



City of North Chicago

Lead Service Line Replacements Project Planning Report

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September 2024

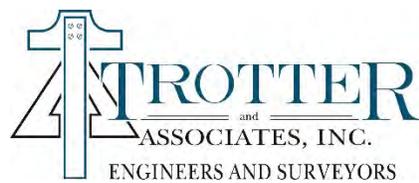


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LEAD SERVICE LINE REPLACEMENTS PROJECT PLANNING REPORT

Prepared By:





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|-----------------|---|
| A | Funding Nomination Form for Public Water Supply Loan Program Lead Service Line Replacement Projects |
| B | Drinking Water Project Planning Submittal Checklist Existing User Charge and O, M, and R Certification Sheet |
| C | Water Service Line Inventory – Lead Service Pipes |
| D | Water Service Line Inventory – Galvanized Service Pipes |



LIST OF ABBREVIATIONS

| ABBREVIATION | DESCRIPTION |
|---------------------|--|
| BIL | Bipartisan Infrastructure Law |
| CMAP | Chicago Metropolitan Agency for Planning |
| FFY | federal fiscal year |
| FY | fiscal year |
| ft ² | square feet |
| gal | gallon |
| gcd | gallons per capita per day |
| gpd | gallons per day |
| gpm | gallons per minute |
| IDNR | Illinois Department of Natural Resources |
| IEPA | Illinois Environmental Protection Agency |
| IHPA | Illinois Historical Preservation Agency |
| LSLR | Lead Service Line Replacement |
| MG | million gallons |
| MGD | million gallons per day |
| PE | population equivalent |
| PFAS | per- and polyfluoroalkyl substances |
| PFOA | perfluorooctanoic acid |
| PFOS | perfluorooctane sulfonate |
| Ppt | part per trillion |
| psi | pounds per square inch |
| PWSLP | Public Water Supply Loan Program |
| ROW | right-of-way |
| SFY | state fiscal year |
| SDWA | Safe Drinking Water Act |
| WTP | Water Treatment Plant |
| yr | year |



1. INTRODUCTION AND BACKGROUND

This report has been prepared to meet the project planning requirements of the Illinois Environmental Protection Agency (IEPA) Public Water Supply Loan Program (PWSLP). The proposed project is comprised of the replacement of existing lead water service lines within the North Chicago water distribution system.

1.1 WATER SERVICE AREAS

The United States Navy also owns and operates a water treatment and distribution system within the City of North Chicago. The Navy water system includes two pressure zones (Low Zone and High Zone). The Low Zone includes all areas east of Ray Street and includes Naval Station Great Lakes. The High Zone generally includes all areas west of Ray Street and includes the Captain James A. Lovell Federal Health Care Center (Veterans Administration facilities), the Hunt Company military housing subdivisions (Nimitz, Halsey, and Forrestal), the Great Lakes Commissary, the Military Entrance Processing Command center, and the Veterans Memorial Golf Club.

The boundaries of the City and Navy Water Service Areas are shown on **Exhibit 1**.

1.2 EXISTING WATER SYSTEM

The City of North Chicago owns and operates a surface water treatment plant (WTP) that draws water from Lake Michigan. The North Chicago WTP can treat up to approximately 16 million gallons per day (MGD). The filtration facility also includes a separate raw water pumping system that conveys up to 32 MGD of untreated lake water to the neighboring AbbVie pharmaceutical manufacturing plant to supplement their lake water intake.

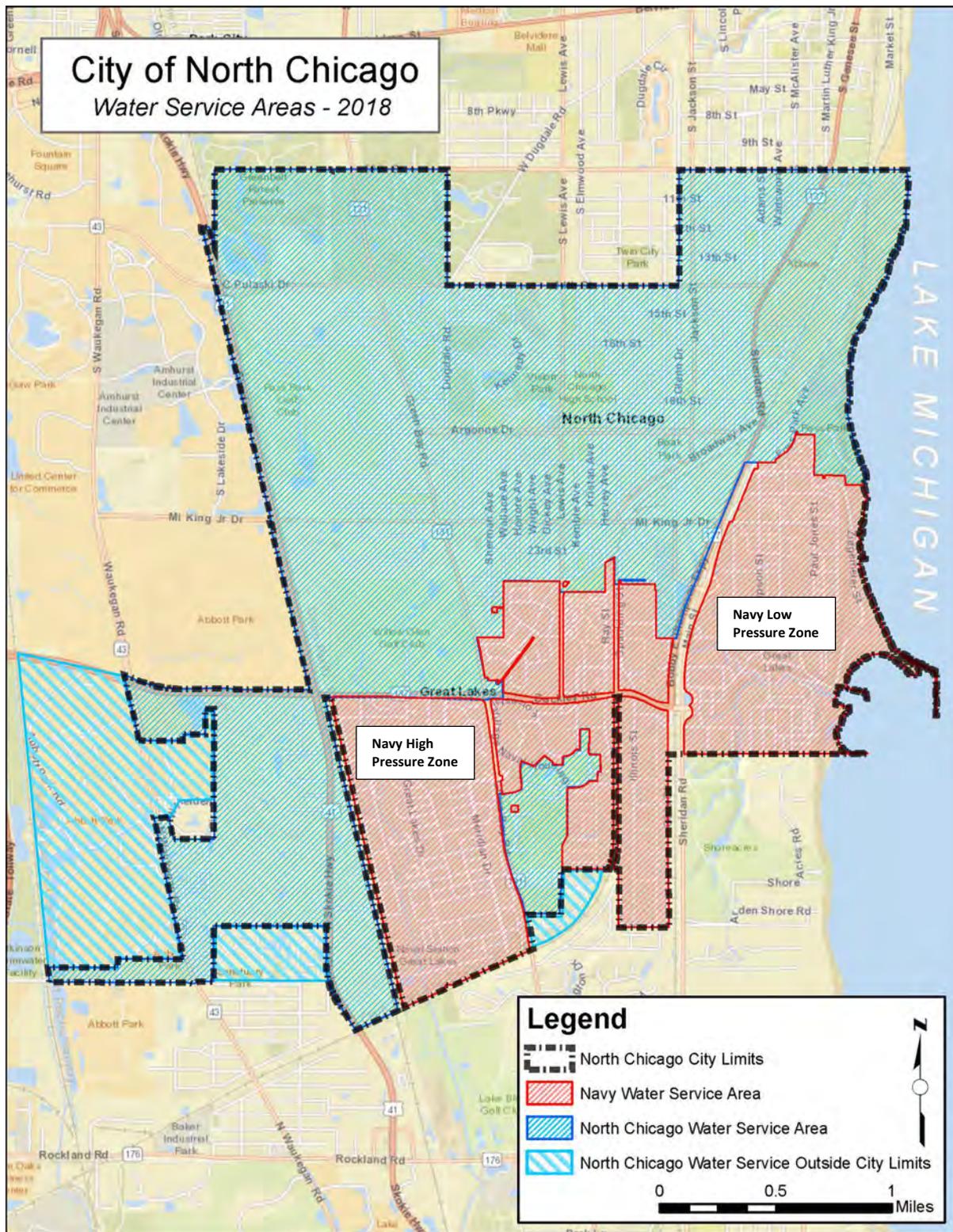
The North Chicago water distribution system operates on a single pressure zone and includes a 4-million-gallon (MG) standpipe located just west of Green Bay Road on the south side of 20th Street. Only the uppermost 5 feet of storage is utilized because the standpipe is only 90 feet tall. The useable storage capacity in the standpipe is thereby limited to approximately 212,000 gallons. Peak demands must be met by variable rate pumping of the finished water from the North Chicago WTP.

