguaClara Reach.

**The second visit focused on new partner development by meeting with multiple potential partners, donors, and innovators.**



Monroe (left) and Izumi (right) in Honduras in July 2023.

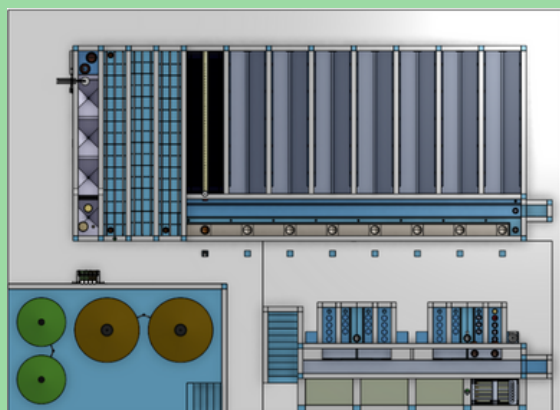
These potential implementation partners, donors, and innovators had established interest in AguaClara technology and were able to experience the technology in person and see how it impacts communities in Honduras to have safe water on tap. We look forward to building more relationships with organizations that are interested in safe water for small towns and cities, and plan to solidify these connections in Honduras whenever possible.

**Are you interested in going to Honduras in 2024?**

**For information about alumni and supporter trips, reach out to Skyler Erickson ([serickson@aguaclarareach.org](mailto:serickson@aguaclarareach.org)) and Monroe Weber-Shirk ([mwebershirk@aguaclarareach.org](mailto:mwebershirk@aguaclarareach.org)).**

# ONGOING INNOVATION AND FEEDBACK

Two trips to Honduras and our regular meetings with Agua Para el Pueblo engineers are providing a steady stream of feedback to improve the AguaClara designs. APP engineers recently recommended a walkway between the entrance and flocculator tanks. They also recommended maintaining a walkway between the filters and the hydraulic control tanks.



Plan view of the previous plant layout. The operator had to look over the entrance tank to see into the first channel of the flocculator and didn't have easy access to the filter.



**Agua Para el Pueblo Engineers and Operators provided feedback in July that is already incorporated in ACR's Design Engine.**



Plan view of the new plant layout. The entrance tank and flocculator are separated by a walkway and the filter controls are moved away from the filter for easier access.

Plant operators really benefit from being able to walk along the first flocculator channel to see how flocculation is proceeding. The operators quickly learn how far along the flocculator they can expect to see flocs as a function of the raw water turbidity. This is another advantage of plug flow hydraulic flocculators!

Making this kind of change to our designs is relatively easy and now all future designs have this design update.



# AGUACLARA REACH JOINED THREE MAJOR CONFERENCES THIS YEAR

**Monroe presented AguaClara's Design Engine as the keynote speaker at the OnShape Research Symposium**

Monroe showed how AguaClara Reach uses Onshape, a PTC Technology to create an unbroken algorithm from the physics to a detailed and customized design of municipal water treatment plants.

The graphic features the OnShape logo in the top left, the event title 'ONSHAPE RESEARCH SYMPOSIUM' in large white and green letters, and the date 'AUGUST 2, 2023'. A circular portrait of Dr. Monroe Weber-Shirk is on the right. A white callout box identifies him as 'DR. MONROE WEBER-SHIRK AGUACLARA REACH'. A grey callout box below contains the text: 'Keynote: Highly Customizable, Parametric Designs Increase Access to Safe Water'. The PTC logo is in the bottom right corner.

Monroe also gave a presentation to the Honduran water and sanitation forum, Para Todos Por Siempre (everyone forever). The title of the talk was “Communities with water fit for human consumption: exploring the challenge”. Monroe talked about the need to quantify how many cities and towns need water treatment plants so that the problem of contaminated water can be publicized.

**Monroe presented AguaClara's technology to the Honduran water and sanitation forum.**

**Izumi attended the United Nations Water Conference to network with leading professionals.**

In March, Izumi Matsuda represented AguaClara Reach at the United Nations Water Conference in New York City, supported by the Rural Water Supply Network. This landmark conference is the first time in 46 years that the UN has met to exclusively discuss and strategize solutions for global water issues.



