



THE BIBOTORIUM

12 March 1911
Dear Gentlemen,

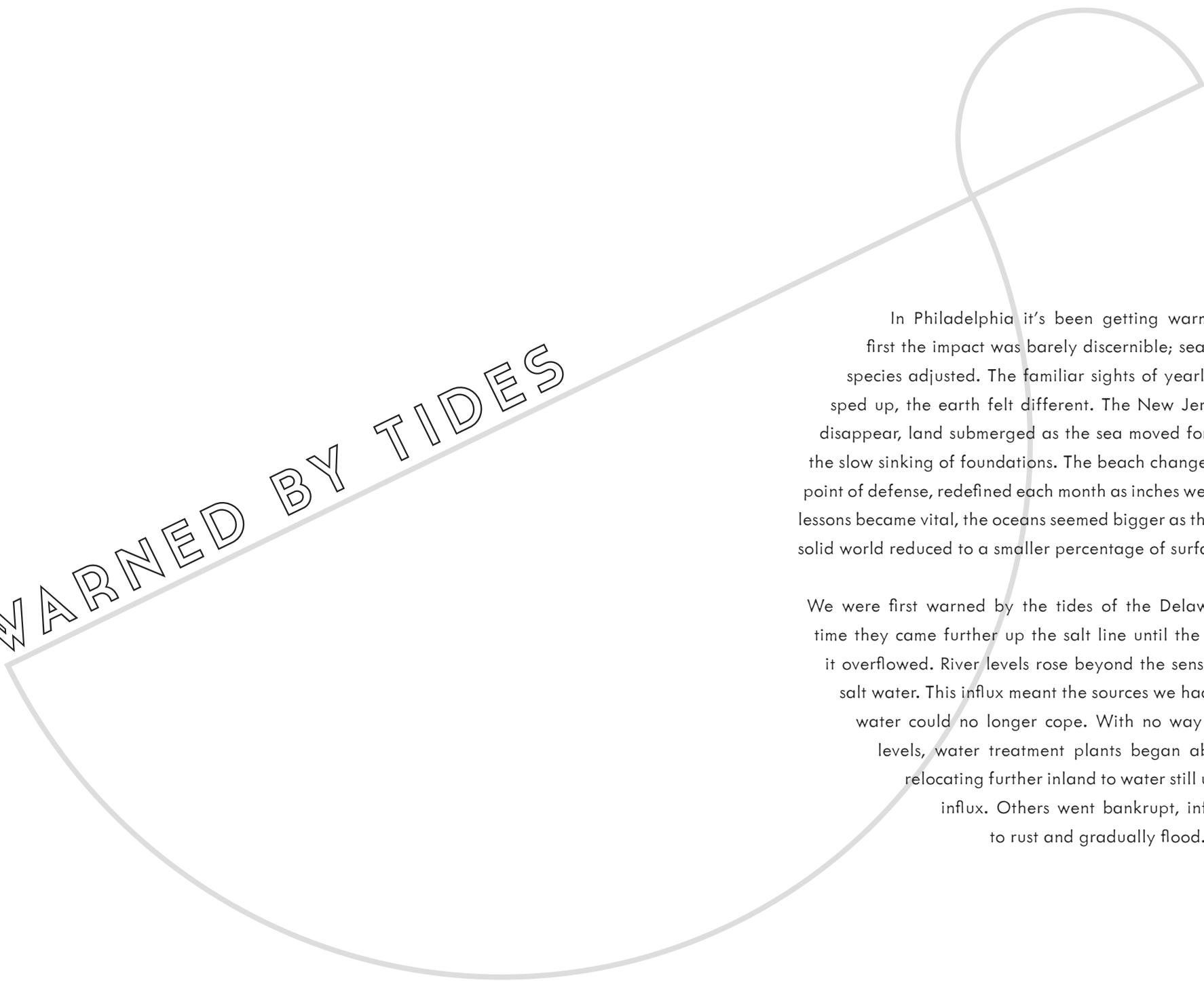
Regarding your, as you might imagine, quite unusual request for an estimate I've begun making inquiries of my own. The cost of the three small vessels shall be easily established, and I've enclosed sketches for your approval. In our brief conversation you suggested each vessel would carry a different water filtering system, do you know an approximate weight for each of these systems? If you wish each boat to displace the same quantity of water we shall have to make them each as heavy as the heaviest. If you plan to use sand filtration this could be quite heavy.