An additional 780,000 gallons (0.78 MG) of finished, treated water storage exists in the clear wells and finished water storage tanks at the water treatment plant. However, this water must be pumped and is not available to meet peak demands during power outages. IEPA funding to construct an elevated storage tank in the distribution system is being pursued by the City under a separate project.

1.3 PROJECT LOCATION

The City of North Chicago is located in eastern Lake County (Waukegan and Shields Townships) along the shores of Lake Michigan. The City was incorporated in 1901 and is home to industry including Abbott Laboratories, AbbVie Pharmaceuticals, Proctor & Gamble, and others.

Exhibit 1: Water Service Areas



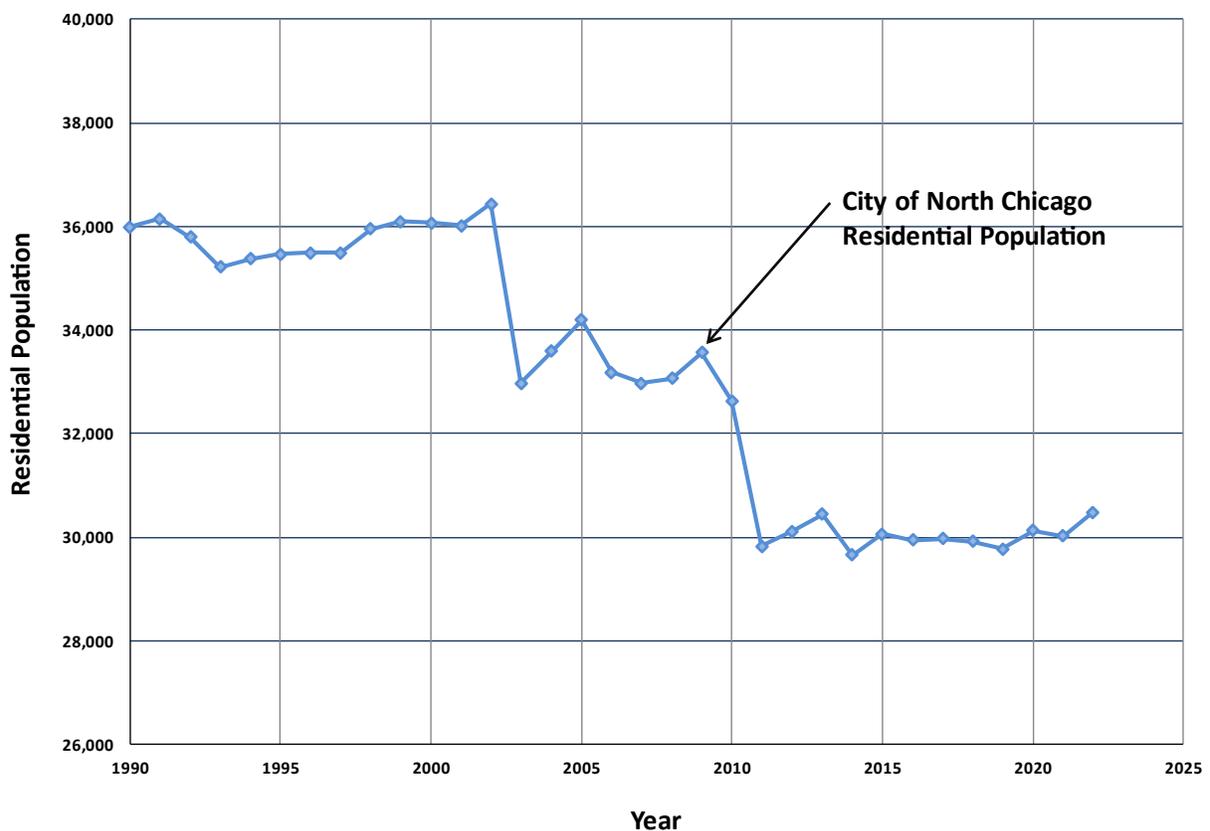


1.4 HISTORICAL POPULATION

Residential population growth since 1990 is shown on **Exhibit 2**. The residential population of the City decreased significantly in 2003 and again in 2011 but has stabilized in recent years. The City has experienced a long-term net negative growth over the past quarter century. The historical 32-year annual compound growth rate from 1990 to 2022 was negative 0.52 percent.

Over the past 5 years the residential population has held steady at an average of approximately 30,000 residents. The Chicago Metropolitan Agency for Planning (CMAP) year 2040 population projection for North Chicago is approximately 40,000 residents (39,744).

