With the exception of a few European explorers beginning around 1610, the site of the present-day city of Detroit – the French word for strait – was the dominion of Native Americans.

French explorer Antoine de la Mothe Cadillac founded a small permanent settlement and fort near the site of the present-day Veteran's Memorial Building on July 24, 1701. The site – christened Fort Pontchartrain for Count Louis Pontchartrain, French Colonial Minister of Marine – was chosen because it was where the river was most narrow, making defense easier. The name was changed to Fort du Detroit in 1751.

The city came under British control in 1760. Colonel John Frederick Hamtramck claimed the city for the newly-formed United States on July 11, 1796.

An Abundance Of Water

Early residents dipped their buckets in the river for their water supply. To deal with the constant threat of fire, residents were required by law to maintain a supply of water and a cask with poles for carrying the precious liquid where needed. As more people settled into the area, a rudimentary distribution system evolved. Horse-drawn carts delivered water to residents unable to obtain their own supply from the river.

Water was plentiful, people were few and concern for the byproducts of water consumption was nonexistent. The lack of demand for a public sewer system meant that untreated wastewater flowed directly to the Detroit and Rouge rivers through small, open channels. It was a system that worked … for a while.

The Great Fire of June 11, 1805 was a major factor in the development of a public water system. The fire started in a livery stable located where the Pontchartrain Hotel now stands when the pipe of a careless worker employed by baker John Harvey ignited hay. Fed by tinderbox structures – including several thatched buildings nearly a century old – the inferno spread quickly out of control. Residents watched from the safety of the river while flames consumed nearly all of the city's 300 buildings. A single stone warehouse remained.

Detroit emerged phoenix-like from the Great Fire. A new metropolis was designed from the ground up. Judge Augustus Woodward based the city's new layout on the plans for the nation's capitol in Washington, D.C. designed by African-American architect Pierre Charles L'Enfant. Woodward's plans, however, would not be fully realized until after another British occupation of the city during the War of 1812.
Woodward – one of three territorial judges appointed by Thomas Jefferson – was an unpopular figure, "who loved to drink and hated to bathe." He named the city’s most important thoroughfare, Jefferson Avenue, after his Washington benefactor. The second most important street, running north from Jefferson, he called "Woodward." When criticized for his choice, considered narcissistic by some, Woodward countered that the name was chosen because the street traveled toward the woods.

Eventually, a revitalized Detroit became an important commercial and manufacturing center. Long before the arrival of the auto industry, the city was an important center for cigars, stoves, ship-building and railway cars.

**Creating A System**

Fearing another fire, officials provided public wells for use as both fire protection and the convenience of those living away from the river. The area's non-porous soil, however, yielded poor quality water in limited supply; especially in summer months when the threat of fire was greatest. Another disadvantage of the wells was the tendency of people and cattle to fall into them.

The groundwater's unpredictability eventually convinced most residents to return to the river for their water needs.

The need for a more efficient system of water distribution was the main topic of conversation at a public meeting at the Old Council House, at the corner of Jefferson and Randolph Streets on June 1, 1822. While some proposals were bandied about, nothing happened.

Two years later, however, Michigan Territorial Governor Lewis Cass and the Legislative Council passed an act on August 5, 1824, which authorized Peter Berthelet of Montreal to erect a wharf and pump on the Detroit River at the foot of Randolph Street, where cars now enter the Detroit-Windsor tunnel. Residents paid an annual tax of a dollar for the venture and Berthelet was granted a 99-year lease.

Ironically, the location would become the site of Fireman's Hall, which in 1886 became the first permanent home of the Board of Water Commissioners (BOWC).

The terms and conditions under which Berthelet was allowed to operate were described by Jacob Houghton, Jr. in the BOWC’s first annual report, published on December 31, 1853:

"...all persons who may reside within the city of Detroit, shall at all times be free of wharfage or other expenses, entitled to take and draw water for their use and convenience, and for that purpose a free use of said wharf shall be given, for carts, wagons, sleighs, or other machinery, and be used in drawing and carrying away the water."
Berthelet's modest arrangement was the beginning of the Detroit Water and Sewerage Department, a sprawling enterprise covering more than 1,000 square miles, servicing more than 40 percent of the state's population, and employing over 3,000 people. It was one of the young city's first departments, and one of the first water distribution systems on the Great Lakes, founded 18 years before the privately-owned Chicago City Hydraulic Company in 1842.

**Not Quite The Desired Solution**

While Berthelet's wharf and pump were a step above what they replaced, their shortcomings quickly became a source of complaint. Seizing an opportunity to take advantage of the situation, Bethuel Farrand – of Cayuga County, New York – petitioned the Council, which, in February 1825, adopted an ordinance granting Farrand "and his legal representatives, the sole and exclusive right of watering the city of Detroit…" Farrand – the father of Jacob S. Farrand, a BOWC member in 1864 – was granted a 15-year charter.

That May, Farrand brought his friend, pump-maker Rufus Wells, into the venture, transferring his interest over to Wells in the fall. The transfer of ownership was sanctioned by Council on March 30, 1827 in "An ordinance granting to Rufus Wells or his legal representatives the exclusive right of supplying the city of Detroit with water."

The new water works and distribution system was up and running by 1827. It supplied Detroit with water until 1850. Meanwhile, Berthelet's pump remained in place until 1835 when it was "removed by order of the Common Council, in accordance with a petition of the citizens."

Wells' water works was located on Berthelet's wharf and featured two horse-driven pumps, which raised water into a 40-gallon cask on top of the pump house. Water flowed by gravity into Detroit's first reservoir – a four-by-four foot structure filled to a depth of six feet, with a capacity of 9,580 imperial gallons – located on the corner of Jefferson and Randolph. Water was then distributed to residents through the city's first water mains.
Detroit families paid a uniform annual rate of $10 for service in 1827. Commercial customers were charged more. Woodworth's Hotel, the largest user, paid $40 per year. The billing system begun by Wells evolved into a quarterly customer billing system still used today.

Two years later, the Common Council altered the company's charter in response to Wells' desire to organize into a venture known as "The Hydraulic Company." He was joined in the enterprise by new co-owners/investors Phineas Davis, Jr.; Lucius Lyons; and A.E. Hathon. The charter covered a 20-year period of January 1, 1830 to January 1, 1850.

Private Ownership and Trial And Error

There were only a handful of water works in the United States in the early 1800s. Standardization of equipment was non-existent and production limited — if and when things functioned as intended. Detroit's works were no exception.

Even as The Hydraulic Company expanded its operations, efforts to secure an adequate supply of water proved frustrating. A source of groundwater to supplement the water taken from the river was seriously considered. With the backing of the Common Council in June 1830, an experiment of drilling for water on a lot near Fort and Shelby was begun.

Drilling continued throughout the summer through layers of clay, quicksand, beach sand, pebble stones and lime. The shaft bored down 260 feet and cost $6,000, but produced no water. Without knowing how far down to drill and without a guaranteed return on their investment, Wells and company decided to cut their losses.

Undeterred by failure, the company redoubled its efforts to increase river water production. The first order of business was to construct a new reservoir on the site of the drilling venture. Water was introduced into the nearly 22,000-gallon structure with the help of a new rotary pump powered by a 10-horsepower engine. The engine was shared with the owners of the Detroit Iron Company, a foundry located at Jefferson and Cass, near the statue of Joe Louis in present day Cobo Center. At this time, Council agreed to alter the company's charter by extending it to 1865 and eliminating certain equipment maintenance obligations the company considered particularly onerous.