I have arranged a meeting with William Meehan and the Commissioners of Fairmount Park to discuss your proposal and the possibility of installing three pools in the retired New Mill House. As you know Graf's Mansion Freshwater Aquarium will be opening later this year and Mr. Meehan does have plans for the expansion of the Aquarium- I will discover what I can about the schedule. If it is impossible to place the pools in the Water Works would you be interested in building a floating facility? As we discussed, while it would be expensive, it would offer the most flexibility and even provide the possibility of a traveling exhibition.

I have begun investigating means of procuring water from some of the mentioned sources. After our conversation I did recall the previous grumblings of two German brothers, brewers by trade, about changes in the fitness of the city's water for beer. I have enclosed a letter from them detailing the setup needed to establish the small breweries you mentioned. Their brewery is located quite near the Water Works and they would be happy to meet with you during your next visit. I very much enjoyed our conversation and hope we can find a way to realize your unusual proposition.

Yours truly,

J.T. Vogdes



WARNED BY TIDES

In Philadelphia it's been getting warmer for years, but at first the impact was barely discernible; seasons shifted, plants died, species adjusted. The familiar sights of yearly changes were lost, cycles sped up, the earth felt different. The New Jersey coastline was the first to disappear, land submerged as the sea moved forward each year in surges and the slow sinking of foundations. The beach changed from a tourist destination to a point of defense, redefined each month as inches were lost to rising waters. Swimming lessons became vital, the oceans seemed bigger as they tried to join up across land, the solid world reduced to a smaller percentage of surface.

We were first warned by the tides of the Delaware and Schuylkill rivers, each time they came further up the salt line until the city itself began changing and it overflowed. River levels rose beyond the sense of tides, swelled by Atlantic salt water. This influx meant the sources we had relied on for fresh drinking water could no longer cope. With no way to process the rising salt levels, water treatment plants began abandoning their bases, relocating further inland to water still untainted by the salt influx. Others went bankrupt, infrastructure left to rust and gradually flood.



As fast as people left the city to move inland, others arrived from places worst hit, the coastline population shifted to the safety of cities. Crops failed from the heat and lack of irrigation, food prices rose and diets altered as all the systems that relied on supplies of fresh water diminished. Everything changed as so much depended on constant supplies of fresh water. Most critically, public drinking water, now contaminated with salt and unfiltered, became undrinkable.

With higher water levels the surface of the city changed and Philadelphia's waterways replaced the roads as the main means of transportation. Owning a boat was essential for mobility and there were plenty of materials to build from. The abandoned buildings and debris of flooded homes furnished water-going machines; buildings turned into boats and people could move around more freely, searching in the wreckage of the changed city for ways to continue.



AFTERWORD

An affordable, relatively quick and transportable solution was needed, one that harnessed and utilized the conditions of the new environment and abundance of salt water and sun. Something that transformed these new commodities into hydration for the disparate neighborhoods and stabilize the scarce environmental conditions.

The desalinization boat was introduced as a solution to the problem of fresh accessible drinking water. Built from materials salvaged from the city, it held a dome on two outriggers. The dome magnifies the heat of the sun which is projected onto salt water beneath the dome. The salt water heats up and evaporates inside the dome and is caught by a trough that channels the fresh drinkable water to a collection tank.

The boat travels the salt water contaminated waterways and further afield as required. It is towed to a new location each month and anchored there to process a supply of salt water. During its tenure people can collect water as it is siphoned off. When a month is out the boat is moved on to supply a new place, hopefully leaving imitation ideas in its wake.