Izumi at the UN Water Conference in March 2023.

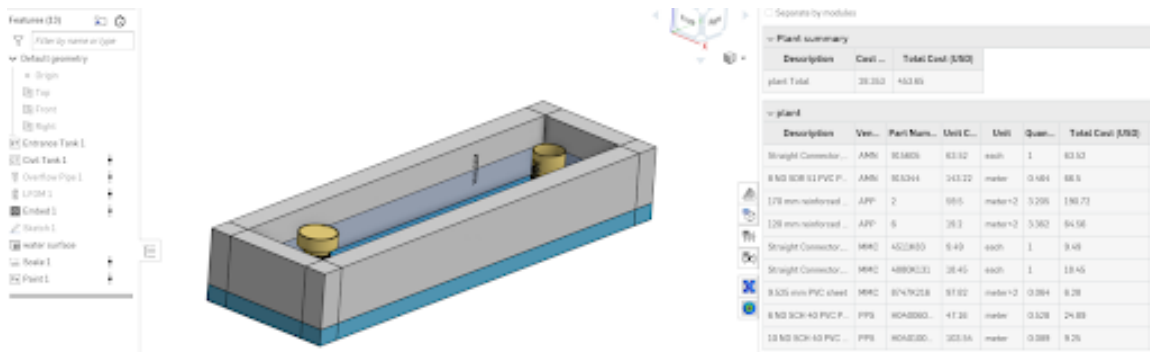
The conference highlighted the UN's sixth Sustainable Development Goal (SDG6) "Ensure access to water and sanitation for all", targeted to be reached by 2030. Izumi attended a variety of sessions, including academia-focused talks, corporate responsibility and water stewardship panels, public sector discussions, and sessions focused on collaborative action with large non-profit and humanitarian organizations. Although we are a long way from reaching SDG6, it was heartening to learn from and connect with so many passionate professionals sharing the same goal as AguaClara Reach, ensuring safe water for all.

**Monroe has also been invited to give a keynote address in October at the Universidad Santo Tomás in Tunja, Colombia.**

**Please donate to help us attend more conferences and share our work with the global WASH networks.**

# RESEARCH, INVENT, DESIGN, EMPOWER (RIDE)

In the spring of 2023, Monroe and Clare O'Connor taught AguaClara Reach's Safe Water on Tap course at Ohio State University (OSU) in collaboration with Dr. Patrick Sours and lecturer Cherish Vance and at New Jersey Institute of Technology (NJIT) in collaboration with Dr. William Pennock.



Example entrance tank with flow measurement produced by student teams

## 70 Students took the Safe Water on Tap Course at Ohio State University and New Jersey Institute of Technology in Spring 2023.

Students at OSU and NJIT learned the latest science of drinking water treatment in a flipped lecture format. The class used the AguaClara textbook, *The Physics of Water Treatment Design*, and design challenges that built on the power of Onshape to directly connect a parts database with hydraulic and process design to create detailed 3-D models of water treatment plant components.

**Are you interested in mentoring students at Cornell, NJIT, or OSU?**  
**Reach out to Zoe Maisel**  
**([zmaisel@aguacларareach.org](mailto:zmaisel@aguacларareach.org)) and Monroe Weber-Shirk**  
**([mwebershirk@aguacларareach.org](mailto:mwebershirk@aguacларareach.org)) for more information.**

# WELCOME TO THE AGUACLARA REACH BOARD OF DIRECTORS



**Elena Tiffert-Vaughan**

Elena brings 28+ years of international experience in leadership in humanitarian and operations management and planning. She has created impact by designing strategic, innovative, and high-quality WASH programs around the world. With experience working in Africa, Asia, Eastern Europe, Latin America and the Caribbean, and the Middle East with organizations including WaterAid UK and America, Save the Children, Oxfam, Christian Aid and Medical Aid for Palestinians, Elena's particular interests are program strategy, program design and development, emergency preparedness, response and recovery, and how to integrate accountability to disaster affected communities. Elena holds an MBA from Oxford Brookes University.

**Thank you to our major donors!**

OnShape, American Eagle Foundation, and Inflo Design Group

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**We rely on generous donors like you to advance our mission of safe water on tap for all!**

Donations are accepted

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