Early Water Mains

Tamarack trees were harvested from marshy regions along the Clinton River before being rafted down to Detroit. The logs were hollowed out and laid end-to-end along Jefferson Avenue and parts of Larned and Congress. Individual sections were joined together with smaller sleeves, most frequently made of lead.

The term fire plug — slang for a fire hydrant — originated during this period. Crews responding to fires, exposed and tapped into the wooden main to connect their hoses. When finished, the crews used a plug to seal the hole.

Work crews continue to find wooden mains. The quality of workmanship that went into these early mains was superior. So superior, in fact, that most would still be perfectly functional today if the pressures of modern water systems were not so high.
Detroiter enjoyed the benefits of increased capacity for only a short time, until the winter of 1830-31, when most of the system froze. Freezing temperatures revealed the new reservoir to be "extremely defective."

In June 1831, a new 119,680-gallon reservoir was constructed and most of the system's mains were re-installed to reduce the potential for freezing. A 20-horsepower engine was purchased because the foundry's pump could no longer be spared for water production.

Despite the best intentions, Wells' efforts to supply enough water continued to fall short. According to Dorothea Engel's 1937 History of the Board of Water Commissioners, "...the undertaking had become a financial burden instead of a source of profit. Management was also subject to constant criticism because of poor quality water and inadequate supply."

**Municipal Takeover**

Dissatisfaction over Wells' performance pushed the Common Council to negotiate the purchase of the system. Because of insufficient funds with which to buy out Wells and company, city fathers proposed borrowing the money. On March 30, 1835, the city's electorate approved the sale of $50,000 in bonds, $25,000 to cover the purchase of the water works (its assessed value) and the other half for the purchase of property and system improvements.

The City of Detroit purchased the water works the following year for $20,500. The reduced price was imposed on Wells based on a charter violation, whereby the Hydraulic Company failed to supply an adequate flow of "clear, pure and wholesome water."

The new owner's first order of business was to give Noah Sutton $150 for expenses for a fact-finding mission to study water-delivery systems in Pittsburgh, Philadelphia and New York City. Meanwhile, Common Council Recorder Alexander D. Fraser – a BOWC member from 1855-70 – was sent in search of property. A suitable site was located at the foot of Orleans Street and Atwater. The owner, Major Antoine Dequindre, was paid $5,500.

On his return to Detroit, Sutton was authorized to purchase cast iron pipes, as well as sheets of wrought iron and cast iron for a new reservoir. The effort was all part of an ambitious program to upgrade the water distribution system.

Council then appointed David French and H. Wilmarth to search for sources of good water in southern Oakland County in response to suggestions from a number of citizens. Their August 1836 report concluded "...that, by the concentration of several springs, an abundant supply of pure water could be obtained" in Farmington.

The report was filed and promptly forgotten. The Detroit River would continue to be the focus of efforts to produce a supply of drinking water.
Mains presented an impediment to expansion since the location of all log mains was unknown. This made repairs a difficult endeavor at best and led to an 1840 Council directive to the street commissioner to produce an accurate map of all log mains and pipes then in use.

The Round House, a brick reservoir begun in 1837, was completed in 1838. A New Hydraulic Works – based on the old Manhattan Works in New York – went into service at the end of 1841. An iron reservoir, at a cost of about $120,000, was also built at this time.

The new works transported water flow down Orleans and Jefferson to Wayne Street, through four-inch pipes to an alley between Congress and Fort, and into the reservoir from where it was distributed. The system consisted of log mains.

The 1840s were heady times for Detroit. The great western migration brought pioneers who sparked a real estate boom when they settled in the city. The population soon doubled. Unfortunately, water works designed for a population of 9,102 in 1840 – without anticipating expansion – were woefully inadequate for the demands of 1849's nearly 20,000 residents. Making matters worse, the system was beset by a flood of leaks.

To supply the increased population, it was necessary to run the system's engine up to 24 hours a day, up from a 12-hour daily average. Near-constant operation made normal maintenance and repair nearly impossible. Inactivity caused by extended down time could leave the city without water.
Controversy surrounded the new water works in 1841. Contractors Charles Jackson and Noah Sutton were paid $46,453.12 for their work, leaving a balance of $2,742. When completed, the pair submitted a bill for $3,181.96 for the balance in addition to a claim of compensation for additional work performed.

City officials were unable to pay because of a treasury depleted by the "Panic of 1837." Officials further balked because of leaks and claimed that construction was not completed in a timely fashion.

Undeterred, Jackson and Sutton engaged the services of arbitrators Levi Cook, Reynold Gillet and Thomas Palmer, who awarded the plaintiffs a judgment of $2,129. Still, the city refused to pay.

Jackson and Sutton next seized some parcels of prime city-owned property and the city's fire engines. When members of the Fire Department — a tontine insurance organization, a type of private corporation — refused to buy back the engines, Jackson and Sutton returned them "for the public good."

The judgment was satisfied when several city-owned lots were sold in December 1843. Two lots on West Fort Street were on the site of old Fort Lernoult. Named for its commandant, Major Richard B. Lernoult, the fort was the site where the Michigan Territory — larger than the entire original 13 colonies — was handed over to the United States in 1796.

To cope with the strain, Council bought a larger, 150 horsepower engine and pump within a new housing complete with a new water intake in the fall of 1849. The expanded works were soon pumping water east to the fringes of the community of Hamtramck and as far west as the area occupied by Tiger Stadium at Michigan and Trumbull. A new reservoir was built on four acres of land on the Mullet Farm near today's Eastern Market early in 1851.

The new engine was powerful enough to fill the new reservoir. The system it fed, however, lacked the capacity to deliver sufficient water to all parts of the city.

While population growth, a legitimate factor, fueled system expansion, new mains were not always installed according to a coherent plan. It was not uncommon for new mains to overlap those laid years before, creating spaghetti-like clusters in some areas while others remained devoid of mains. Consequently, Council found itself on the receiving end of the same complaints of mismanagement hurled at its predecessor. An added factor was a debt of over $83,000 spent on system improvements.

After 15 years of Council's absentee administration of the system through a variety of committees, it was time for a change. The system needed the guiding hand of an administrative body able to devote its full attention.

As far as some Council members were concerned in 1852, the novelty of municipal ownership of the water works had worn thin. Outright sale of the system was strongly advocated. This was sentiment not out of synch with the thinking of the time. Just over a third of the country's 83 water works then in operation were municipally owned. Publicly owned works would not outnumber private operations until 1875.
An ordinance of February 24, 1852, gave control of the water works and its distribution system to a Board of Trustees, consisting of five members: Shubael Conant, Henry Ledyard, Edmund A. Brush, James A. Van Dyke, and William R. Noyes.

The following year, Council petitioned the state legislature for official recognition of Detroit's Trustee-controlled system to which Lansing responded by amending the city's charter. Public Act 90 of 1853 transformed the Trustees into a Board of Water Commissioners endowed with the "power to contract, sue and be sued, to purchase, hold and convey personal and real estate, to have a common seal, to alter and change the same at pleasure, to make by-laws and ordinances, and do all legal acts which may be necessary and proper to carry out the effect, intent and object of this act."

The Commission was formally organized in May with Shubael Conant – a conductor on the Underground Railroad – as its first president. BOWC members were given a free hand in system operation. On December 31, 1853, the Board published its first annual report to the Common Council.

