

Highlights

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PRWRERI Newsletter

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The Puerto Rico Watershed Symposium 2020

On December 10th the PRWRERI partook in the Puerto Rico Watershed Symposium of 2020, a digital conference dedicated to community-based integration of watersheds in Puerto Rico.

The full day event took place between 8:30 am to 4:30 pm, featuring several presentations by environmental experts including our very own Dr. Jorge Rivera-Santos, Dr. Thomas H. Douthat from

Louisiana State University, and many more.

The Symposium also held various presentations from the restoration of watersheds with Dra. Lisa Vandiver's "*Assessing the Effectiveness of Watershed Restoration on Nearshore Ecosystems through a Multi-spatial and Multi-temporal Monitoring Program*" to aspects of environmental pollution with Tania M. Metz-Estrella's "*Watershed Management Plans to Reduce Land-based Sources of Pollution Threatening Coral Reefs in Puerto Rico*." Special mention once again goes to Dr. Jorge Rivera-Santos that gave an in-depth view of our research institute and continuous ongoing projects. All presentation are available to read on our website: <https://bit.ly/38uI8r3>.

Thanks to event coordinators and assistance from our alumni Oscar Martínez-Pinilla, the symposium was a success for not just educators and speakers but attendees alike. When questioned, most all participants, attendees and organizers overwhelmingly rated the event as a 5 out of 5, making it clear that they were extremely excited to see what was in store for the future. Regardless, of the move to a virtual format there was a unanimous call and excitement for future topics and themes. From nature-based infrastructure to new analysis techniques, the excitement in the air is palpable all thanks to the coordinators, speakers, and sponsors continuous hard work.

President Biden Signs New Executive Order to Combat Climate Crisis

President Joe Biden has recently taken to office and with his arrival has come a series of policies in the name of climate protection. The executive order signed January 27th, 2021 divides the new initiatives and policies into 3 parts.



Part I of the executive order details the various ways this new administration will be putting the climate crisis at the center of U.S. foreign policy and national security. This involves hosting an early Leaders Climate Summit, reconvening the Major Economies Forum on Energy and Climate, creating a new special presidential envoy for the climate, contributing to the Paris agreement, press for enhanced climate ambition and integration, as well as so much more that would push the U.S. to the front of the climate crisis in this new administration.

Part II details the ways in which the U.S. will take a government wide approach to the climate crisis on the mainland. This involves a series of reforms and new jobs that would in theory lead the U.S. to reduce greenhouse gas emissions and achieve net-zero emissions nationwide by no later than 2050. The official documentation includes a list of all new positions created to

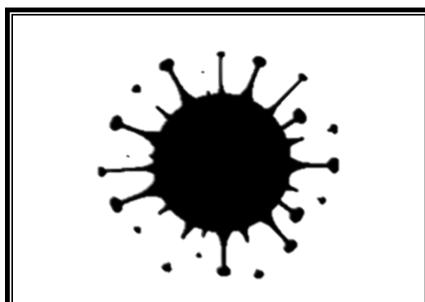
achieve this goal, as well as a detailed plan on the steps it will take going forward. Despite the climate crisis seemingly taking a back seat during the Trump administration this executive order does not detail if these plans will be followed through if this administration does not continue in 2024.

Part III is a small list of general provisions to the document that detail the various ways it will and will not affect state legislature, applicable law and much more.

Access the full document by clicking on the following link:
<https://bit.ly/3jRS2aF>.

Covid-19 and Us: The Viruses Lasting Impact on the Environment

Covid-19 has had profound impact in our relationships, jobs, and families, but an effect rarely discussed in news outlets today is the virus's effect on the environment, and in that, a large part of modern scientific research.



On a surface level it would be easy to say that due to the increased number of people staying home and not driving that the environment would have seen a pollution reduction, or at least some kind of large-scale change, but that couldn't be further from the truth. According to the

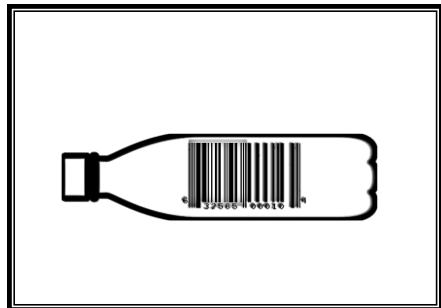
United Nations Economic Commission for Europe (UNECE), though gas pollution has dropped, and environmental damage have begun to slow, a series of new problems have arisen from the woodwork. Plastic has grown in use for many families staying at home and with most companies choosing to dispose of this trash through incendiary means high quantities of Co2 are released into the atmosphere. Disposal of pollutants are also facing a dilemma. The restrictive conservative protections have made it difficult to both dispose of garbage as well as hunt for valuable resources, leading to an increase in illegal hunting, logging and even waste dumping. The popular narrative that things "will simply get better" if people are confined to their homes is false and many in positions of power have begun to argue in favour of green, ecofriendly renewal paths once Covid-19 cases begin to decrease.

