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The Pressing Problems of Water Scarcity and Water Pollution

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STORY AT-A-GLANCE

- One key environmental threat facing mankind today is the increasing lack of potable water, worldwide, thanks to a combination of water pollution and scarcity. Infrastructure — especially in the U.S. but also elsewhere — is also in dire need of repairs and upgrades
- During a single week in September, 2022, E.coli contamination was found in Baltimore, toxic arsenic levels were discovered in New York City, and in Jackson, Mississippi, 180,000 people are left without running water due to a water system breakdown
- Hazardous water pollutants include but are not limited to arsenic, fluoride, nitrate, pharmaceutical drugs, pesticides, per- and polyfluoroalkyl substances (PFAS) and microplastics
- In San Francisco, wastewater from 37 sewage plants has turned the San Francisco Bay a murky brown, and dead fish litter its shores. The cause for the die-off is a toxic algae bloom, triggered by the nitrogen and phosphorous from the feces and urine in the discharged wastewater
- NASA mapping of groundwater storage trends for the earth's 37 largest aquifers reveals 21 aquifers have already exceeded their sustainability tipping points and are being depleted, and 13 of them are considered "significantly distressed, threatening regional water security and resilience"

While the globalist cabal claims "climate change" is the No. 1 threat to humanity, necessitating radical quality of life sacrifices and the total relinquishing of privacy and

freedom, there are far more pressing problems. One key environmental threat facing mankind today is the increasing lack of potable water, thanks to a combination of water pollution and scarcity. Without potable water, we're in immediate lethal peril.

Groundwater aquifers rapidly depleting, resulting in water scarcity, higher prices, land cave-ins and water wars. On top of that, much of the world's remaining water supply has become too contaminated to drink or even bathe in, and infrastructure — especially in the U.S. but also elsewhere — is nearing the end of its useful life and is in dire need of upgrades.

Water Contamination Commonplace Even in Developed Countries

News of dangerous water contamination in the U.S., reported in the first week of September 2022 alone, include:

- E.coli contamination in Baltimore, Maryland, thanks to aging water pipes and poorly maintained wastewater infrastructure.[1]
- Toxic arsenic levels in New York City tap water rendering it unsafe to drink.[2]
- The complete breakdown of the water infrastructure in Jackson, Mississippi, after the treatment plant got flooded, leaving some 180,000 people without running water.[3] When something does come out of the tap, it's mud brown.

  As in Baltimore and Flint, Michigan,[4] this crisis could have been avoided if proper maintenance and upkeep of infrastructure had been prioritized.

  The Biden administration has now earmarked $429 million to help repair Jackson's crumbling water and wastewater systems, but the final price tag has been quoted to run into the billions, and will take many months, if not years, to complete. In the meantime, residents are in a life-or-death crisis.[5]

According to the World Health Organization, more than 2 billion people worldwide drink water contaminated with feces,[6] resulting in hundreds of thousands of deaths due to

preventable diseases each year.

Water sources in both developing and developed countries are also contaminated with toxic chemical pollutants that treatment plants are not prepared to filter. Among the most hazardous water pollutants are arsenic, fluoride, nitrate, pharmaceutical drugs, pesticides, per- and polyfluoroalkyl substances (PFAS) and microplastics.[7]

Algae Blooms Are a Costly Problem

According to a September 5, 2022, article in the San Francisco Chronicle,[8] wastewater from 37 sewage plants dumped into the San Francisco Bay has turned the water a murky brown, and dead fish litter the shores. (While hard to believe, an estimated 80% of global wastewater is released into the environment untreated.[9])

An estimated 10,000 yellowfin goby and hundreds of striped bass and white sturgeon have washed ashore so far. The cause for the die-off: toxic algae bloom, triggered by the nitrogen and phosphorous from the feces and urine in the discharged wastewater.