Exhibit 2: Residential Population



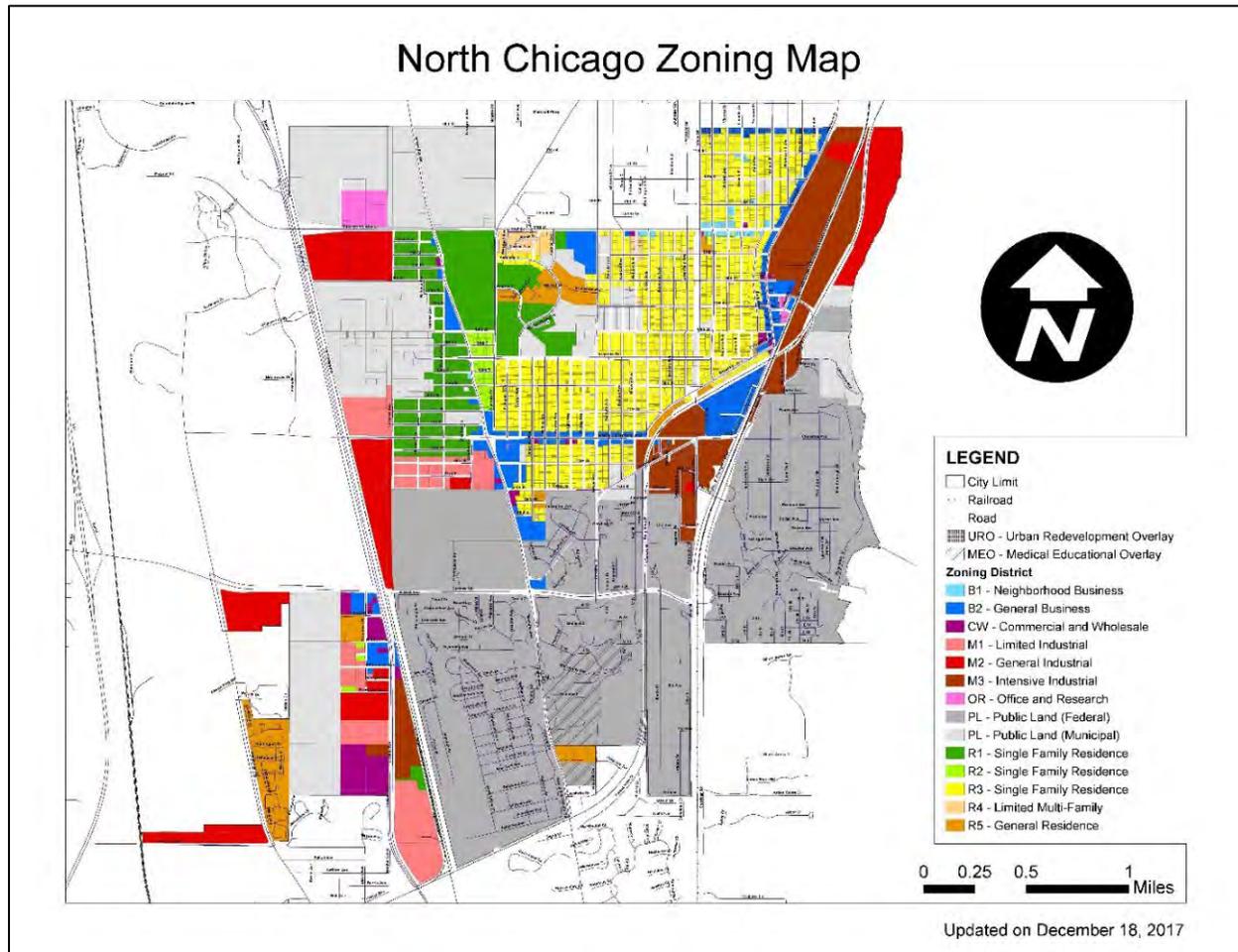
1.5 EXISTING CUSTOMER BASE

The North Chicago water system currently serves a customer base that includes residential and non-residential (commercial, industrial, institutional, etc.) demands. Of the City's current residential population of 30,490 (2022), only 16,813 are connected to the City water system. The remainder of the City residents are served by the Navy water system. Non-residential customers include AbbVie, Abbott Laboratories, Proctor and Gamble Chemicals, and Rosalind Franklin University of Medicine and Science, amongst others.

1.6 CURRENT LAND USE

Current Zoning and land use within the City of North Chicago is shown on **Exhibit 3**.

Exhibit 3: Current Zoning and Land Use



In the northern half of the City, current land use is predominantly single family residential east of Green Bay Road. Industrial land use exists along the lakeshore (AbbVie) and generally east of the railroad tracks. Commercial development is concentrated along Sheridan Road and Martin Luther King Boulevard. West of Green Bay Road, land use is single family residential, industrial and public use (park district lands).

The southern half of the City is dominated by federal lands (Naval Station Great Lakes and associated facilities). The far southwest areas of the City, west of US Highway 41 and south of Buckley Road, are served with City water. Land use in these areas is comprised of general residential, industrial commercial and public lands.



1.7 CONDITIONS AFFECTING GROWTH

The land within the North Chicago corporate limits is nearly built-out. The limited amount of projected future growth will occur as undeveloped properties are built upon, and existing properties are redeveloped for improved use.

It is not anticipated that the land use for those areas currently served will change significantly during the planning period. A more significant impact on the North Chicago water system would be the connection of all or some of the customer base currently connected to the Navy high pressure zone. There may be an opportunity to connect new customers, specifically those currently served by the Navy water system High Zone shown on **Exhibit 1**.

The City may also provide water service to areas outside the corporate limits from time to time through annexations or Intergovernmental Agreement(s).

1.8 CURRENT WATER USAGE

Residential and non-residential average daily water use, based on water utility billing data, is summarized in **Table 1**. The per capita residential water demands were used to calculate the population equivalent (PE) for the non-residential commercial and industrial demands. Residential use comprises approximately 40 percent of total water use, with the remaining 60 percent sold to non-residential commercial and industrial customers.

Table 1: Current Average Daily Water Billings

| Description | FY 2020-2021 | FY 2021-2022 | FY 2022-2023 | 3-yr Average |
|---|--------------|--------------|--------------|--------------|
| Residential Water Billing (gpd) | 826,036 | 827,904 | 859,403 | 837,781 |
| Residential PE | 16,813 | 16,813 | 16,813 | 16,813 |
| Residential per Capita Demand (gcd) | 49.1 | 49.2 | 51.1 | 49.8 |
| Commercial Water Billing (gpd) | 151,803 | 167,838 | 155,312 | 158,318 |
| Commercial PE | 3,090 | 3,408 | 3,038 | 3,177 |
| Industrial Water Billing (gpd) | 1,151,890 | 1,156,825 | 1,017,030 | 1,108,582 |
| Industrial PE | 23,445 | 23,493 | 19,897 | 22,248 |
| Total Average Daily Water Billing (gpd) | 2,129,729 | 2,152,567 | 2,031,745 | 2,104,680 |
| Total PE | 43,348 | 43,714 | 39,748 | 42,238 |

Monthly water pumping data from the North Chicago WTP during Water Year 2023 are listed in **Table 2**.



Table 2: Monthly Water Pumping Data

| Month | Average Day (MGD) | Max Day (MGD) | Min Day (MGD) |
|-------------|-------------------|---------------|---------------|
| Oct 2022 | 2.112 | 2.583 | 1.874 |
| Nov 2022 | 2.012 | 2.323 | 1.076 |
| Dec 2022 | 2.041 | 2.534 | 1.774 |
| Jan 2023 | 2.114 | 3.372 | 1.040 |
| Feb 2023 | 2.114 | 2.585 | 1.828 |
| Mar 2023 | 2.067 | 2.235 | 1.816 |
| April 2023 | 2.092 | 2.336 | 1.858 |
| May 2023 | 2.087 | 2.410 | 1.817 |
| June 2023 | 2.242 | 2.606 | 1.837 |
| July 2023 | 2.193 | 2.614 | 1.611 |
| Aug 2023 | 2.897 | 3.156 | 1.874 |
| Sept 2023 | 2.699 | 3.185 | 2.391 |
| Ann Average | 2.222 | | |
| Max Day | | 3.372 | |
| Max Day/Avg | | 1.517 | |

For Water Year 2023, billed and unbilled water consumption was reported to the Illinois Department of Natural Resources (IDNR) as summarized in **Table 3**.

Table 3: Water Consumption and Losses

| Description | Value |
|---|-----------|
| Water Supplied | 2.106 MGD |
| Authorized Consumption | |
| Billed Metered | 2.000 MGD |
| Billed Unmetered | 0.000 MGD |
| Unbilled Metered | 0.001 MGD |
| Unbilled Unmetered | 0.026 MGD |
| Authorized Consumption | 2.027 MGD |
| Water Losses | |
| Apparent Losses | 0.041 MGD |
| Real Losses | 0.038 MGD |
| Water Losses | 0.079 MGD |
| Non-Revenue Water | 0.106 MGD |
| Total Water Supplied | 2.106 MGD |
| Non-Revenue Water/Water Supplied | 5.03% |



1.9 PROJECTED POPULATION EQUIVALENT AND WATER USAGE

The CMAP year 2040 population projection for North Chicago is for approximately 39,744 residents and 8,000 employees, as summarized in **Table 4**. The CMAP 2010 data are subzone-level aggregations, and not direct Census figures. However, they are considered appropriate for planning purposes.

Table 4: CMAP Population Projections

| Description | 2010 | 2040 |
|---------------------------------------|--------|--------|
| CMAP Data | | |
| Households | 7,299 | 8,856 |
| Population in Households | 21,539 | 26,070 |
| Population in Group Quarters | 12,545 | 13,674 |
| Employment | 24,664 | 26,667 |
| Population Equivalents: | | |
| Residential Population Equivalent, PE | 34,084 | 39,744 |
| Residential PE Growth | | 16.6% |
| Employment Population Equivalent, PE | 7,400 | 8,000 |
| Employment PE Growth | | 8.1% |
| Total Population Equivalent, PE | 41,484 | 47,744 |
| Total PE Growth | | 15.1% |

CMAP projects modest growth through the year 2040 as discussed above. Projected 20-year demands for water are summarized in **Table 5** (based on the CMAP 20-year population projections presented in **Table 4**). The 20-year residential growth rate was used to project the future residential demands, while the employment growth rate was used to project the future commercial and industrial demands.