**Getting Down To Business**

The Board first concentrated on extending the network of iron mains to feed Detroit's exploding population, quelling many persistent complaints. In 1854, construction was begun on a nine-million gallon reservoir. Bound by Wilkins, Calhoun, Riopelle and Dequindre near today's Eastern Market, the site was on "the extreme outskirts" of the city.

The reservoir went into operation in 1857, about the same time work began on a new Cornish pumping engine within a new works at the foot of Orleans Street. Engineer John E. Edwards designed the new engine, which featured fuel economy and increased pumping capacity.

An emphasis on improvements by the Board enabled the system to function well for years; so much so that in 1862, the system showed its first profit: a healthy $5,000.

The Board was busy in 1871. In addition to introducing Detroit's first public drinking fountains, the inlet pipe was extended another 160-feet into the river and, yet, another new engine was placed in operation.

The year 1871 marked another milestone of sorts when the state legislature tried to regionalize the city's water department. This first takeover effort was an attempt to consolidate the BOWC and three other city boards: planning, roads and sewers. The members of a single "Board of Public Works" would have been chosen by the legislature.

When its bid for exemption from the Act was rejected, the Board expressed its defiance by refusing to surrender its books to the newly-created body. The state's high court later found the law unconstitutional. An aspect of the discredited law was incorporated into an 1873 act, which provided the Board with unprecedented powers to condemn property and conduct business outside Detroit's city limits.
More Water, More Problems

The works on Orleans Street was setting records for the amount of water pumped almost every year, yet was hard pressed to keep pace with demand. Detroit's development into an important manufacturing center after the Civil War spurred enormous population growth; to nearly 100,000 by 1873, up from 79,577 in 1870! More people needed more water. This unquenchable thirst was the result of other factors, as well.

Figure 1 illustrates the rise in water production in Detroit during which the average daily consumption per person rose from just under 30 gallons per person per day in 1855 to over 100 gallons per person per day in 1880. Manufacturing accounted for some, but not all of this growth. The development of indoor plumbing and the water closet, in particular, represent the biggest single factors.

To cope with the city's voracious water demands, the BOWC purchased a 56-acre site located between the river and Jefferson Avenue (in what was then Hamtramck Township) from Robert P. Toms for $35,000. The decision to move upriver was made since expansion of the Orleans works was not practical. The location had become entangled in a maze of commercial and manufacturing facilities and was considered a fire hazard.

The new site would contain an expanded water works capable of serving Detroit's needs for many years. Moreover, the new location would be fed by a new water intake located far from the concentration of industry and its troublesome pollution.

<table>
<thead>
<tr>
<th>Year</th>
<th>Gallons Pumped</th>
</tr>
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<tbody>
<tr>
<td>1855</td>
<td>542,807,364</td>
</tr>
<tr>
<td>1860</td>
<td>870,036,459</td>
</tr>
<tr>
<td>1870</td>
<td>1,866,060,068</td>
</tr>
<tr>
<td>1880</td>
<td>5,552,965,310</td>
</tr>
</tbody>
</table>

Water Production In Detroit

Public Fountains

Moses W. Field - a prominent citizen and attorney, who represented Michigan from 1873-75 in the House of Representatives - petitioned the Common Council to set up public drinking fountains throughout Detroit in May 1871. Public response to the seven fountains placed on June 27 was so great that nine more fountains were ordered in July.

The BOWC spent $255.24 that year on fountains.

The Bagley Fountain was provided for by the will of John J. Bagley, a former governor, police chief and tobacco entrepreneur. Unveiled in 1887 at the intersection of Woodward and Fort, it was "by far the most elegant of any in the city ... and cost upwards of $5,000."

An August 1907 newspaper account summed up the public's fascination:

"Push the button and chew off all you want, perfectly hygienic, sanitary, germless, never need to wash out the cup nor wonder who has been drinking before you - perfection..."

The pressure of the water that flowed from the fountains took some getting used to. The same newspaper account described the experience of one unfortunate lady:

"...z-z-z-z-z-zp comes a lovely crystalline spurt of water. But the matron forgot to open her mouth and the spurt hit her sharply on the nose. In her excitement the lady forgot even to remove her finger from the button to stop the jet of water. She only pressed harder and tried to get her nose out of the way. She opened her mouth to say, "How dare you!" but only gurgled - gagged and ducked her head and stopped the jet of water with her lovely ostrich plumes."
The new works sent water into the mains for the first time on December 15, 1877 and for a short time its output was combined with that of the Orleans station. The older works were eventually dismantled. What could be used was incorporated into the new site.

Water Works Park was in full-operational bloom by 1879. Its two engines had a combined output of 152 million gallons per day (MGD). There was a boiler house, storage shed, settling basin, intake pipe and a 124-foot standpipe used to maintain steady pressure in the mains. So impressive were the park grounds that they became synonymous with Detroit, not unlike the Renaissance Center, Eastern Market, the ethnic festivals in Hart Plaza, and Dearborn's Greenfield Village, and Ford Rouge complex. At the height of its popularity, people came from all around to stroll past the park's floral displays, wade in its huge pool, admire the Victorian architecture and view Detroit and neighboring Windsor, Ontario from atop the 185-foot-tall minaret-like tower that encased the standpipe. Water Works Park has since expanded to its present size of 110 acres as a result of the purchase of additional tracts of land in 1906 and 1912.

**Growing with the City**

The BOWC moved into its first permanent home in 1886 when it purchased the Old Fireman's Hall at the corner of Randolph and East Jefferson. Built in 1850 by the Detroit Fireman's Association, the three-story structure was located on the site of the Old Council House, where the need for a public water system was first discussed.

The building was used for administrative offices until 1928 when the Board moved into a brand new building a few blocks away on a triangular site bordered by Randolph, Farmer and Bates Streets.

As Detroit's population reached 135,000, two more engines were added and the first water meters were installed in homes. The Village of Delray – later absorbed by Detroit – was added to the water supply system in 1898. Two years later, River Rouge joined, followed by Hamtramck in 1902 and Ecorse in 1903. The latter three communities became the first components of DWSD's current network of wholesale customers.

Upon becoming operational, facilities at Water Works Park were expected to easily handle Detroit's needs for many years with only minor upgrades. However, the growth of industry – the infant automobile industry's explosive growth (there were 202 different Detroit-based automotive marques in 1910 alone) in particular – continued unabated in the city, as did the level of pollution; the byproduct of heavy industry. The raw water intake was once again threatened by pollution, forcing construction of a new intake crib. A second pumping station – built between 1909 and 1914 – was constructed when demands on the original station became too great.

Less than a century after Peter Berthelet set up his simple pump on a wharf at the end of Randolph Street, Detroit had a water system worth boasting about. A Detroit News story from June 2, 1907 compared the 33 gallons pumped daily to each resident of London, England by "one of the best water systems in Europe" to the 160 gallons consumed each day by every man, woman and child in Detroit.
The same story posed the rhetorical question:

*Can you imagine a river or a canal 100 feet wide, 100 feet deep and 557 miles in length? This river would contain just the water, which Detroiters use in one year. In this quantity of water could be floated the combined navies of the world.*

Detroits were awash in a sea of Great Lakes water. Unfortunately, they were also discarding a torrent of wastewater.

**The Solution To Pollution Is Not Dilution**

Detroit was typical of every major U.S. city in the late 1800s with its own water works. Wastewater wasn't treated. "Combined sewers discharged directly into nearby waterways, because sanitary engineers believed that running water purified itself."