"Sustainable Recovery" is a term has spread across socio-political circles, where the main idea is to re-establish green infrastructure and jobs to combat the problems brought about during and after Covid-19. In May 2020, the World Health organization (WHO) published their ideas on sustainable recovery. The first step involves greater protection of environmental resources from the types of pollution already discussed in fear of this disregard for ecofriendly guidelines becomes the new norm. Secondly, to invest heavily in water sanitation and clean energy health care facilities to preemptively create more sustainable ecofriendly environments for human health not dependent on limited resources. Thirdly, ensuring quick healthy energy transitions, promoting healthy food systems, and many more. This long-term plan divided in segments to assure not just a healthier environment post Covid-19, but active jobs to combat the growing unemployment.

The rise of Covid-19 has created its own share of problems that most people could have never predicted, even so as more and more people social distance and vaccinate, the greater question of green initiatives remains in the air. Many corporations and institutes continue to plan for the idea of a green recovery but without specific instruction from political law maker nothing is set in stone. Regardless, both researchers, students, and institutes like the PRWRERI continue working tirelessly to analyse and protect the resources around us.

All articles discussed and more can be provided upon request.

Water Wars: A Brief Introduction to the Water Privatization Debate



From as early as the 2000's an ongoing debate of water resource privatization has led any discussion of the matter into two highly polarized viewpoints. One where privatizing water resource is inherently flawed and would simply

be an overall worse service than when it was public, while the flip side in favour believes that deniers are simply overly conspiratorial and that an innate hatred of private business is blinding them to the public good of privatizing the industry. Now, these viewpoints could not be more different from one another, so how did we get here? The only way to begin understanding is through a brief introduction into the issue.

The privatization of water resources is a system in which private corporations buy or operate public water utilities, more specifically public water goods like tap and sewer systems. The responsibilities of controlling water systems can range anywhere from the rates in which communities are charged for their services, providing aid when those services go awry, the creation of jobs in those fields and many more that would have previously been controlled by public officials. As stated, before these polarizing viewpoints from both pro and anti privatization groups are not in any way just a water resource issue, as it can be found in many other sectors of governmental influence like electricity, telecommunication, etc., but they are however extremely relevant in today's political climate.

As recently as 2020 the U.N. Human Rights Council held a presentation by Léo Heller titled "Human Rights to Safe Drinking Water and Sanitation" where he reported his findings on the possible effects of privatization on public water resources across the world. Still free to the public as of writing this article, Heller's report laid out the reason's privatization should be an issue handled with caution, as fears of possible corruption, mismanagement and lack of transparency are brought to the forefront of what was to be expected

when private businesses run unsupervised. The report was by no means a hit piece, but even so it sent shockwaves across groups that found the report to be "anti-private sector" and "prejudiced" by none other than the executive director of AquaFed one of the major players hoping to establish itself as a viable water resource provider alternative to the U.N. Human Rights Council. Citing a lack of credible evidence, critique, and speculation as a matter of contention, the executive director Neil Dhot urged that the report not influence any mandates made by the council. Without the council reaching a decision many had already begun to question the legitimacy of Dhot's concerns and wonder if his worries were nothing more than a tactic to dismiss the negative reality of privatization. The many groups that spoke out against AquaFed include The Global Initiative for Economic, Social and Cultural Rights, Public Services International, Corporate Accountability and more. As of the publication of this article no decision has been made in favour or against privatization by the U.N. Human Rights Council.

While the situation described may seem like a singular incident, water privatization is a growing worry for many and the fact that it has reached the U.N.'s front desk speaks to its relevancy. Where some see corporate greed, others see elected officials continuously failing water resource infrastructure. There may not be a concrete answer on part of the U.N. but with the ever-shifting public opinion of the Puerto Rico Aqueducts and Sewers Authority, it may be a dilemma that we all face soon enough.

Oscar Hernan Martínez Pinilla



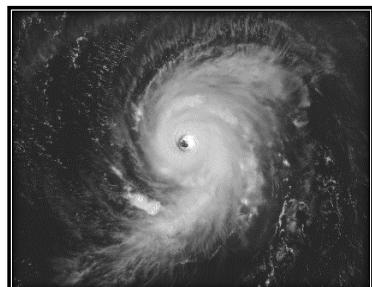
Student Spotlight

In this Segment the PRWRERI looks at one of its outstanding students and their work. Find more from them on the official website prwreri.uprm.edu.

A student of the PRWRERI and well-known educator to many students, Oscar Martínez is our institutes chosen alumni for this issue's student spotlight. Learn more about his life, career, and education in the following pages.

Oscar Martínez Pinilla is a student and staff member of the PRWRERI here at the University of Puerto Rico, Mayagüez.

