

**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

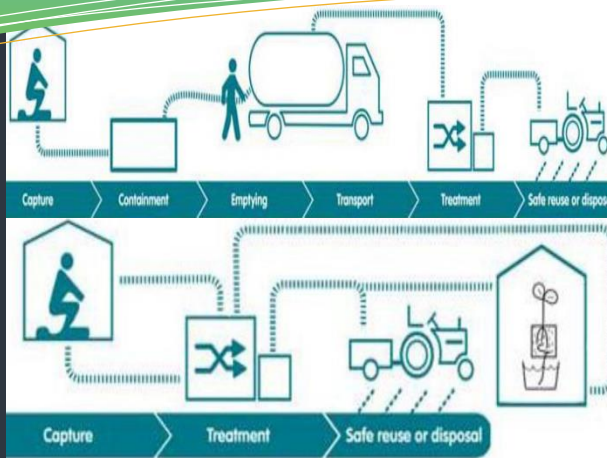
The COVID-19 pandemic has raised the awareness of global water challenges and the lack of proper sanitation. Public health conditions related to clean drinking water, and adequate treatment and disposal of human excreta and sewage, are our top priority. Our systems are designed to provide Urban, Peri-Urban,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



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Closed-Loop Wastewater Treatment Opportunities

The United Nations currently promotes a traditional and lengthy process (top image above) as its Sustainable Development Goal for a safely managed sanitation service delivery chain. The traditional process helped create the pollution and health problems of today. If you look at the challenge of treating wastewater using WLS closed-loop and decentralized methodologies (bottom image above), you see a world of Green and healthy opportunities.

You might always hear, or always be saying, that “we already have the technology, we just need more money from government” to sufficiently operate our centralized wastewater treatment plants (WWTPs). Firstly, if we did not continue to evolve technologically, humans would still be taking care of their personal dirty business down by the river and wiping with leaves. Secondly, if you need more money from government, maybe your business model and how you provide services needs fixing.

A set of problems that WLS sees are the expensive add-ons required for traditional centralized WWTPs to accommodate fast growing population centers with environmental regulations and requirements that are becoming more stringent by the year.

That, the systemic risks associated with putting all your bread in one centralized wastewater treatment basket, and a host of other cost savings, job creation, environmental, and health arguments that support transitioning to decentralized water and wastewater treatment utilities with closed-loop plumbing capabilities influenced WLS treatment technology and methodology development.

Development in rural, peri-urban and urban areas can happen quicker and smarter by providing water and wastewater utilities on demand at competitive capital costs, without the shortcomings that traditional centralized WWTPs produce. You do not have to wait for the exorbitantly expensive life supporting centralized utilities to be developed to create housing. Decentralized systems allow low cost and on-demand development. This is true for both municipal and industrial development as the WLS technologies are modular, scalable, and more powerful than traditional biological based wastewater treatment systems.

WLS sees a world of Green and healthy opportunities...



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.



WLS Membrane Filtration For Resource Recovery

In the April Water Life issue, we discussed various shortcomings of reverse osmosis membrane systems that WLS provides solutions. Not all membrane filters are bad! In fact, WLS has its own line of membrane filters that are utilized in various applications including resource recovery. Let us look a little deeper.

The Nitrogen (N) and Phosphorous (P) are the primary nutrients used by organisms on Earth to live. N, especially in its form of ammonia that is usable by plants, is known to be a limiting nutrient in nature and agriculture. A limiting nutrient is one that is in shortest supply and limits growth. On the flip side of the N coin, too much N found in fertilizers that are carried in runoff to lakes and rivers often results in toxic algae blooms, or eutrophication.

P is also a primary element found in fertilizer that ends up in our waterways and contributes to eutrophication. Found in rocks, mining P to produce fertilizers requires a significant amount of energy that further contributes to the increased pollution levels and climate change of today.

The P and N in wastewater are significant, so money and the opportunity to capture these resources using environmentally friendly methods is going down the drain with every flush of the toilet.

WLS has perfected resource recovery methods using

filters that can isolate specific periodic table elements. No waste streams are created, and the filters are constructed of mediums that are reusable, with the viscosity of ceramic filters without the fragility.

No external chemicals are required for WLS resource recovery filters to function, unlike other common systems that are obscene in physical footprint and cost. WLS membrane filters can be custom produced to the desired flow rates and physical shapes best suited for the application.

Your municipal WWTP can be outfitted with the filters to save your community money while providing environmental protection. The runoff from your agricultural operations can be filtered to remove N and P before it enters nearby waterways, by lining relevant ditches and runoff zones with custom shaped filters for the job. Flush the filter periodically to recover the nutrients and the filter is ready for reuse. No wastewater, no waste from the used filter. Resources recovered.

Contact Water Life Systems today for major project consultation or technology licensing inquiries:
mail@waterlife.systems
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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 2

Zero Hunger

2.1 Target

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

2.1.1 Indicators

The prevalence of undernourishment, or the share of the population with a caloric intake which is insufficient to meet minimum requirements for a healthy life.

2.1.2 Indicators

The prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).

2.3 Target

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

2.3.1 Indicators

The volume of production per labour unit by classes of farming/pastoral/forestry enterprise size.

2.3.2 Indicators

The average income of small-scale food producers, by sex and indigenous status.

2.4 Target

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

2.4.1 Indicators

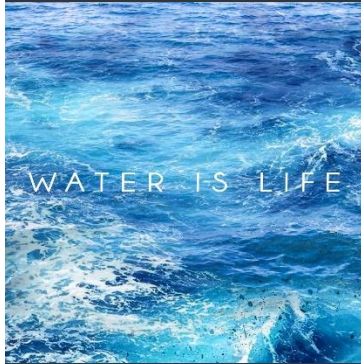
The proportion of agricultural area under productive and sustainable agriculture. It is currently not clear or well-defined what constitutes productive and sustainable agricultural practice.

2.5 Target

Maintain the genetic diversity in food production.

2.5.1 Indicators

The number of plant and animal genetic resources for food and agriculture secured in either medium- or longterm conservation facilities.



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](#)

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

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For More Information
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