

Draft: The World Before We Knew Better (4-21-26)

In the nineteenth century, the bay was still something people depended on directly. Oyster beds covered the bottom, and towns like Keyport made their living from them. The water was not just scenery but a source of food, work, and identity, and something people trusted without thinking twice.

At the same time, cities were growing at a pace no one had seen before. New York expanded outward and upward, and with that growth came waste—far more than could be managed on land. The solution, or what passed for one, was simple: it went into the water.

At first, this did not feel reckless. It felt practical. The bay was wide, the tides constant, and there was a shared assumption across towns and industries that whatever was carried out would be diluted or broken down. The scale of the natural world seemed to promise a kind of quiet forgiveness.

But that promise did not hold.

When disease followed—typhoid, cholera—people responded to what they could see. The oysters disappeared from the table, and the industry that depended on them collapsed. Yet the deeper realization that the water itself had limits arrived slowly and unevenly.

The Century of Industry

By the twentieth century, the relationship with the bay had shifted entirely. It was no longer something to harvest from but something to use—a working corridor that powered industry across the region.

In Sayreville, the Hercules plant stood on land shaped by earlier explosives manufacturing, leaving behind contamination that lingered long after production slowed. Before that, DuPont operations had already altered the landscape in ways that were not easily reversed. Rail lines carried chemicals and fuels in steady circulation, tying local industry into a much larger network.

Along the lower Raritan and around the bay, refineries, tank farms, metal works, and chemical processors operated within sight of neighborhoods. Storage yards held fuels and solvents; scrap operations dismantled machinery and ships; marine repair facilities handled paints, oils, and degreasers. Smaller operators, often less documented, managed waste hauling, drum storage, and transfer—sometimes in ways that would not meet later standards.

Closer to Keyport, the pattern continued in smaller but still significant ways. Fuel depots, marine yards, and scrap businesses became part of the landscape. People often remembered these places not by their official names but by what they did, a yard where drums were stacked, a lot where trucks came and went, a stretch of ground where nothing seemed to grow quite right.

Some names faded or blurred over time, replaced by nicknames or fragments of memory. What remained consistent was the presence of industry and the waste it generated.

And then there was the landfill.

The Aeromarine site in Keyport was not unusual for its time, but its proximity made it feel different. Waste was deposited there for years, and when it was eventually covered, it was not sealed in a way that would prevent movement. For a while, it seemed contained.

Over time, it became clear that it was not.

What Went into the Ground

Much of the pollution in this region did not remain in the water but was instead buried in the ground. The materials varied widely: industrial solvents, petroleum byproducts, heavy metals, construction debris, and chemical residues that were not always clearly identified.

Separation practices were limited. Materials were often combined, stored in drums that could leak or corrode, and buried together. The assumption was that once something was underground, it was effectively gone.

But the ground was never truly still.

Rainwater moved downward, carrying substances with it. Groundwater shifted slowly beneath the surface. Tides influenced the edges of landfill sites and shoreline areas. Over the years and decades, these movements allowed contaminants to migrate, spreading beyond their original boundaries.

This was not a story confined to one town. Keyport was part of a larger system in which multiple communities contributed to and were affected by the same patterns.

Sayreville carried its own industrial legacy. Perth Amboy bore the impact of refineries and shoreline contamination. South Amboy dealt with hazardous materials tied to its past. Old Bridge had landfill and disposal sites connected to the same environmental pathways.

All of these places were linked through shared water systems and subsurface connections. Contamination did not remain fixed in one location but moved gradually, often invisibly, across boundaries.

By the 1970s, public awareness and scientific understanding had advanced enough to change the conversation. Regulations were introduced, dumping was restricted, and monitoring began to take shape.

It became clear that certain chemicals did not break down easily, that heavy metals persisted in sediments, and that contamination could move through ecosystems in complex ways.

These changes mattered, but they came after decades of accumulation. The materials that had already been released or buried remained in place, continuing to influence the environment.

The Present: *Illness, Fear, and Unanswered Questions*

What has changed most in recent years is not only the science, but the way people interpret what they see around them.

In Keyport, concern about a possible cancer cluster—particularly in neighborhoods near former landfill sites—has drawn renewed attention to the region’s history. These concerns often begin quietly, with individuals noticing patterns that feel difficult to ignore.

Cancer clusters are inherently complex to evaluate. Public health investigations rely on statistical comparisons to determine whether the number of cases in a given area exceeds what would typically be expected. Even when elevated rates are observed, identifying a specific cause can be difficult.

At the same time, the concern is not unfounded. Substances historically associated with industrial and landfill sites in this region—including benzene, arsenic, lead, and PCBs—have been studied extensively. Long-term exposure to these chemicals has been linked in research to increased risks of certain cancers and chronic health conditions.

This does not establish a direct cause for any individual case, but it does provide context for why these questions arise.

For residents, the issue is not abstract. The landfill is not distant, and the bay is not removed from experience. When illness appears within a small geographic area, it becomes part of how people understand their surroundings.

Investigations proceed carefully and may not always yield definitive answers. What remains is a heightened awareness of the connection between past practices and present conditions.

What Was Left Behind

Environmental investigations in Keyport have identified a range of hazardous substances in soil, groundwater, and along the shoreline, consistent with historical landfill use, industrial waste disposal, and shoreline dumping practices.

Heavy metals: arsenic, lead, vanadium, manganese, aluminum, copper, antimony, mercury
Industrial chemicals: polychlorinated biphenyls (PCBs), benzene, toluene, xylene

These substances are characteristic of mixed industrial waste, where metals, petroleum byproducts, and chemical residues were often disposed of together with little separation or long-term containment.

A former landfill site has been identified as a likely source, with hazardous materials detected at elevated levels in surrounding soil and groundwater.

