ISSUE
08
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YOUR SOURCE FOR
WATER, SANITATION,
& FOOD SECURITY
INNOVATION INFO

Water Life

this issue

water life systems

What We Do

WATER TREATMENT & SUPPLY

Water is life... for both people and business. Our scalable prefabricated systems treat ground, surface, and wastewater sources to supply:

- Drinking / Domestic Water
- Industrial / Process Water
- Agricultural / Irrigation Water

SANITATION & HYGIENE

The COVID-19 pandemic has raised the awareness of global water challenges and the lack of proper sanitation. Public health conditions related to clean drinking water, and adequate treatment and disposal of human excreta and sewage, are our top priority. Our systems are designed to provide Urban, Per-Urban, and Rural populations with proper sanitation and hygiene services.

FOOD SECURITY

We recover water and nutrients, among other resources, from wastewater for reuse and closed-loop plumbing infrastructure in agriculture and aquaculture-controlled environment operations.

IoT CONNECTED

Our Wi-Fi, Lo-Ra, and Satellite IoT Connected arsenal of digital pathogen, heavy metals and nutrient sensors make our solutions revolutionary.

There Is Most Likely Bacteria In Your Rainwater

As climate change and rapid population growth contribute to the reduction of freshwater sources across the globe, rainwater harvesting is being utilized to sustain a healthy landscape, reduce utility bills, and in an increasing number of areas in the world rainwater harvesting is a means of survival.

Even though rainwater falls from the sky as pure and safe to consume, if it is not polluted with microplastics, acid, and other pollutants present in many metropolitan areas of the world, it is a perfect material to host and encourage the growth of bacteria, including legionella.

What people do not know is that their common UV and membrane filters for potable consumption are known to not sufficiently remove the bacteria, and recurring illnesses are a result.

Studies have found that legionella infection rates are increasing across the world. Man- made water systems, such as rainwater harvesting/collection, hot tubs and whirlpool spas; hot water systems in large buildings, hotels, and hospitals; and cooling towers produce aerosolized bacteria contaminated water that provide the source of most legionellosis and water borne bacterial infection cases.

Roof-collected rainwater is a source of legionella, along with water that stands still for a period and some roofs produce more bacteria than others. You can either change your entire roof to reduce somewhat your odds of bacteria growth in your rainwater collection tanks or utilize the Water Life Systems low-cost and highly robust **O3-InGEN™** treatment and monitoring systems to essentially eliminate the problem. The Water Life Systems water treatment solutions can be effectively integrated into most water use applications.

Yu, A.T., Kamali, A. & Vugia, D.J. Legionella Epidemiologic and Environmental Risks. Curr Epidemiol Rep 6, 310–320 (2019).

Rhoads, W. J., Pruden, A., & Edwards, M. A. (2016). Survey of green building water systems reveals elevated water age and water quality concerns. Environmental Science: Water Research & Technology, 2(1), 164-173.

Hamilton, K. A., Ahmed, W., Palmer, A., Sidhu, J. P. S., Hodgers, L., Toze, S., & Haas, C. N. (2016). Public health implications of Acanthamoeba and multiple potential opportunistic pathogens in roof-harvested rainwater tanks. Environmental research, 150, 320-327.

Bae, S., Maestre, J. P., Kinney, K. A., & Kirisits, M. J. (2019). An examination of the microbial community and occurrence of potential human pathogens in rainwater harvested from different roofing materials.

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Water, Sanitation & Food Security

OUR MARKETS

INDUSTRIAL

Agriculture | Aquaculture | Automotive | Commercial Livestock | Disaster Management | Environmental Rehab | Food & Beverage | Military | Mining | Oil & Gas | Paper & Pulp | Petrochemical | Pharma | Power | Specialized Industry | Steel | Tourism

MUNICIPAL

Urban, Peri-Urban & Rural Utilities | Commercial Buildings | Public Facilities | Mixed-Use Buildings | Developments | Multi-Tenant Residences | Single Homes

OUR GUARANTEE

Water Life Systems guarantees that you will receive enhanced security and higher quality with Water Life Systems' products and services. The service starts with customizing our solutions to your specific needs and continues through equipment delivery and life cycle maintenance. We back up what we design and manufacture to ensure that you receive complete technical and process support on-demand.

What Do You Have When You Take The Waste Out Of Wastewater?

In the May Water Life issue, we discussed the benefits of utilizing WLS Membrane Resource Recovery Filters so valuable nutrients found in our wastewater do not go to waste. Let us take another look at how WLS wastewater treatment systems recover water from wastewater, and common reuse applications.

WLS wastewater treatment systems have been designed and are manufactured to the ISO 30500 & 31800 standards as developed by experts from 48 countries, representing industry, government, academia, and NGOs. Major contributions came from TÜV SÜD, the African Water Association (AfWA), and the Toilet Board Coalition (TBC). ISO 30500 was published in October 2018, 31800 in August 2020. The Bill & Melinda Gates Foundation has supported uptake activities.