Table 5: Projected 20-year Water Demands

| Description | Current | Additional 20-Year | Total Projected 20-year |
|---|-----------|--------------------|-------------------------|
| Residential PE | 16,813 | 2,791 | 19,604 |
| Commercial PE | 3,177 | 257 | 3,434 |
| Industrial PE | 22,248 | 1,802 | 24,050 |
| Total PE | 42,238 | 4,850 | 47,088 |
| Average Daily Per Capita Water Use, gcd | 50 | 50 | 50 |
| Average Daily Demand, gpd | 2,111,900 | 242,500 | 2,354,400 |
| Non-Revenue Water at 5% | 105,595 | 12,125 | 117,720 |
| Average Daily Water Production, gpd | 2,217,495 | 254,625 | 2,472,120 |
| Maximum Day/Average Day Peaking Factor | 1.5 | 1.5 | 1.5 |
| Maximum Day Demand, gpd | 3,326,242 | 381,938 | 3,708,180 |



2. EXISTING WATER SUPPLY, TREATMENT, STORAGE, AND DISTRIBUTION SYSTEM

The existing North Chicago water system includes two Lake Michigan intake pipes, a 16 MGD surface water filtration plant, finished water high service pumps, distribution system, and a 4 MG standpipe.

2.1 WATER SUPPLY

The North Chicago water system is supplied by Lake Michigan water through dual intakes (20" and 42"). Each intake is split into each of two raw water inlet wells. Water in the parallel inlet wells is screened prior to entering the raw water wet well. Washwater tank overflow and tank drain piping (no sludge) are also conveyed to the raw water inlet wells and discharged upstream of the screens.

The water supply system includes two separate sets of raw water pumps: the City Raw Water Pumps and the AbbVie Raw Water Pumps.

The City Raw Water Pumps pump raw lake water to the filtration plant for treatment and ultimate conveyance to the City water distribution system using the high lift pumps. The existing City Raw Water Pumps include four vertical turbine pumps, each rated for a flow of 4.75 MGD.

The AbbVie Raw Water Pumps convey raw untreated lake water to AbbVie for cooling. The existing AbbVie Raw Water Pumps include four vertical turbine pumps, each rated for a flow of 8 MGD.

The City's Raw Water Agreement with AbbVie includes provisions for the City to provide AbbVie with up to 32 MGD of untreated lake water. The dual intakes have the capacity to meet the AbbVie demand plus the Maximum Day Demand within the City water system.

The Agreement between AbbVie and the City also provides for AbbVie to receive an additional 20 MGD, for an allotment up to 52 MGD if requested. If AbbVie requests the additional 20 MGD provided for in the Agreement, AbbVie would be responsible for the capital cost of installing a third Lake Michigan intake along with the pumping system improvements that would be required to pump the increased supply of untreated lake water to the AbbVie pharmaceutical plant. It is not currently expected that AbbVie will ever exercise this option.

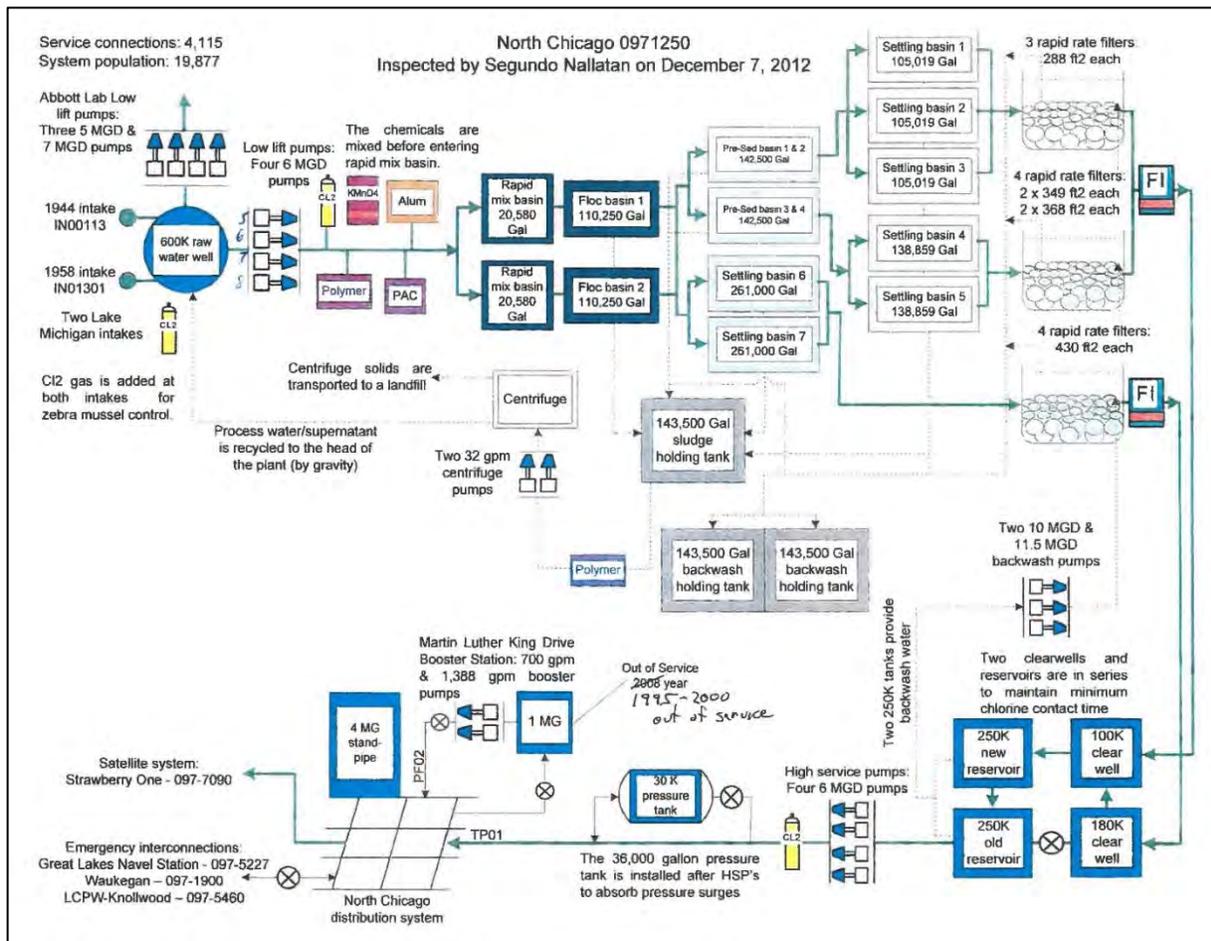
2.2 TREATMENT FACILITIES

The existing treatment processes at the North Chicago WTP include chemical feed systems, mixing/flocculation/sedimentation basins, followed by filtration and disinfection. Solids produced by the treatment facility are dewatered using centrifuges and disposed of off-site.

The conventional surface water plant was designed to treat an average day flow of 12 MGD and a peak flow rate of 16 MGD. Currently the treatment plant produces an annual average daily flow of approximately 2.11 MGD.

The schematic shown in **Exhibit 4** illustrates the treatment processes at the North Chicago WTP.