April 22, 2062

Dear Editor,

I was glad to read the article in yesterday's paper about PWD's purity assurance fee adjustments and I agree with the author that the fees are unfairly high. I reside in the Brewerytown neighborhood, which is close enough to the Queens Lane Purity Assurance Station to have only a Level 2 fee rating. However, the increases in the 2063 adjustment would increase my family's water bill by 27%. I already pay exorbitant property taxes on my house, due to the introduction of the My Water District Map in 2051 and resulting real estate reassessments. The graduated fee districts are a scheme to allow Pepsi and the City to steal from hard-working Philadelphians by any means possible-- either hidden in real estate tax jacked up by the fees, or through the fees themselves. If the city expects to maintain a consumer base, they must propose a new district map before families like mine decide to relocate altogether.

Sincerely,
Marlowe Redmond
Brewerytown, Philadelphia

DEAR EDITOR 2062



April 22, 2062

Editors of the Inquirer:

The analysis of the costs and benefits of Pepsi's 2063 Adjustment on Philadelphia communities in the Inquirer's article, " PWD INC Announces 2063 Purity Assurance Adjustment," April 21, 2062 was deeply and disturbingly inadequate. The discussion of Level 9 Fee Zones barely mentioned a "possibility" that Zone 9 neighborhoods may be removed from guaranteed Purity Assurance completely. The reality is that these neighborhoods will be likely lose their access to safe water completely and come to rely exclusively on private and NGO filtration barges. All Philadelphians have been affected by the fee hikes of the last 17 years since privatization, but it is the poorest families that have been hit the hardest. The argument that rising property taxes in lower-zone neighborhoods compensates for their lower fees is invalid: a family's combined property tax and water fee is a much higher percentage of their income in an upper-zone neighborhood than in a low-zone. Zone 9 residents are using PWD in-home delivery as little as possible, due to the cost, but they are entitled to the same human right to clean water as those who can afford to live in low-zone neighborhoods.

John Mendoza

Water Without Borders Philadelphia

April 22, 2062

To the Editor:

PWD cried for efficiency and fairness, but their real plan is obvious now: price the neighborhoods the most expensive to supply at a level that those people can't pay. Then complain that there isn't enough demand to justify maintenance of the pipes, so that you can shut them down. Unfortunately for "Pepsi Water Dictatorship," people are finding their own solutions. The first River Coop water filter barge is launching in six weeks, using the same loophole in the Permanent Treatment Structures Regulations tested by Dasani and Water Without Borders. Once Philadelphians in other upper-zone neighborhoods see the financial and social benefits of the River Coop, PWD will start losing even more of their market. We'll see how they balance their bottom line when neighborhoods start eliminating themselves from Purity Assurance before Pepsi has a chance to.

Phadera Lesser

Temple Student Water Alliance



THE FILLING STATION

Hefting the single roller Fina cart over his shoulder, Jordan glanced at his watch, transferred funds to Dasani and headed down the stairs. His sister had modified the cart's valve so the Dasani would fill it.

Over the holidays an antibiotic resistant bug had gotten into her apartment building's gray water system and after a few months of patch efforts the landlord had given the place up for lost. No longer needing to pay rent didn't make up for the absence of grey water.

Fina had stopped piping water into her neighborhood nearly a decade ago and rolling the cart three kilometers to the filling station was exhausting, especially during the dry season. Its central tower swarming with glowing exclamations and a fog of advertisements, the Dasani plant had appeared, overnight, a month ago. Technically it was a boat, and a coup to Fina's contract as Philly's water supplier.



Jordan hadn't read much about the filters the tiny boats used but none of the library's sensors had flagged the water. It was a third the price of Fina's and once you paid for it the tiny boats would meet you at the river's edge. Dasani said the plant ran on a type of cold fusion, using the pollutants from the tiny boats nano-filters as fuel. Allegedly the only byproduct were lattice like wafers that had similar water filtering properties to charcoal. The wafers were tossed into a huge net around the central plant and reused as fuel when they were packed with enough pollutants. The whole shebang was a PR dream for Dasani, if the hype was to be believed.

Jordan started down Chestnut street, empty the cart rolled fast but the water wheel always pulled to the left when it wasn't full. At 23rd street he crossed over the flood wall, he took the stairs, avoiding the long ramp, the cart clanking behind him.