Harmful algae bloom (HABs) will turn the water red and release neurotoxic compounds that are then passed up the food chain. It also depletes the water of oxygen, eventually — if not properly addressed — creating a dead zone where no life can be sustained.[10] As reported by the San Francisco Chronicle:[11]

> *"The regional water board has told agencies that it will probably require caps on nutrients in wastewater when their regional permit comes up for renewal in 2024.*
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> *But upgrading dozens of aging treatment facilities could cost $14 billion, which would double or triple ratepayers' water bills, [executive officer of San Francisco Bay Regional Water Quality Control Board, Eileen] White said in an interview.*
>
> *'It's a multibillion-dollar Bay Area issue that needs to be thought through very carefully, taking the science into effect,' she said. 'There's all of sorts of different treatments, and none of them are cheap' ...*

> *Federal, state and local governments and the treatment plants themselves have spent millions to research the issue, but like much of climate change planning, the science and policy are moving slower than the problem is progressing.*"

Some water treatment plants could help address the problem using already existing infrastructure. The San Jose/Santa Clara Regional Wastewater Facility, for example, has been able to reduce the nitrogen load of its wastewater from 17 to 11 milligrams per liter, at no extra cost, simply by directing the water through a series of four tanks containing nitrogen-consuming bacteria before it's discharged.

Wastewater Could Be a Source of Reusable Phosphorous

One of the important resources found in wastewater is phosphorus. This mineral is an essential nutrient for plant growth, which is why many fertilizers include it. And, while widespread across the Earth, there are limited areas where it is found in concentrated form.

However, wastewater contains a significant amount, as phosphorus is not only found in human excrement but also in detergents. Removing and reusing phosphorus from wastewater would not only increase supply, but would also reduce the risk of algae blooms.

The U.N. has proposed[12] that removing and recovering phosphorus, nitrogen and other nutrients from wastewater could prevent hyper-growth of HEBs in lakes and rivers, while simultaneously providing a unique business opportunity to recuperate a finite resource essential for agriculture. The Blue Plains Advanced Wastewater Treatment Plant has been doing this for years already, as seen in the 2012 video report above.

Pharmaceutical Pollution Is Widespread

Anything and everything you flush down the drain ends up somewhere and, oftentimes, the end destination is your local waterways. Pharmaceutical drugs are particularly problematic, as water treatment plants are not equipped to filter out these compounds.

Water treatment plants fail to filter out an estimated 93% of the drug compounds in wastewater, and a 2017 U.S. Geological Survey found 80% of U.S. waterways contained pharmaceutical pollution,[13] which can have a devastating impact on aquatic species.

Proper disposal of drugs, lotions, creams and perfumes is paramount to the reduction of water pollution. By using all-natural and unscented personal care products, dropping off unused and expired drugs at a drug take-back site and not flushing any medication down the toilet, you can reduce your personal pharmaceutical footprint.

If you're in the U.S., the Food and Drug Administration has tools to help you find a local drug take-back location on its Drug Disposal: Drug Take Back Locations page.[14]

Firefighting Foam Contaminates Water Across the US

Firefighting foam also poses a serious threat to our water supplies. In 2015, investigative journalist Sharon Lerner published an extensive series[15] of articles about the dangers of PFAS[16] (two of the most well-known ones of which are PFOA and PFOS) and the industry's attempts to cover up the damage.

Part 15[17] addressed the U.S. military's affinity for toxic flame retardants, despite the fact that billions of dollars are being spent trying to clean up drinking water contaminated by firefighting foam used on military installations. Many other PFAS chemicals[18] — such as PFHxS, PFHpA, PFBA and PFBS — have also been detected in drinking water, yet the military is only attempting to clean up PFOA and PFOS contamination.

Around hundreds of U.S. military bases, PFAS have leached through the ground, contaminating surrounding groundwater. In addition to prostate cancer and thyroid problems, these chemicals have been linked to other types of cancer as well, including kidney, testicular and bladder cancer, as well as immune dysfunction, reproductive problems and hormone disruption.

Considering the public health threat posed by PFAS contamination, courtesy of firefighting foam, you'd think the U.S. government would take proactive measures to

eliminate the use of these toxic chemicals. After all, other countries are using PFAS-free firefighting foam, and it works just as well. Alas, this is not happening.

Incomplete data make it very difficult to ascertain how widespread the PFAS-contamination might be, but drinking water near at least 46 military installations in the U.S. have been found to contain PFOA and/or PFOS at levels exceeding 70 parts per trillion (ppt), which is the EPA's health advisory level for drinking water.[19]

If you live anywhere near a military installation or fire department fire-training area, consider getting your tap water tested for PFAS and other toxic contaminants. Water testing is a prudent step no matter where you live these days, as is filtering your water, as there are literally hundreds of potential water contaminants that can harm your health.

Factory Farm Contamination

Another major source of water contamination is runoff from factory farms. In addition to farming chemicals such as nitrates, which pose a serious threat to water quality, there's the issue of drug-resistant bacteria, which are a result of antibiotic overuse in livestock.