Exhibit 4: North Chicago Water Treatment Plant Process Schematic



The treatment systems at the existing facility include the following:

Pretreatment

- Chemical Feed and Mixing Systems
 - Chlorine (CL₂)
 - Potassium Permanganate (KMnO₄)
 - Aluminum Sulfate (Alum)
 - Polyaluminum Chloride (PAC)
 - Polymer
 - Fluoride
 - Rapid Mix Basins
 - 2 basins @ 20,580 gal/each
- Flocculation Basins
 - 2 basins @ 110,250 gal/each

- Pre-sedimentation Basins
 - (4 @ 142,500 gal)
- Settling Basins (7 total)
 - 3 @ 105,019 gal
 - 2 @ 138,859 gal
 - 2 @ 261,000 gal

Filtration

- Rapid Rate Filters - 11 total
 - 3 @ 288 ft²
 - 2 @ 349 ft²
 - 2 @ 368 ft²
 - 4 @ 430 ft²

Chlorine Contact and Finished Water Storage

- Finished Water Clearwells (1 @ 100,000 gal, 1 @ 180,000 gal)
- Finished Water Reservoirs (2 @ 250,000 gal)

High Service Pumping

- Finished Water High Service Pumps (4 @ 5 MGD)
- Hydro pneumatic Tank (1 @ 30,000 gal)

Solids Handling

- Filter Backwash Pumps (2 @ 10 MGD and 1 @ 11.5 MGD)
- Sludge Holding Tank (143,500 gal)
- Backwash Holding Tanks (2 @ 143,500 gal)
- Polymer Mixing and Feed System
- Centrifuge Feed Pumps (2 @ 32 gpm)
- Sludge Dewatering Centrifuge

The untreated lake water is subjected to many processes before it is safe to drink and pumped into the distribution system.

The first step in conventional treatment, such as that used at the North Chicago WTP, is Coagulation which is comprised of the rapid mixing of coagulants (chemicals and polymers) into the water. These chemicals alter the electrical charges surrounding the suspended, undesirable particles to make them attract and coagulate (clump together) into larger particles known as flocs.



The second step in the conventional treatment process is Flocculation, during which the floc is gently agitated so that the flocs or particles collide with each other, stick together and entrap other suspended particle, forming larger, heavier particles that will settle out downstream.

The third step in the conventional process is Sedimentation. The flocculated water is passed slowly through sedimentation tanks to allow the heavy floc particles to settle to the bottom of the tank, from which they may then be removed from the process. The clear water at the top of the sedimentation tank overflows the effluent weirs and is conveyed to the next treatment process.

The clarified water overflows from the sedimentation tanks are then conveyed through Filtration. The North Chicago WTP utilizes dual-media (anthracite and sand) filtration. The majority of suspended particles are removed in the top portion of the filter media.

The filters are backwashed to dislodge and remove particles trapped within the filter bed, to reduce head loss, and to keep the filter media clean. Filter performance is often poorest immediately following a backwash cycle, particularly in regard to particulate contaminants. The concentration of solids in the media increases as the filter run time increases, such that the filtration process will often perform better with regard to particulate contaminant removal.

The conventional treatment process produces a sludge comprised of coagulation sludge settled out and removed from the Sedimentation Tanks, and filter backwash solids. These flows are directed to Backwash and Sedimentation Tanks. The clearer overflow from these tanks is conveyed back to the Raw Water Wet Well and reprocessed through the treatment plant. Settled solids are removed and dewatered using a centrifuge. The dewatered sludge is removed off-site and disposed of.

2.3 HIGH LIFT PUMPING FACILITIES

The high lift pumps at the North Chicago WTP draw finished treated water from the clear well and pump it into the distribution system. The existing City Finished Water Pumps include four vertical turbine pumps, each rated for a pumped flow of 5 MGD.

The high lift pumps provide the sole supply of water to the North Chicago distribution system under normal conditions. In emergencies, interconnections with adjacent systems (Naval Station Great Lakes, City of Waukegan, and Lake County water systems) can be temporarily opened.

The high lift pumps operate at variable speed and output, which is controlled manually from the treatment plant based on maintaining the liquid level in the standpipe between 80 and 85 feet. When the level in the standpipe falls below 80 feet, the pumping speed is increased by the plant operators. Similarly, the pump speed is slowed when the level rises above 85 feet.

2.4 STORAGE FACILITIES

In a water distribution system that includes in-system storage (elevated, ground level, or underground), the water supply is typically sized to meet the maximum day demand. Peak hour demands are met by drawing from storage (operational storage). Water storage must also be sufficient to provide water for



fire suppression, and a degree of reserve storage. Water storage requirements for this type of operation of the North Chicago system are summarized in **Table 6**.

Table 6: Storage Requirements

| Description | Current Average Day | 20-year Projected Average Day |
|--|---------------------|-------------------------------|
| Average Day Demand, MGD | 2.112 | 2.354 |
| Unbilled Water @ 5% of Average Day, MGD | 0.106 | 0.118 |
| Average Day Demand + Unbilled, MGD | 2.218 | 2.472 |
| Fire Storage (3 hrs @ 3000 gpm), gal | 540,000 | 540,000 |
| Operational Storage (@ 50% average day), gal | 1,109,000 | 1,236,000 |
| Reserve Storage (@ 50% operational), gal | 554,500 | 618,000 |
| Total Required Storage, gal | 2,203,500 | 2,394,000 |
| Available Standpipe Storage, gal | 212,000 | 212,000 |
| Clearwell Storage at WTP, gal | 780,000 | 780,000 |
| Storage Surplus (Deficiency), gal | (1,211,500) | (1,402,000) |

Water is drawn from elevated storage by gravity. Elevated storage in the North Chicago system currently includes only the 212,000 gallons of usable storage in the standpipe. Ground level storage or the remaining standpipe volume requires booster pumping to convey stored water to the distribution system. Currently there are no booster pumps at North Chicago’s Green Bay Road Standpipe (4 MG).

Current operations of the North Chicago water system only utilize about 212,000 gallons of the 4 MG storage capacity of the standpipe, because the drawdown (or bounce) is limited to 5 feet in order to maintain acceptable system pressures in the immediately surrounding area. This leads to water quality concerns and, because little water is drawn from in-system storage, the water treatment system and high lift pumps at the North Chicago WTP must produce and deliver water at the peak demand rate. Because the current demands are only about 15 percent of the plant hydraulic capacity, the finished water pumps are capable of meeting the peak system demands without having to draw from storage.