A noted sanitary engineer of the time, Allen Hazen, believed that a dollar spent in purifying water "would do as much as 10 dollars spent in sewage purification … the discharge of crude sewage … is not locally objectionable in any way to justify the cost of sewage purification."

Policies based on such views are credible only when they serve a handful of people. When the concentrated discharge of hundreds of thousands of people are factored in, the absurdity is obvious.

By the dawn of the 20th century, scientists had begun to understand the link between dirty water and the spread of diseases, such as typhoid. But, treating sewage was costly. Consequently, hundreds of thousands of gallons of untreated wastewater continued to flow into the Detroit River every day. Accounts from the early 20th century compared the Detroit River below Detroit to an open sewer. Most seriously affected were those who lived in downriver communities like Wyandotte, Trenton, Monroe and along the shores of Lake Erie.

While Detroit's source water remained relatively "pure and wholesome" – compared to other cities – the city's supply was not unaffected by harmful bacteria. "The typhoid season is on again" in the August 21, 1908 *Detroit News* was a typical headline. A May 1916 "Preliminary Report on Sewage Disposal for the City of Detroit" by Clarence Hubbell, concluded: "There are times when the current in the Detroit River is reversed and the water flows toward Lake St. Clair…for short periods of time due to strong easterly winds which raise the water level of Lake Erie at the mouth of the river, above the level of Lake St. Clair." This caused a backflow of river water and the pollutants dumped into it.

The U.S. and Great Britain signed the Waterways Treaty on January 11, 1909. The pact recognized pollution as an international problem, and provided that boundary waters between the United States and Canada, or waters crossing the boundary "shall not be polluted on either side to the injury of health or property on the other." It foreshadowed the necessity for remedial measures and is considered the genesis of DWSD's Wastewater Treatment Plant.
Meanwhile, yearly typhoid epidemics reached a high point in 1912, prompting the U.S. Public Health service to mandate the disinfection of all water distributed to the Department's customers. Calcium hypochlorite was first used in 1913. It was replaced in 1916 by liquid chlorine, a more effective disinfectant.

Disinfection had a dramatic impact. Typhoid deaths in Detroit reached a rate of 25 for every 100,000 people during the year prior to the introduction of liquid chlorine. The following year's death rate fell to less than half that amount, approximately 10 for every 100,000 people. Illness from waterborne organisms became negligible after the implementation of 24-hour monitoring of water quality by degreed chemists in 1917.

Because disinfection of drinking water was not considered a complete answer to water treatment, the first segment of the Detroit River Interceptor (DRI) was built in 1912. The DRI intercepted sewage and discharged it below the system intake. At that time, the Department made plans to build the filtration plant in Water Works Park. In the meantime, an exhibit was set up near the Hurlbut Memorial Gate on East Jefferson where Detroiter were invited to compare filtered and unfiltered samples of drinking water. The clear filtered water was the hands-down choice over the off-colored, unfiltered samples.

On December 2, 1923, the Department formally opened the largest filtration plant in the world.

From 1912-15 the International Joint Commission conducted a survey to determine the extent of boundary water pollution. The Commission's March 1916 report concluded that Detroit's raw water intake was relatively safe, but warned that pollution threatened the water supplies in Windsor and Walkerville, Ontario "in spite of the efforts made by these towns to protect their supplies by means of chlorination..."

The report went on to state that the source water used by downriver communities (Wyandotte, Trenton and Amherstburg, in particular) "is grossly polluted and totally unfit as a source of water supply."

Clarence Hubbell published a report in May that magnified the Commission's findings. The reports' combined impact presented nothing less than a mandate to establish a sewage treatment plant for the area.

Alleviating threats to the water supplies of other communities was not an immediate objective, protecting Detroit's raw water intake was.

Construction of the Interceptor – a key part of the network of pipes that would eventually send wastewater to the Wastewater Treatment Plant – was stepped up and would continue throughout the 1920s. Meanwhile, the city's untreated wastewater continued to flow into the Detroit River … only farther downstream.

The overall quality of the river continued to deteriorate, becoming worse before it got better. A graphic description appeared in the January 1936 edition of *The Wayne Engineer*:
"The entire lower Detroit River is posted by the State Department of Health as being unsafe for bathing.... Oils and scums, accompanied by floating debris, make bathing an ordeal ... the bather who will overlook the above hazards may bathe for long periods without contracting dysentery or typhoid, but he might be compared to the man who puts his head in the lion's mouth ... The people of Grosse Ile ... are actually surrounded by a water which is a menace to their health."

By the end of the '20s, the practice of channeling untreated wastewater into the river could no longer be tolerated. Pollution was exacerbated by Detroit's frantic pace of expansion and annexation from 1910-1926. The city was flirting with the one-million population mark while the auto industry roared.

The BOWC addressed the need for more treated water – created by development and annexation – in 1924 by authorizing construction of the Springwells Water Treatment Plant at an estimated $30 million. When fully completed in 1935, it was the largest self-contained water plant in the world; adding about 300 MGD to the overall system capacity.

After entering service, it was known for a short time as "the White Elephant of Springwells Street." The unflattering sobriquet was bestowed by those who perceived the plant's vast size as a wasteful and extravagant expression of a bygone era when grand scale and over-engineering were two sides of the same coin. This was, after all, the Depression.

The plant's efficiency eventually won over skeptics and the Springwells plant has since been accepted as an invaluable part of the Detroit system. A $35 million expansion program undertaken in 1955 increased maximum plant output to over 500 MGD.

In, 1925, the Board gave the go-ahead for construction of the Wastewater Treatment Plant – at the confluence of the Rouge and Detroit rivers – to deal with the flood of wastewater created by Detroit's industrial and urban development and a growing number of requests for additional services from suburban communities. Unfortunately, economic conditions created by the Great Depression halted construction in 1932.

Construction would not start up again until 1936, after an infusion of money from President Franklin D. Roosevelt's Public Works Administration. That $20
million allowed the Department to, not only, complete plant construction, but provided enough to finance the extension of the DRI to the treatment plant.

The Wastewater Treatment Plant entered service in February 1940 at a cost of $22,635,000 (more than half spent to complete the DRI and the network of connecting mains). It was designed to provide primary treatment for 2.4 million people in Detroit, Gratiot Township (Harper Woods), Grosse Pointe City, Grosse Pointe Farms, Grosse Pointe Park, Grosse Pointe Woods, Hamtramck, Highland Park, Redford Township, St. Clair Shores, Southfield Township and Warren Township. With modifications, the plant was expected to service the needs of a population of four million. But, "the chief benefits of the new plant," trumpeted the Detroit Times, "will fall to the residents of Wyandotte and other downriver cities, which obtain their water supply from the river."

The plant was initially managed by the city's Public Works Department but was transferred to the Department of Water Supply in 1941. A 1935 city ordinance required the cost of operations and debt repayment ($1,392,543 during the first 12 months) be raised by supplemental charges added to every bill issued by the BOWC. Detroiters paid 11 cents per thousand cubic feet of water and suburban communities paid an extra 21.61 cents per thousand cubic feet.

### Postwar Development

When normal economic development returned after the end of World War II, new homes were often connected to lateral sewer mains laid in the 1920s because of a decline in new home construction during the Depression. The Great Depression also caused the brakes to be applied to the BOWC's liberal expansionist policy. L.G. Lenhardt – General Manager beginning in 1938 – was a product of the era's cautious approach to development. He held the Department to a course that mirrored Detroit's near-saturated state of development and proclaimed that the Department would concern itself with only taking care of what it already had. He advocated entry into the water and sewerage business by other government bodies – Wayne County, in particular – to serve needs created by suburban development.