Under a continuously lengthened educational track (thanks to Hurricane Maria, student protest, and Covid-19) Oscar has become a familiar face to many students, but how did he get here? Well, originally from Bucaramanga, Colombia Mr. Martínez did not initially plan on coming to the island. While a fan of Puerto Rican music, he earned his bachelor's degree in civil engineering at the industrial university of Santander in Colombia. It was not until his then girlfriend began studying in Puerto Rico that his curiosity was peaked and following his heart and his career passions he decided to apply for citizenship and earn his master's degree on Island. The move, in of itself was arguably the easiest part of it all, as that same year he chose to come over in 1998 the devastating hurricane George was nearing the island. While nothing could have prepared him for a major hurricane Oscar hit the ground running, and despite the circumstances he found himself with a deep love for the island that no storm could blow away.



Hurricane George was by no means a cake walk, it forced Oscar to grow prepared, to develop plans and harden his resolve for the future of both his and his girlfriend's education. After gaining his master's in environmental engineering, he set off to work in San Juan as a licensed engineer. Those 12 years he would spend gaining experience in the field were critical to his growth, not just as an engineer but in his dedicated work ethic. It is in those years when applying for a PhD. at the University of Puerto Rico became a goal worth getting, and his time well managed allowed for him to work fulltime in San Juan and study at Mayagüez upon acceptance. Now, many students have tried and failed to be academically present when working on the side, yet Oscar could always pride himself in excellent academic performance. His drive kept him punctual in each class even when it cost him 2 cars and hours of sleep.

Few can ever claim to be half as dedicated a student as Oscar, but as the years wound down Mr. Martínez decided to stop working fulltime and instead throw himself fully into his major of water resource engineering in 2015. He applied himself to his studies as he one day became a research assistant at the PRWRERI, and the rest is history.



While reminiscing on his past, some of Mr. Martínez's fondest memories and friendships can be found in his time with the PRWRERI. Friends like Roy who worked IT with Oscar on ideas and designs for our webpage and characters like Victor Vargas, where they had a continuously rotating seat of work shifts and respect. There is often an idea that work is some painful thing that many simply must get through to live; yet on Oscar's account of his time in this institution and in his career, there are no critical low points. There have been opportunities and friendships that continue to grow and make him into the man he is today.

Those same friends that have graduated from this institution always manage to find their way back. Through visits, projects, conferences and more, Mr. Martínez has found that work can be a wonderful opportunity to make connections and feel like a functioning part of a complete whole. Now, this is not to say life is all sunshine and rainbows. Times are hard and each year brings with it a new hurdle, but when things get tough Oscar takes a run. Usually early in the morning, towards sections of his local beach where people have not touched, he takes a pair of running shoes and lets it all go. Hearing the birds across the trees and the waves crashing against his eardrums, Mr. Martínez could only summarize his life as blessed. With his then girlfriend and now wife, Oscar looks forward to what comes next and with graduation on the horizon he finds himself content in whatever it may bring. When asked about any words of advice for students right now he had this to say:

“Make sure you love your thesis. As simple as it sounds, your thesis will require work and passion so make it something worth fighting towards.”





In Memoriam

In this segment the PRWRERI remembers those within this program that have sadly passed way. With the upmost respect for the individual's life as well as their academic accomplishments, this segment will stand as a testament that though time may pass the memories they have created will always live on.



Oscar J. Perales-Pérez

A professor of the Department of Materials Science and Engineering, Dr. Oscar Perales- Pérez was a friend to all those lucky enough to work alongside him. Be it in his multiple projects revolving around nanotechnology or simply getting to work in one of his classes, Perales- Pérez was a creative and innovative part of the research community that will be thoroughly missed. He lived not only as a tremendous part of academia but also as a friend. The program of PRWRERI, including his coworkers, peers and students give all their condolences to his family and friends in these trying times.

CALENDAR OF EVENTS

2001 Information Management & Technology Conference and Exhibition
American Water Works Association
April 8 – 11, 2001 - Atlanta, Georgia
For more information contact: AWWA
Phone: 1-800-926-7337
Web site: www.awwa.org

AWRA's Annual Spring Specialty Conference
"Water Quality Monitoring, & Modeling"
American Water Resources Association (AWRA)
April 30 - May 2, 2001 - Menger Hotel - San Antonio, Texas
For more information contact: AWRA
Phone: (540) 687-8390

AWWA Annual Conference and Exposition
June 17-21, 2001 - Washington D.C.
For more information contact: AWWA
Phone: 1-800-926-7337
Web site: www.awwa.org

Joint AWRA/UCOWR Summer Specialty Conference
"Decision Support Systems for Water Resources Management"
American Water Resources Association (AWRA)
Universities Council on Water Resources (UCOWR)
June 27-30, 2001 - Snowbird, Utah
For more information contact: AWRA
Phone: (540) 687-8390

WATER NEWSLETTER

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