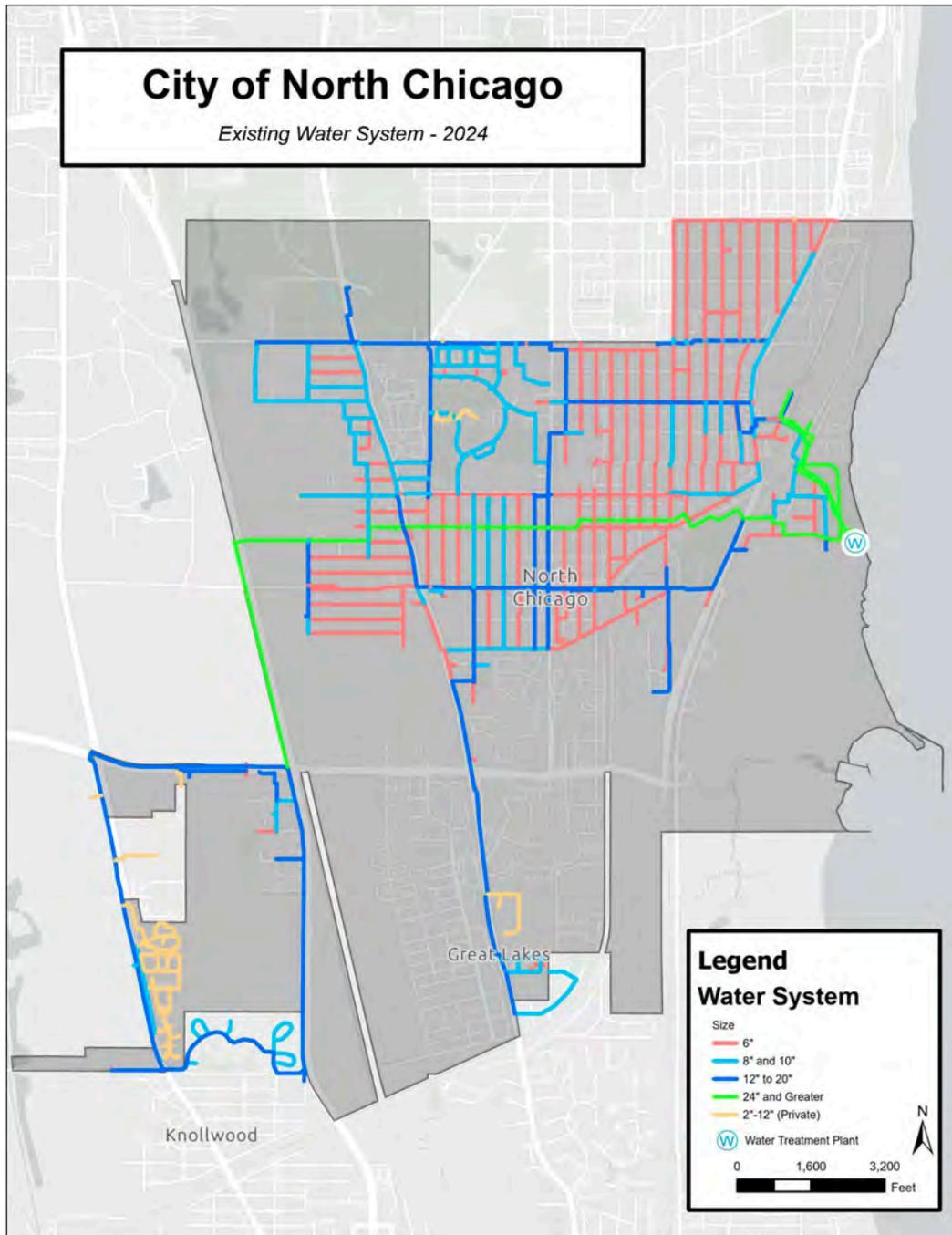
If peak demands could in part be met by water stored in-system, the water treatment systems could be operated at a consistent base rate. The high lift pumps could also be run at more consistent rates determined to maximize the efficiency of pumping. Because of that, and to increase system reliability and flexibility of operations, the City is pursuing the construction of a new elevated water tower.



2.5 WATER DISTRIBUTION SYSTEM

The existing City of North Chicago water distribution system is shown on **Exhibit 5**. The existing water distribution system includes 3" through 24" water main, valves, hydrants, a 4 MG standpipe, and an abandoned 1 MG underground storage tank with booster station. The 1 MG underground storage tank is planned for demolition and removal.

Exhibit 5: Existing City Water Distribution System





The total footage of water main pipe in the various diameters are listed in **Table 7**. This table does not include private water mains or the pipelines that convey untreated water to AbbVie.

Table 7: Existing Water Mains

| Water Main Diameter (inches) | Length (feet) | Length (miles) | Percentage (%) |
|------------------------------|---------------|----------------|----------------|
| 3 | 435 | 0.08 | 0.14% |
| 4 | 120 | 0.02 | 0.04% |
| 6 | 138,600 | 26.3 | 43.09% |
| 8 | 68,157 | 12.9 | 21.19% |
| 10 | 6,561 | 1.2 | 2.04% |
| 12 | 60,495 | 11.5 | 18.81% |
| 16 | 23,980 | 4.5 | 7.45% |
| 24 | 23,335 | 4.4 | 7.25% |
| Totals | 321,683 | 60.9 | 100.0% |

The City water distribution system includes more than 61 miles of water main pipelines ranging from 3" to 24" in diameter. Approximately 43.3 percent of the distribution system is comprised of water main pipes less than 8 inches in diameter. In order to improve available fire flows throughout the system, the City has adopted a long-term plan to replace these undersized water mains with larger mains that are at least 8 inches in diameter.

2.5.1 Transmission Mains

Exhibit 6 illustrates the current transmission mains in the North Chicago distribution system and shows all existing 12", 16", and 24" transmission mains.

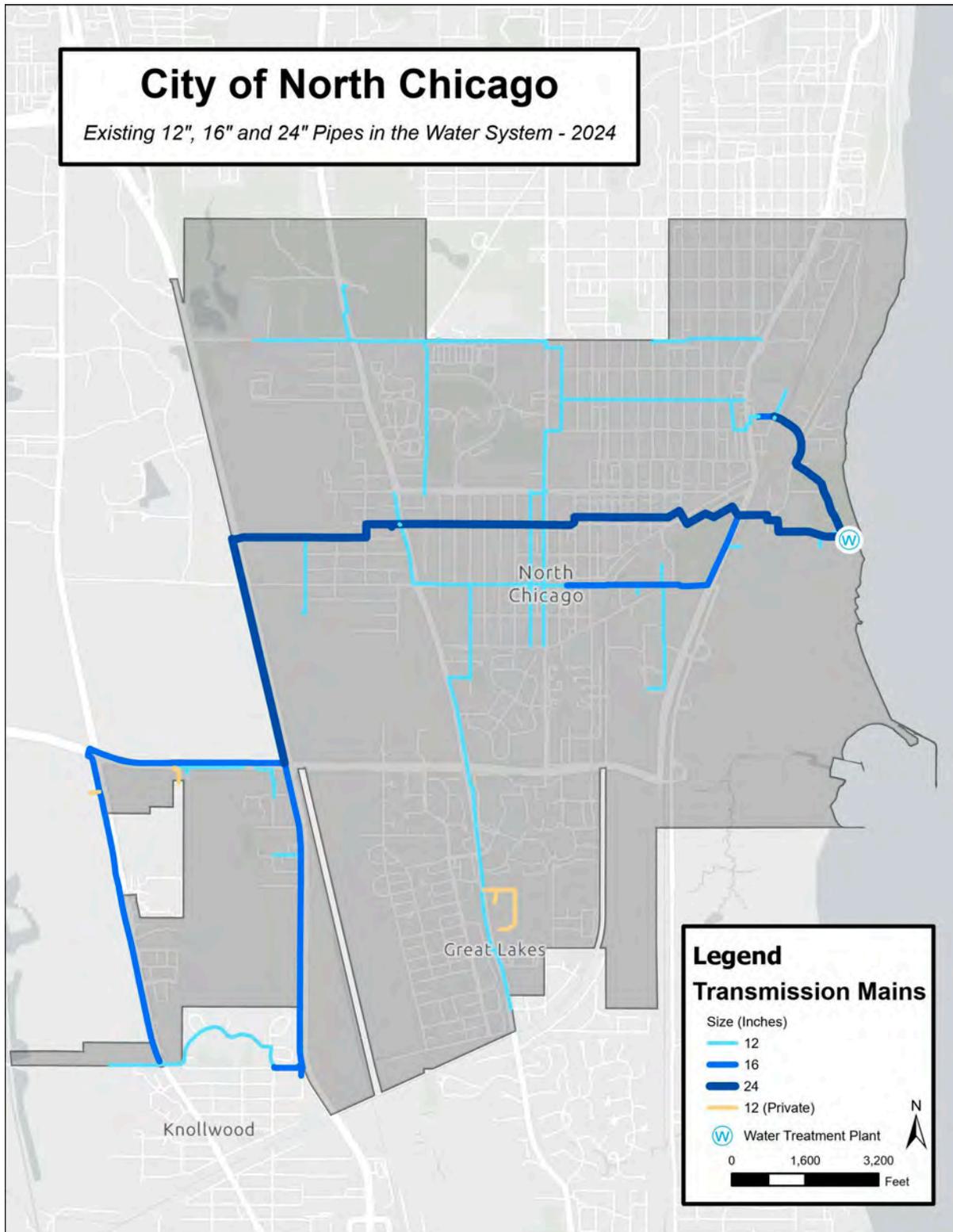
The backbone of the distribution system is a 24" transmission main that extends from the North Chicago WTP west generally along 20th Street to the 4 MG standpipe just west of Green Bay Road, and then extends further west and south to Buckley Road. From there a 16" transmission main extends west along Buckley Road to Abbott Laboratories.