When it comes to water pollution from farms, the problem is twofold. First, regular farming is exempt from the Clean Water Act. Second, while farms registered as concentrated animal feeding operations (CAFOs) are regulated under the Act, many simply don't apply for the required National Pollutant Discharge Elimination System permits, which dictate what you're allowed to discharge into national waterways.

Between 2011 and 2016, the number of CAFOs in the U.S. increased by 956, to a total of 19,496, yet the total number of CAFO discharge permits didn't go up but actually declined by 1,806 during that period.[20] Many farmers also don't bother with nutrient management planning, which is voluntary, even though there are plenty of conservation practices that can help reduce water pollution.[21]

The Global Crisis of Vanishing Groundwater

Industrial farming also uses enormous amounts of potable water for irrigation, and in many areas, aquifers are being drained faster than they can be refilled, resulting in water scarcity.

> **“NASA mapping of groundwater storage trends for the earth's 37 largest aquifers reveals 21 aquifers have already exceeded their sustainability tipping points and are being depleted.”**

According to the U.S. Department of Agriculture, about 80% of U.S. consumptive water (and more than 90% in many Western states) is used for agricultural purposes.[22]

NASA mapping[23] of groundwater storage trends for the earth's 37 largest aquifers reveals 21 aquifers have already exceeded their sustainability tipping points and are being depleted, and 13 of them are considered “significantly distressed, threatening regional water security and resilience.” Considering groundwater accounts for 99% of potable freshwater,[24] the depletion of aquifers is a serious concern. As reported by the Pacific Institute:[25]

> *“Depleted groundwater aquifers can take thousands of years to be replenished by rain, snow, and other sources. This option can be off the table when an aquifer becomes so depleted it loses its capacity to store water.*
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> *In the U.S., the Ogallala Aquifer, which stretches across parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming, illustrates this concern.*
>
> *A history of groundwater overdraft threatens to deplete the aquifer. Once depleted, it’s estimated the Ogallala Aquifer could take more than 6,000 years to be naturally replenished ...*
>
> *A 2021 Pacific Institute study[26] highlighted connections between California groundwater management and local communities’ ability to access water —*

with significant water equity concerns.

California's Sustainable Groundwater Management Act (SGMA) was created to help protect groundwater, but the study showed minimum groundwater thresholds defined by SGMA would leave many people vulnerable to losing their water access."

What Are the Solutions?

There tends to be a "free-for-all" mentality at play where the one who can afford to drill the deepest well wins in the short term, but everyone loses in the long term. Groundwater as a resource needs proper governance and management. Farmers also need more efficient irrigation systems, and we need engineering solutions to improve the refill rate of aquifers.

On a personal level, we also need to make changes in how we use water, and how we grow crops. Selecting the most appropriate crops for any given area would result in more efficient water usage, and would reduce the amount farmers would have to draw from our aquifers. In short, we need to grow food with less water.

The good news is we already know how to do that, and it's called regenerative agriculture. It's been well-proven that regenerative agriculture biodynamic farming is far more water efficient than industrial farming. To learn how, see "**Regenerative Food and Farming: The Road Forward**."

With water wars becoming a reality even in developed nations (just look at California, where the battle over water allocation has been ongoing for more than a decade[27]), you'd be wise to give serious thought to emergency water preparations.

Not only do you need a source of water, were your tap water to stop running, but you also need to have the proper supplies on hand to filter and decontaminate that water to make it safe to drink.

Filtering the water you use for drinking, cooking and bathing is, I think, an absolute necessity these days, no matter where you live — unless you've had your water tested and are satisfied that it's pure (which is rare). I recommend installing a whole-house filter system to ensure optimal water quality from your tap.

In an emergency situation, however, when tap water is unavailable, you'll need to source your water elsewhere and that can be a real challenge, as people in Jackson, Mississippi, are now finding out.

In "How to Secure Your Water Supply for Emergencies," I review ideas for alternative water sources, such as collecting spring water, or water from a local stream or river, which is far from ideal but might work in the short-term, and setting up a rain catchment system, which is a far more sustainable, long-term solution.

I also go over basic water purification and disinfection guidelines. Rainwater is often thought to be pristine, but it's not, so even rainwater needs to be properly filtered before drinking.

The time to sort out your emergency plans is now, while municipal water and supply chains are still operational. Once an emergency hits, it's too late to start thinking about installing wells or rain barrels and buying water filters, as by then the things you need might be incredibly difficult to get.

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