The Department's conservative management style was radically transformed in 1956 with the arrival of Gerald J. Remus, the new Superintendent and Chief Engineer. Remus believed Detroit was up to the task of filling the role of water and wastewater services provider for the whole of metro Detroit. Under his direction, the Department returned to a policy of expansion with an aggression not seen since the end of the 19th century. Today's DWSO is directly attributable to him. Several thousand miles of water and sewer transmission lines within a service area of over 1,000 square miles serve Detroit, 77 suburban communities on the wastewater side, and 125 suburban communities on the water side.

During the 1950s, the Department facilitated a major upgrade of its sewer system as a result of the construction of freeways that criss-crossed the metro area. The Department also built the Northeast plant, the system's third water treatment plant.
The Main Office Building

The Art Deco-styled Water Board Building has been a familiar part of Detroit’s skyline since October 1928. The Common Council provided $1 million in the 1927-28 city budget for a triangular-shaped building on a site bound by Randolph, Farmer and Bates Streets. Louis Kamper—a Detroit-based architect known for his work on the houses of prominent Detroiter as well as for Detroit landmarks like the Book Building in 1917, the Washington Boulevard Building in 1923 and the Book-Cadillac Hotel in 1924—originally planned for a 14-story building. But, “because of the high value of the site, the Board decided that … it would build a twenty story building…”

The completed building reflects the trend toward simplification of forms typical of the Jazz Age. Standing 23 stories, it is comprised of a five-story base, a 15-story shaft, and a three-story penthouse. The total cost—excluding the $250,000 paid for the site, and the architect’s five-percent commission—was $1,768,760.20. It was one of the last buildings designed by Kamper, who was in his late sixties during its design and construction.

The building’s site was originally part of East Grand Circus Park. First designated for use as park land in 1806, on April 3, 1855 the Common Council affirmed that it would continue to be used as such and not “for any other purposes.” Council reversed itself in 1883 when it approved a Metropolitan Police Commission petition to build a headquarters there.

After the Police Commission moved into new digs at Beaubien and Clinton in 1923, the building was used to temporarily house what would later become the Downtown branch of the Detroit Public Library.

The BOWC’s new building was raised in a record-breaking seven months. It was considered state-of-the-art and fireproof by 1928 standards. The Department initially occupied only the first eight floors, while the upper floors housed other city departments. The Water and Sewerage Department did not become the building’s sole occupant until the 1990s.

Board members were proud of their new headquarters. The fifth floor boardroom is a study in opulence. The room features floor-to-ceiling walnut paneling. Two huge, mahogany pillars on dark green marble bases support paneled beams, and serve to frame the conference table in the middle. Small ceiling murals help to enhance the quiet dignified aura.

Above the conference table is a bald eagle, the symbol of the United States. To its left is a lion, a symbol of strength and courage. To the eagle’s right is a stylized, heraldic bear, symbolizing ferocity and strength. On the ceiling above the visitor’s gallery is a rendering of the seal of the City of Detroit, the Latin on which means, “We hope for better things...it shall arise from the ashes.”

Once upon a time, the building’s staff included employees, whose sole function was to polish bright work located throughout the building. Included were elaborate scones on the second floor, brass elevator doors, and Art Deco trimming rendered in silver metal within the interior of the cherry-paneled elevator cars.

Beyond the first floor lobby, the customer service center is awash in cream-colored marble on the walls and pillars that frame the inner entrance. On the room’s ceiling, two stories above the floor, is a large, elaborate mural that depicts symbols and events of significance to the City of Detroit and DWSD.

Neptune, the mythological god of water, dominates the center. He is surrounded by various scenes: Cadillac’s landing in 1701, the arrival of Colonel Hamtramck in 1796, Chief Tecumseh convening a war council, the Battle of Lake Erie and the development of Detroit’s first water works.

The building’s triangular shape (not a perfect triangle, however) is not its only unique feature. The structure’s hydraulic freight elevator was originally connected to the City’s water mains. It was upgraded in 1982 and now uses a more contemporary, hydraulic mechanism. The Randolph side of the basement parking area extends 30-feet beyond the buildings exterior to the middle of the street.

The building’s Randolph Street entrance is surrounded in marble, and a three-foot band of polished pink and grey granite completely surrounds the base of the building. The exterior of the penthouse - the building’s top three floors - is painted terra cotta, setting it off from the Bedford Limestone walls that enclose the buildings first through 20th floors. The building’s two-tone appearance is a distinctive air in a Detroit skyline dominated by even taller and more modern buildings.
The first official acknowledgement of the Department's role as a service provider for the region came with the expansion of the BOWC from five to seven members in 1960. Suburban communities for the first time had a voice in the system's operation. Clarence L. Lichtenberg for Wayne County, Fred L. Yockey for Macomb County and Frank Biehl for Oakland County were the first three suburban commissioners.

The high lift pumps at Water Works Park were electrified the following year and an age of coal and steam ended for the Department.

On May 11, 1964, a nearly 10-year battle between Detroit and Wayne County was peacefully resolved when the Southwest Water Treatment Plant in Allen Park was added to the Detroit system. The plant was built and initially operated by Wayne County with the enthusiastic encouragement of the Department's former superintendent, L.G. Lenhardt.

In December, the National Sanitation Foundation and its board of consultants issued a report detailing the wastewater disposal problems for the six-county metro area. It recommended that the Department assume the job of pollution control for the entire area by providing the necessary construction, financing, administration and operation of the system.

Also in 1964, operation and maintenance of the wastewater system was officially placed under Departmental jurisdiction. Total control of the wastewater system was handed over in 1966 when responsibility for sewer design and construction was transferred from the Department of Public Works. At that time, an agreement with the Michigan Water Resources Commission established treatment standards intended to protect the quality of Southeast Michigan's rivers and lakes and preserve them for future generations.

In 1974, the Lake Huron Water Treatment Plant entered service, fulfilling the Department's long-held ambition to tap into the bountiful waters of Lake Huron.

The Department's first African-American director, Charles R. Scales – a BOWC member in 1974 – was appointed by Mayor Coleman A. Young in 1975. In 1999, director, Stephen F. Gorden (1994-2000), was elected President of the American Water Works Association, "an international, non-profit scientific and educational society dedicated to the improvement of drinking water quality and supply."
1996 Eminent Conceptor Award presented by the American Consulting Engineers Council/Michigan Society of Professional Engineers in recognition of Outstanding Engineering Excellence for DWSD's Raw Wastewater Pumping Station No. 2A.

1996 Quality of Life Award presented by the Southeastern Branch/Michigan Section of the American Society of Civil Engineers (ASCE) "in recognition of the improved quality of life to the cities and townships of Oakland County" created by DWSD's 72-inch water transmission main, Adams Station to Franklin Station.

1996 Outstanding Civil Engineer Award to Awni Qaqish presented by the Michigan Section ASCE "in recognition of your people service contribution to society and to the civil engineering profession."

1998 Outstanding Civil Engineering Achievement Award presented by ASCE for the Rochester Booster Pumping Station.

1999 Engineering Excellence Honor Award presented by the American Consulting Engineers Council for DWSD's rebuilding of the sewer running beneath the Southfield Expressway.

1999 Outstanding Engineer Award to Awni Qaqish presented by the Michigan Society of Professional Engineers Detroit – Metro Chapter/Consulting Engineers Council of Michigan.

2000 Project of the Year award presented by the Michigan Chapter of the American Public Works Association for DWSD's emergency generator program.