A second 24" transmission main is routed north from the North Chicago WTP to serve the northern areas of the system. However, this main connects to smaller mains at Sheridan Road and as such available fire flows in the northern reaches of the system are not as great as along the main transmission main to the south.

Other 12" and 16" transmission mains convey water from the 24" transmission main into the distribution system.



Exhibit 6: Existing Transmission Mains (12", 16" and 24")





2.5.2 Fire Protection Requirements

The City of North Chicago currently has adopted by ordinance the 2006 Edition of the International Fire Code (IFC). The 2006 International Fire Code establishes minimum fire flow requirements.

Minimum fire flows are a function of multiple variables that include land use, type of building and the nature of the surrounding area. Minimum required levels of fire protection include the rate at which fire flows are delivered, the duration for which that flow rate must be sustained, and the residual pressure that must be maintained at the point of delivery.

Fire flow requirements used for hydraulic modeling and assessment of the North Chicago water distribution systems are summarized in **Table 8**. Undersized water mains currently restrict fire flows in portions of the City to less than that prescribed by the Code and City Ordinance. The hydraulic analyses performed during master planning identified which of those mains should be replaced with larger pipes to deliver the required fire flow. Any new water main installed should be a minimum of 8-inch diameter.

Table 8: Fire Flow Requirements

| Parameter | Residential | Commercial/Industrial |
|---------------------------------|-------------|-----------------------|
| Minimum Fire Flow, gpm | 1,000 | 3,000 |
| Duration, hours | 3 | 3 |
| Minimum Residual Pressure, psi | 20 | 20 |
| Total Volume Delivered, gallons | 180,000 | 540,000 |

3. PROJECT DESCRIPTION

The project includes the replacement of existing lead water service lines within the City of North Chicago water distribution system. The project is needed to protect public health, and to comply with Federal and State requirements to remove all lead water service lines from the system.

The City completed their inventory of existing lead services within the system. The results of that inventory are shown on **Exhibits 7 through 10**. Tabulations of lead and galvanized service lines by address are presented in **Appendices C and D**, respectively. The results of the lead service line inventory are summarized in **Table 9**. The proposed project will include the replacement of all lead and galvanized service lines from the main to the water meter inside the building.

Table 9: Lead Service Line Material Inventory Summary

| Service Line Material | Total Number of Services |
|-----------------------|--------------------------|
| Copper | 4,691 |
| Galvanized | 140 |
| Lead | 753 |
| PVC | 10 |
| Steel | 60 |
| TOTAL | 5,654 |