The boat was nothing but a faceted hull and set of turbines that sent the water nanofilter packed in her sharp lines skipping across the water's surface. Vegetation crackled underfoot as he headed down the flood wall landings. From the top of the wall he could see the tiny boat meeting a client on the west bank of the Schuylkill. The boat met him at the river's edge. He set the cart's water wheel on its side, the hacked valve waited, as the impossibly long water stem lifted from the boat's flat deck. It filled the wheel quickly, beeped its thanks, a ridiculous affectation, vaguely reminiscent of the R2D2 before the Disney spinoffs, and skipped off.



THE GREY WATERS

The *Grey Waters* drops anchor in the middle of the swollen river. Julia stands transfixed, centered on the bow deck, making fine adjustments to one of the snoopers carriers. She drops a few handfuls of snoopers into the rebin. John will pluck the sensor package from its tiny nose and clip the new parts that are printing below deck into place, as soon as he situates *Grey Waters*. He checks the OSGPS monitor, three satellites in line site for the next two hours, and engages the drift monitor. They've covered more zones than expected this month and if today goes well they can both afford to irl the OSG meet up Sunday in Philadelphia.

John was seventeen when he got involved in what would become the OSG. Growing up there'd been shit for public schools. Luckily his parents let him join an early OS charter 'school'. He'd met Julia there, she too, the kind of problem teen that leans towards arguing over listening. Their first year was also the school's first year and they spent grueling ten hour days building boats. It was a complete phase shift. The education falling out of a practice, teachers nearly as unsure as the students about how to proceed. By the end of the school year they'd built the first three boats of the what would become the OSG's water monitoring program. It was another five years of studying and working before they finished R&D for the water monitoring snoops.

John was great with tech and enjoyed helping set up the water monitoring program but after those five years he'd realized he was more interested in how the system as a whole worked. The OSG hadn't yet become the OSG and was really just a massive network of different groups using an open source approach. Too much was still being sucked into the walls of corporate closed gardens. John had left the water monitoring program and got involved in politics. Initially aligned with the Green party, he'd run for a traffic court position in Philadelphia.

"During the campaign I realized how much energy, money, and brains went into campaigning and how little into decision making afterwards," John says, his quiet gray eyes lift occasionally from the printing snoopers to find mine. "That was when we first started talking about the OSG, some friends and colleagues, all of us worn out with trying to be public officials or running NGOs. Why not bypass the government altogether? Then we imagined, somewhat naively, that if we got enough people involved we could just replace the government. Of course, on one hand, that was crazy. We had the usual run-ins with the FBI but we had all the lessons of the radical parties that came before us and we were building the very structures of organization and networking that the bureau was trying to use against us. Its that old evolutionary adage, that the predator always has to be slightly more intelligent than the prey, but in this case bureaucratic bloat slowed the intelligence agencies down and the hackers just stopped helping them. But, oddly, it was the water monitoring project--coming full circle for me--this harebrained scheme that Robert came up with, to create this charter school in Philadelphia. It was that project that really made the OSG an organization the US government had to leave alone."



Standing on the bow of *Grey Waters* in cool morning fog, it's difficult to imagine unpolluted fresh water. But it was less than two decades ago, amidst protest from many organizations about frivolousness, that the OSG opened the water monitoring project. A decade later it was already undeniable that most of the water in the US was at least mildly carcinogenic.

"It's ironic, isn't it, that 2gen LENRs have replaced all the traditional extractive mining and energy collection technologies, now that we've really poisoned the water. High SEC folks can just pull it from the air. Not that they still don't have people mining their trace mineral supplements." John nods as Julia begins, they share the lid of a storage locker with the intimacy of decades long friends. "The stew of chemicals pumped beneath the nation's aquifers during the natural gas boom in the early oughts and teens were slow to show up in the water, and even slower to appear as illnesses not easily written off to other factors."

"There were thousands of deaths from the contamination before the widespread birth defects. By the time the source of the birth defects was pinned down the fracking had already stopped. We had been protesting for decades, everyone knew those fracking fluids were dangerous. We had to poison the whole nation before we could really see any serious political action, but it's also hard to imagine OSG having gotten off the ground without something so serious."

They both stand at once, behind them the Philadelphia shoreline shimmers into view. After docking at 30th Street Station, we part ways. You can join us tomorrow night at the OSG meet up.





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