2000 Outstanding Civil Engineering Achievement Award presented by the Michigan Section ASCE for DWSD's Hubbell-Southfield Combined Sewer Overflow Basin.

DWSD continues to solidify its reputation as a recognized industry leader as it enters the 21st century. Innovation that was the hallmark of the Department throughout the 19th and 20th centuries continues unabated today. The following are just a few of the most recent awards received:
The site where Detroit's first historic water treatment plant is located has not always been known as Water Works Park. The earliest reference we could find to a specific name attached to the park is an entry from the Department's first Superintendent of Grounds, Elbridge A. Scribner in the Board of Water Commissioner's 1893 Annual Report:

"When the different improvements begun this season are completed, which we hope will not be later than June 15th, the Hurlbut Park will be one of the most attractive in the city."

More than a decade later, an anonymous newspaper editor used the name to promote what was at that time Detroit's premier tourist attraction. His inspired prose appeared in the Detroit News Tribune edition of Sunday, July 16, 1905:

A more quiet place than Hurlbut Park could not be found within the city when the rising sun first pours a flood of light upon it.

The rush of trolley cars may be heard from the street, and away to southward the river ripples softly. But across the grounds, there is as yet no echo of human voices.

The call of a bird overhead sounds like a startled note of alarm; the sound is taken up by scores of feathered choristers, and the stillness is broken by the chirping and chattering. For the birds, at least, the day has begun.

These, and probably many other, efforts to promote Hurlbut Park never caught on with the public. But a more appropriate candidate could not have been chosen.

Chauncy Hurlbut, a larger-than-life figure, played a pivotal role in Detroit history and is more responsible than anyone for the park's development. After making his fortune in the grocery trade, Hurlbut made his mark as a public official as Detroit's fire commissioner. He then served two terms on the Board of Water Commissioners (BOWC), 1861-63 and 1868-84; 12 years of the latter term as its president. The 56-acre Grand Marais Farm ("The farm at the big marsh") was purchased from Robert Toms and developed into Water Works Park during Hurlbut's second term. After his death on September 9, 1885, he bequeathed most of his sizeable estate for beautification of the park grounds and maintenance of his library legacy.

In 1910, Common Council members, too, decided that Water Works Park should be known by some other name. Water Works Park, they decided, was too ordinary a name. The park needed the kind of moniker that
would lend personality – ambience, if you will – worthy of such a grand place.

For reasons known only to them, Council members settled on Gladwin Park, for Major Henry Gladwin, the dashing commander of Fort Detroit during the 1763 siege by Chief Pontiac and his Ottawa warriors. Gladwin was also British. But, that's another story.

The public never accepted this name, either. Perhaps they didn't appreciate their beloved Water Works Park becoming the namesake of a British colonial officer. In any event, Detroiters continued (and continue) to refer to it as "Water Works Park," a utilitarian name that accurately describes the purpose of the place that was once the heart and soul of the Department of Water Supply, known today as the Detroit Water and Sewerage Department, or DWSD.

For more than a century, the park's spacious grounds have served as more than just a place where drinking water is produced.

**A Public Treasure**

In 1893, Water Works Park contained a man-made waterway encompassing two islands, three bridges, a small wading lagoon and a winding canal where rowboats could enter the park. Visitors strolled along pathways lined with chestnut trees, intricately-landscaped shrubbery and floral displays. Water in the channel – warmer than the river – attracted schools of fish so numerous that anglers could catch all they could carry without baited hooks. There were tennis courts, a baseball diamond, a picnic area, teeter-totters and swings.

The lagoon became a casualty of the 1960s when the Health Department condemned it for unsanitary conditions and ordered it filled. Playground equipment – including swings, slides and a basketball court – was added.

A refurbished oil storage building was used to house Hurlbut's personal collection, mostly books and periodicals about science and engineering. Established in 1897, the Hurlbut Library was the first branch of the fledgling Detroit Public Library system. It was staffed by Water Department employees, whose lack of training as librarians made for an awkward arrangement.

The BOWC got out of the library business in 1905 when branch operations were transferred to the Detroit Public Library Commission, which installed its own books and staff.

Per Hurlbut's wishes, the BOWC constructed a large, ornate, cast iron gate at a cost of $30,000. Encased within a stone monument at the park entrance, the Hurlbut Memorial Gateway continues to fulfill the former commissioner's park-beautification mandate.
A garden (or floral) clock was a landmark for more than 25 years. Considered one of the most striking floral displays in the United States, the clock's mechanism was incorporated into a knoll and powered by a water-driven paddle wheel. The park's Superintendent of Grounds, Elbridge A Scribner, designed and built the clock with the assistance of a watchmaker. It kept accurate time and attracted visitors from all over the world long before Detroit was known as the Motor City.

The clock was a popular attraction, so popular that in 1921 it was fenced off to discourage children from swinging on its wooden hands.

It barely survived a one-way trip to the junkyard in 1934 because of increasingly expensive maintenance and poor timekeeping, but ended up at Greenfield Village instead. Artisans there restored it, converted it to electric power and placed it on display, colorfully decorated with more than 10,000 red and green plants. In 1989, the timepiece was returned to Water Works Park where it is currently stored.

Two green houses – the first dating from 1892 – were used for the care and maintenance of ornamental shrubbery and flowers. A spectacular panorama could be seen from the top of an open-roofed gallery. Visitors had an excellent view of the "Twelve Apostles," 12 pear trees believed to have been planted by French settlers in the 1700s. Several offspring of the original 12 trees continue to thrive throughout metro Detroit, and within the Park itself.

Near the grove stood another longtime monument, a standpipe or surge tower contained within a 185-foot tower built in 1876. Joseph E. Sparks – a Detroit architect – won a design competition, besting several other designs, including the submission of George D. Mason, one of Detroit's top architects. Sparks' brick and stone creation – combining elements of Victorian architecture and inspired by oriental minarets – encased a 124-foot vertical standpipe used to equalize pressure in the water mains and doubled as an observation tower. It was described at the time as "an architectural exclamation point" and later, by City Council President John C. Lodge, as "the Empire State Building of its day." By climbing the tower's 202 iron steps to the balcony at the top, visitors were rewarded with a spectacular view of the park grounds and downtown Detroit.

The standpipe's role as a pressure equalizer ended in 1895 when it was disconnected from the pump discharge mains. Improved technology allowed pressure to be controlled by the pumps themselves.
The Buildings and Safety Engineering Department issued a violation in 1945 following an inspection by a professional steeplejack, who found the tower "unsafe and … prohibitively expensive to repair." The old tower was dismantled in 1962 and exists now only in vintage photographs and fading memories.

On July 15, 1912, a 5,000-square foot parcel of land was leased to the Fire Department's Ladder Company No. 14 for 50 years. By 1918, however, increasingly larger equipment made the Old Firehouse obsolete. It sat vacant until 1940 when the lease was transferred to the Recreation Department.

The former station house was remodeled and renamed the Sylvia Allen Hobby Center, after the great granddaughter of Charles Larned, an aide to George Washington and the granddaughter of the elder Larned’s son. The latter soldiered during the War of 1812 after which he was appointed Attorney General for the Michigan Territory in 1814. Larned Avenue is named for him.

Sylvia and her sister, Julia Allen, operated a private kindergarten attended by the children of prominent Detroiters. Her will made provisions "to establish and maintain a garden and playground for children in a congested neighborhood in the City of Detroit…"

The hobby center was used for woodcrafts, the making of model airplanes, boats, and other crafts. The building was used as a craft center until 1968. The lease was then returned to the Fire Department, which used it for storage.