Even though WLS systems are created to the ISO specs, we can exceed the minimum ISO treated water standards using WLS proprietary electrocoagulation, ozone, membrane filtration, and other treatment system components to produce pure drinking water that can be custom conditioned to the finest standards of drinking water sommeliers. Wastewater without the waste is just water. The trick is to remove ALL waste and monitor the output efficiently.

The ISO 30500 and 31800 standards are used as performance standards for manufacturers to ensure that their **systems are safe for human health and the environment**. As nations continue to adopt the standard, manufacturers will find increased value in certifying their products to the ISO 30500 & 31800 standards to gain market penetration.

From ISO.org, on 1st January 2016, the 17 UN Sustainable Development Goals (SDG) were launched, including SDG 6: *ensuring access to water and sanitation for all*. The SDGs are a set of goals to end poverty, protect the planet, and ensure prosperity for all as part of the new UN sustainable development agenda. **The 30500 and 31800 standards support the development of stand-alone sanitation systems** designed to address basic sanitation needs and promote economic, social, and environmental sustainability through strategies that include minimizing resource consumption (e.g. water, energy) and converting human excreta to safe output.

Contact Water Life Systems today for major project consultation or technology licensing inquiries:
mail@waterlife.systems
www.waterlife.systems

SUSTAINABLE DEVELOPMENT GOALS

#WeCanSaveTheWorld

The core mission of WLS is to increase global resiliency and sustainability in water, sanitation, and food security systems.

The world's rapid population growth, coupled with rapid climate change, is increasing the competition for resources. At WLS, we're committed to doing our part to operate sustainably. Our innovative solutions provide resource conservation, energy savings, the reuse of water, food security, and better population well-being and health outcomes.

Advanced **O3In-Gen™** technology is one example of WLS' focus on cost savings and increased treatment effectiveness. **O3In-Gen™** is used in WLS' **PureBOX™** distributed / decentralized package plants and controlled environment food production systems. The systems are ideally suited for a scalable solution to provide clean water, wastewater treatment, and food security for all by 2030 in a world where billions of people do not have access to sufficient water supply and sanitation services. We envision a world without waterborne pollution and the abundance of freshwater for all using our water treatment and monitoring systems, which correspond most directly to the United Nations Sustainable Development Goals SDG 6 - Clean Water and Sanitation.

At WLS, we're committed achieving the United Nations Sustainable Development Goals (SDGs) by the 2030 goal date. This collection of 17 global goals is designed to be a "blueprint to achieve a better and more sustainable future for all." Our operations and solutions contribute to all the UN's SDGs.

This Issue's SDG Provided by Water Life Systems

World Economic Forum 2020: "The global water crisis is one of the greatest threats to humanity."

The "traditional" way of living is not sustainable for life on Earth. Water Life Systems leadership, in living through their own climate-caused near disasters, being Vancouver 100-year drought in 2015 and the 2017-18 Day Zero scare in Cape Town, South Africa, have developed water supply, sanitation, and food security Micro-Utility solutions that can be deployed into the built environment on a global scale. Tech components can be integrated into centralized systems.

WLS systems are at the core of providing water stressed populations with clean water and sanitation services. Currently some 2.2 billion people worldwide do not have sufficient drinking water services, 4.2 billion people do not have safely managed sanitation services, and 3 billion lack basic handwashing facilities.

Much of the world is not set to meet United Nations Sustainable Development Goals with current systems thinking. No single solution will result in universal access by 2030. A range of adaptable and scalable solutions are needed to overcome geography, gender, and socioeconomic barriers.

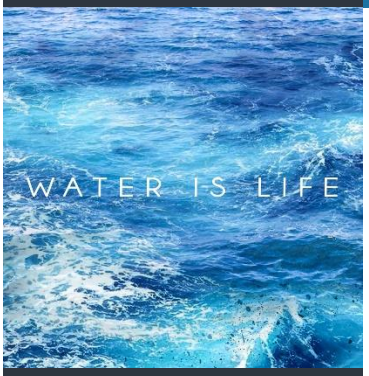
SDG 1

No Poverty

1.1 Target
By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day
1.1.1 Indicators
Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)

1.4 Target
By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
1.4.1 Indicators
Proportion of population living in households with access to basic services
1.4.2 Indicators
Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure

1.5 Target
By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
1.5.1 Indicators
Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population
1.5.2 Indicators
Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)
1.5.3 Indicators
Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030
1.5.4 Indicators
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies



Would you like to participate in the WLS Investor & Partner Program? Please fill out the application to help us determine how to best approach the partnership to ensure mutual success.

Partnership Tracks

WLS offers various partnership solutions including:

- **Integrated product distribution**
- **Individual tech component licensing**
- **Complete tech transfer programs for national solution integration**

Technical expertise, geography and solution area of your business will determine which track best fits your business model. Partners can participate in one or more tracks, based on expertise and available production facilities.

Click here for more information and to complete the application

For More Information

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