Along the shoreline, investigators have documented industrial slag—rock-like waste left over from metal processing—containing concentrated levels of arsenic and lead. Over time, this material has broken apart and spread into nearby areas, with fragments occasionally washing onto beaches.

These patterns are consistent with broader contamination in nearby waters, including the Raritan Bay, where legacy industrial waste has contributed to the redistribution of metals along the coast. Movement through groundwater, rainfall, and tidal activity has allowed contaminants to migrate beyond their original disposal sites.

These substances can enter the body through contact with soil or debris, through the air, or through water that carries them beyond their initial burial site.

Additional concern comes from PCBs and benzene, both classified as carcinogenic. PCBs persist in the environment for decades and accumulate in sediments and living organisms, while benzene can affect both air and groundwater and has been linked to long-term health risks.

Together, these findings reflect a long-term environmental issue rooted in past waste practices.

Health Concerns and the Question of Exposure

In recent years, concern in Keyport has extended beyond environmental conditions to questions about possible health impacts.

Reports of illness, including cancer diagnoses within relatively small areas, have drawn attention from residents and prompted calls for further investigation. These concerns often begin at a personal level—patterns noticed over time, cases that feel too close together to ignore.

The challenge lies in connection. Environmental presence does not automatically translate into direct health outcomes, and individual cases cannot be attributed to a single factor without clear evidence.

Still, the overlap between known contaminants and community concern shapes how the issue is understood locally. The landfill, the bay, and the surrounding neighborhoods are not separate from daily life.

Investigations continue, often cautiously and over long periods. Some may find no statistically significant cluster. Others may identify elevated rates without a clearly defined source.

What remains is a heightened awareness of how past environmental practices may intersect with present-day health concerns.

Pollution and the Geography of Illness

When people talk about cancer, they often speak in the language of fate—genetics, bad luck, the quiet unpredictability of life. But when you begin to map where cancer appears, a different story starts to emerge. Patterns form. Clusters appear. And those patterns, more often than we might like to admit, follow the footprint of pollution.

To understand this relationship in a meaningful way, we have to move beyond raw numbers. A large town will always report more cases than a small one. That alone tells us very little. What matters is not simply how many cases exist, but how those cases relate to the environment in which people live.

For this reason, I developed what can best be described as a *Cancer Risk & Concern Index*—a way of looking at towns not just by incidence, but by context. It considers four essential elements: the cancer rate relative to the population, the level of environmental exposure, the presence of documented clusters, and the broader social conditions that influence health outcomes. Each of these factors contributes to a composite picture—not perfect, not definitive, but revealing.

What begins to surface through this lens is anything but random.

In places like Toms River, the story has already been told in painful detail. Industrial dumping contaminated groundwater, and over time, an alarming number of childhood cancers forced the nation to pay attention. It became one of the most studied cancer clusters in American history—not because it was unique, but because it was undeniable.

Further north, towns such as Linden and Bayonne reveal a different but equally troubling pattern. These are places shaped by refineries, chemical plants, and decades of industrial activity. The air carries a history that cannot be seen, only measured. Federal environmental models have identified elevated cancer risks tied to airborne toxins in these areas, reminding us that pollution is not always buried beneath our feet—it often surrounds us with every breath we take.

Then there are towns like Gibbsboro, where contamination is not theoretical but documented, etched into the ground through designation as a Superfund site. The legacy of industrial waste does not simply disappear with time. It lingers, sometimes for generations, quietly influencing the health of those who remain.

And closer to home, in Keyport, concern has begun to take shape in a more familiar way—not through official declarations, but through observation. Neighbors talk. Cases are remembered. Streets acquire a kind of reputation. Whether such patterns ultimately prove to be statistically significant or not, they reflect something deeply human: the instinct to recognize when something feels wrong.

What ties these places together is not coincidence, but proximity—to industry, to waste, to decisions made long before the consequences were fully understood. Pollution does not distribute itself evenly. It follows infrastructure, economics, and history. It settles where factories once stood, where waste was buried, where regulation arrived too late.

This does not mean that every case of cancer can be traced to environmental causes. It cannot. But it does mean that in certain places, the burden is heavier, the risk more pronounced, and the questions harder to ignore.

In the end, pollution is not just an environmental issue. It is a historical one. It tells us where we have been careless, where progress has outpaced caution, and where communities have been left to live with the aftermath. And if we look closely enough, it may also tell us where we need to be more careful in the future.

Living With It

For those who lived through earlier decades, pollution was something seen and accepted, not fully understood in terms of its long-term implications.

The assumption was that the bay could absorb what was put into it and that the ground could contain what was buried. That assumption was shared across communities surrounding Raritan Bay.

What has changed is not only the science, but the awareness.

For many residents, the issue is not abstract. It is tied to specific places—a stretch of beach, a patch of ground, a neighborhood that carries both memory and uncertainty.

The materials that were buried decades ago remain in place, shaped by groundwater, tides, and time. Their presence is often invisible, but their implications are not.

Living with that awareness does not always mean having answers. It means carrying questions forward.

What happened in Keyport was not contained to a single moment or decision. It unfolded gradually, shaped by assumptions that once felt reasonable—about land, water, and the ability of the environment to absorb what was put into it.

Those assumptions changed, but the materials remained.

The bay, like the communities around it, carries that history forward—not always in ways that can be fully measured, but in ways that continue to shape how people understand the place they live.

There are still questions without clear answers. Investigations continue. Data is gathered. Conclusions are drawn carefully.

But uncertainty does not erase experience.

What remains is the recognition that what was left behind has not disappeared. It has simply become part of the present, moving through water, through ground, and through time.

And understanding it is not a conclusion, but a process.