An arrangement was made with Detroit's historic Pewabic Pottery after the building reverted to the Water Department in 1987. The murals that decorate the city's People Mover stations were assembled there. Currently, the former firehouse is once again being used as a place where craft-making is taught.

In 1925, the Mayor's Aviation Committee established a landing and mooring basin for seaplanes at the foot of Water Works Park where spectators now experience the annual hydroplane races. The basin was used for both private and commercial flights two years before Detroit City Airport was established and four years before the main runway of Detroit Metro Airport was laid.

The convenient location allowed passengers to disembark a mere 15 minutes from downtown. An aircraft-industry annual payroll of more than $1.5 million allowed city fathers to boast of Detroit as "the center of the nation's aircraft industry."

Water Works Park was closed to the public for national security reasons on three occasions: during World War I, at the start of World War II and, at the onset of the Korean War. It has since remained closed to the public. However, some historic buildings are being restored while a new state-of-the-art water treatment plant is constructed on site. The public will soon be invited back.

Even though Water Works Park's glory days as a recreational jewel can be found only in history books and fading memories of a dwindling number of people, the facility continues to serve Detroit. As one of five DWSD water treatment plants, it continues to produce safe, potable water and will continue its legacy with the completion of a new state-of-the-art water treatment plant, Water Works Park II.
Appendix A

Board of Trustees (1852)

Shubael Conant
Edmund A. Brush
Henry Ledyard

Board of Water Commisioners (1853-)

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>Name</th>
<th>Years</th>
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<tbody>
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<td>Edmund A. Brush</td>
<td>1853-66</td>
<td>John Zynda</td>
<td>1901-07</td>
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<td>Shubael Conant</td>
<td>1853-58</td>
<td>John Schroeder</td>
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<td>James A. Van Dyke</td>
<td>1853-55</td>
<td>John F. Dodge</td>
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<td>1853-64</td>
<td>Dr. Frederick J. Clippert</td>
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<td>Henry Ledyard</td>
<td>1853-59</td>
<td>James H. Pound</td>
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<td>Alexander D. Fraser</td>
<td>1855-70</td>
<td>Basil A. Lemke</td>
<td>1908-12</td>
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<td>Julius D. Morton</td>
<td>1859-64</td>
<td>James Wilkie</td>
<td>1909-13</td>
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<td>John V. John Ruehle</td>
<td>1859-60</td>
<td>John Gillespie</td>
<td>1910-12</td>
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<td>Chauncey Hurlbut</td>
<td>1861-63, 1868-84</td>
<td>George Lane</td>
<td>1911-15</td>
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<td>Stanley G. Wight</td>
<td>1863-68</td>
<td>James J. Brady</td>
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<td>Jacob S. Farrand</td>
<td>1864-89</td>
<td>Emil Stroh</td>
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<td>John Owen</td>
<td>1865-78</td>
<td>Thomas F. Comerford</td>
<td>1913-14</td>
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<td>Caleb Van Husen (also Husan)</td>
<td>1867-71</td>
<td>Robert Oakman</td>
<td>1915-18</td>
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<td>Samuel F. Hodge</td>
<td>1871-78</td>
<td>Alex Dow</td>
<td>1916-21, 1926-32</td>
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<td>John B. Sosnowski</td>
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<td>Michael Martz</td>
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<td>Albert P. Ternes</td>
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<td>James Beatty</td>
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<td>Francis L. Sward</td>
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<td>Samuel G. Caskey</td>
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<td>Lawrence P. Fisher</td>
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<td>Homer W. Clark</td>
<td>1932-34</td>
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<td>Daniel O. Collins</td>
<td>1933-35</td>
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<td>Dewitt H. Moreland</td>
<td>1894-95</td>
<td>Donald F. Valley</td>
<td>1933</td>
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<td>Edward W. Pendleton</td>
<td>1894-1908</td>
<td>Oscar A. Wagner</td>
<td>1933-73</td>
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<tr>
<td>Darius D. Thorp</td>
<td>1895-1904</td>
<td>A.C. Wallich</td>
<td>1934-36</td>
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<td>John P. Huckeinstein</td>
<td>1896</td>
<td>Joseph Hershey</td>
<td>1935-37</td>
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<td>John W. McGrath</td>
<td>1896-1900</td>
<td>Prewitt Semmes</td>
<td>1937-39</td>
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<td>James Meathe</td>
<td>1897-98</td>
<td>Dow, Douglas</td>
<td>1938-42</td>
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<td>Joseph J. Noeker</td>
<td>1897-1901</td>
<td>Adam J. Brzezinski</td>
<td>1938-44</td>
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<td>Benjamin F. Guiney</td>
<td>1899, 1914-19</td>
<td>Elmer P. Grierson</td>
<td>1940-42</td>
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<tr>
<td>Joseph J. Crowley</td>
<td>1900-05</td>
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## Appendix B

### Water System Roster

Listing of customers as of date of entry into system  
Established 1853

<table>
<thead>
<tr>
<th>Year</th>
<th>City Names</th>
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<tr>
<td>1853</td>
<td>City of Detroit</td>
</tr>
<tr>
<td>1900</td>
<td>City of River Rouge</td>
</tr>
<tr>
<td>1902</td>
<td>City of Hamtramck</td>
</tr>
<tr>
<td>1904</td>
<td>City of Ecorse</td>
</tr>
<tr>
<td>1920</td>
<td>City of Grosse Pointe Park</td>
</tr>
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</table>
| 1922 | City of Lincoln Park  
City of Ferndale |
| 1925 | City of Melvindale  
City of East Detroit (Eastpointe) |
| 1927 | City of Grosse Pointe Woods  
City of St. Clair Shores |
| 1928 | City of Lathrup Village (a)  
City of Roseville  
City of Taylor |
| 1929 | City of Allen Park  
City of Dearborn Heights  
City of Grosse Pointe Shores Village  
City of Oak Park  
City of Pleasant Ridge (a)  
City of Riverview  
City of Trenton |
| 1931 | City of Dearborn |
| 1933 | City of Inkster  
City of Livonia  
City of Royal Oak (a) |
| 1934 | City of Wayne |
| 1938 | City of Garden City |
| 1939 | City of Harper Woods  
Royal Oak Township |
| 1940 | City of Farmington Hills  
Redford Township  
City of Warren |
| 1941 | City of Southfield (a) |
| 1942 | City of Huntington Woods (a)  
City of Southgate |
| 1943 | Brownstown Township  
City of Gibraltar  
City of Romulus  
City of Woodhaven |
| 1953 | City of Berkley (a)  
City of Westland  
City of Sterling Heights |
| 1955 | City of Clawson  
City of Birmingham (a) |
1956
City of Hazel Park
City of Madison Heights

1957
City of Farmington
Plymouth Township

1958
Village of Beverly Hills (a)

1959
Huron Township
Canton Township
City of Center Line

1960
City of Troy
Bloomfield Township
City of Pontiac
City of Utica
Van Buren Township

1961
City of Farmington
Plymouth Township

1962
City of Fraser
Berlin Township
City of Bloomfield Hills
Harrison Township
Flint Township
Flushing Township (c)
Mt. Morris Township (c)

1963
City of Fraser
City of Pontiac
City of Utica
Van Buren Township

1964
City of Troy
Bloomfield Township
City of Pontiac
City of Utica
Van Buren Township

1965
City of Auburn Hills
City of Novi

1966
City of Mt. Clemens (b)
City of Northville
Shelby Township

1967
Clinton Township
City of Keego Harbor
City of Flint (c)
Sumpter Township
City of Flushing (c)

1968
Village of South Rockwood

1969
Ash Township (e)
Village of Carleton (e)
City of Lapeer (d)
City of Clio (c)

1970
West Bloomfield Township
Berlin Township
Estral Beach (k)
City of Bloomfield Hills
Harrison Township
Flint Township
Flushing Township (c)
Mt. Morris Township (c)

1971
City of Swartz Creek (c)
Davison Township (c)
City of Imlay City (d)
City of Plymouth

1972
City of Rochester Hills
Ypsilanti Township (f)
City of Mt. Morris (c)
Mundy Township
Pittsfield Township (f)
Vienna Township (c)

1973
City of Burton (c)
Clayton Township (c)

1974
Chesterfield Township
Gaines Township (c)
Oakland County Drain Commission (h)

1976
Village of Almont (d)

1978
Genesee Township (c)
Greenwood Township (g)
Montrose Township (c)
Washington Township
1979
City of Montrose (c)

1980
Augusta Township (f)
Orion Township
Superior Township (f)
York Township (f)
Village of Romeo
Macomb Township

1981
Village of Bingham Farms (a)
Mayfield Township (d)

1982
City of Rockwood
City of Flat Rock

1986
Commerce Township

1989
City of Walled Lake

1990
Lenox Township

1992
Village of New Haven
City of Sylvan Lake
Grand Blanc Township

1993
Orchard Lake Village (j)

1994
Village of Lake Orion (i)
City of Ypsilanti (f)

1995
Richfield Township (c)

1998
Burtchville Township

1999
City of Wixom

(a): Southeastern Oakland County Water Authority
(b): Mt. Clemens System (no longer served)
(c): Flint System
(d): Greater Lapeer County Authority
(e): Ash Township System
(f): Ypsilanti Community Utilities Authority
(g): St. Clair County - Board of Public Work
(h): Individual Suburban Customer
(i): Orion Township System
(j): West Bloomfield Township System
(k): Berlin Township System
Appendix C

Wastewater System Roster
Listing of customers as of date of entry into system
Established 1940

C1940
City of Detroit
1-City of Grosse Pointe
2-City of Grosse Pointe Farms
3-City of Grosse Pointe Park
4-City of Grosse Pointe Woods (a)
5-City of Hamtramck
6-City of Harper Woods (a)
7-City of Highland Park
8-Redford Township (a)
9-St. Clair Shores (a)

1942
10-City of Southfield (b)
11-City of Berkley (c)
12-City of Clawson (c)
13-City of Ferndale (c)
14-City of Hazel Park (c)
15-City of Huntington Woods (c)
16-City of Oak Park (c)
17-City of Pleasant Ridge (c)
18-City of Royal Oak (c)
19-Royal Oak Township (c)
20-City of Troy (b)

1944
21-City of East Detroit (Eastpointe) (a)
22-City of Roseville (a)

1950
23-City of Dearborn
24-City of Dearborn Heights (a)

1954
25-City of Birmingham (c)
26-City of Centerline

1955
27-City of Garden City (d)
28-Village of Grosse Pointe Shores (a)
29-City of Livonia (d)
30-City of Northville (d)
31-Northville Township (d)
32-City of Plymouth (d)
33-Plymouth Township (d)
34-City of Westland (d)

1956
35-City of Farmington
36-City of Madison Heights (c)
37-City of Melvindale

1958
38-Village of Beverly Hills (c)
39-Bloomfield Township (e)
40-City of Bloomfield Hills (e)
41-City of Farmington Hills (e)
42-City of Keego Harbor (e)
43-City of Lathrup Village (e)
44-Pontiac Township (City of Auburn Hills) (e)

1959
45-City of Allen Park
46-Canton Township (d)
47-City of Romulus (d)
48-Van Buren Township (d)

1962
49-City of Inkster (d)
50-City of Wayne (d)

1966
51-City of Sylvan Lake (g)

1967
52-City of Novi (d)

1969
53-Bingham Farms, Village (e)

1972
54-Avon Township (City of Rochester Hills) (e)
55-Chesterfield Township (f)
56-Harrison Township (f)
57-Village of Lake Orion (e)
58-Orion Township (e)
59-Oxford Township (e)
60-City of Sterling Heights (f)
61-Waterford Township (e)

1973
62-Clinton Township (f)
63-City of Fraser (f)
64-Independence Township (e)
65-Oakland Township (e)
66-Village of Oxford (e)
67-City of Utica (f)

1974
68-Village of Clarkston (e)
69-Macomb Township (f)
70-Shelby Township (f)
71-West Bloomfield Township (e)
72-City of Orchard Lake Village (c)
73-Washington Township (f)

1991
74-New Haven (f)
75-Lenox (f)

1993
76-Franklin Village (c)

1994
77-City of Rochester (c)

(a) Wayne County Board of Road Commissioners
(b) Oakland County Board of Public Works and Drain Commission
(c) Oakland County Drain Commission
(d) Wayne County Board of Public Works
(e) Oakland County Board of Public Works
(f) Macomb County Drain Commission
(g) No longer served
Appendix D

Department Directors

1919* - Department of Water Supply
1919-38 – George H. Fenkell, Superintendent & General Manager (through 01/30/38)
1938-55 – Laurence G. Lenhardt, Superintendent & General Manager
1956-58 – Gerald J. Remus, Superintendent & General Manager
1959-62 – Gerald J. Remus, General Manager & Chief Engineer

1963 – Department of Water Supply and Sewage Treatment
1963-65 – Gerald J. Remus, General Manager & Chief Engineer

1966 – Department of Water Supply
1966-67 – Gerald J. Remus, General Manager & Chief Engineer

1968 – Detroit Metropolitan Water Service
1968 – Gerald J. Remus, General Manager & Chief Engineer

1969 – Detroit Metro Water Department
1969-73 – Gerald J. Remus, General Manager & Chief Engineer
1974 – Ernest Cedroni, Acting Director

1975 – Detroit Water & Sewerage Department
1975 – Charles R. Scales, Jr., Director
1976-78 – John P. Kanters, Director
1979-83 – Charles Beckham, Director
1983-92 – Charlie J. Williams, Director
1992-93 – Bennie L. Benjamin, Director
1993 – Charlie J. Williams, Director
1994 – Kathleen Leavey, Acting Director (through 07/24/94)
1994-2000 – Stephen F. Gorden, Director (through 09/30/00)
2000-02 – Kathleen Leavey, Interim Director (through 01/02/02)
2002 – Gary Fujita, Interim Deputy Director (through 06/23/02)
2002 – Present Victor M. Mercado

*Between 1853 and 1919, the Board of Water Commissioners shouldered the administrative responsibilities as well as the day-to-day operation of Detroit’s water system. 1919 marked the first year where the system’s operational and administrative functions were handled by separate entities. Since then the Board has focused on the larger issues involved with the administration and evolution of the system.
Appendix E

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Appendix F

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The Detroit Journal (published materials).

The Detroit News (published materials).

Detroit Times (published materials).

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Dossin Great Lakes Museum.

George Haberer, Engineer of Water Systems, Planning Section, Engineering Division, Detroit Water and Sewerage.

Mary Mazur, Sr. Publicist, Public Relations Section, Public Affairs Division, Detroit Water and Sewerage Department.