Exhibit 7: Lead Service Line Inventory Map - Overall

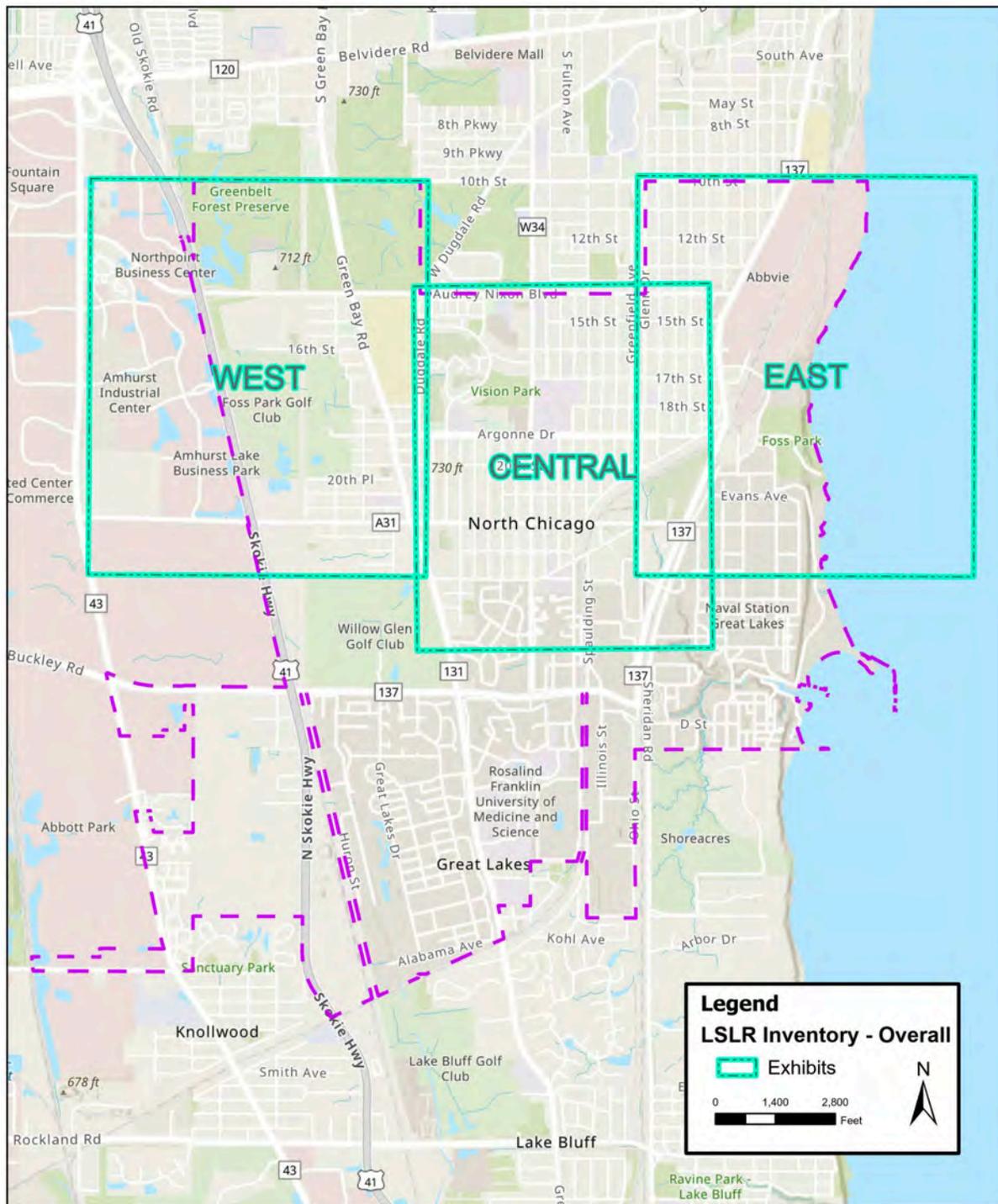




Exhibit 8: Lead Service Line Inventory Map – West Area

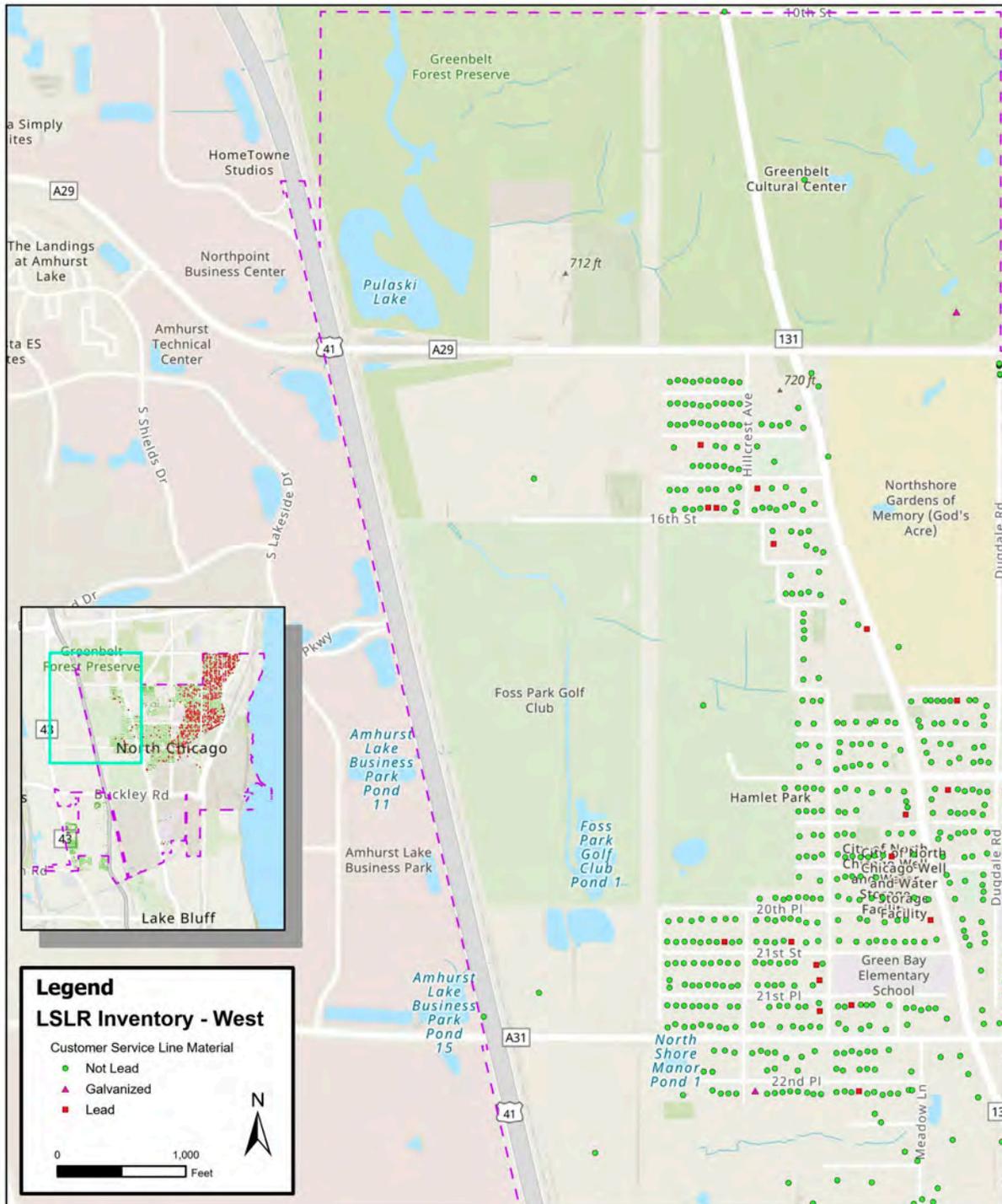




Exhibit 9: Lead Service Line Inventory Map – Central Area

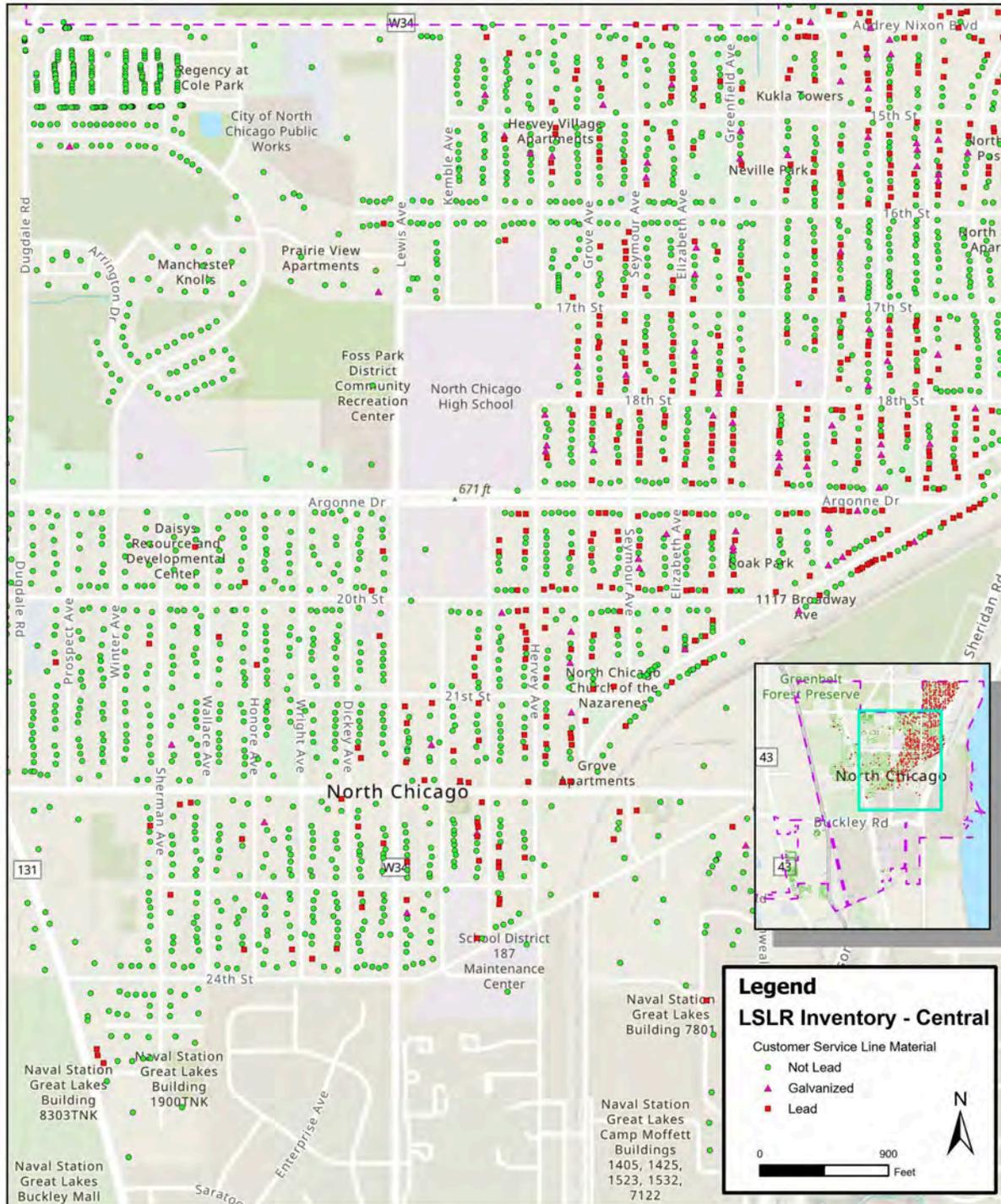




Exhibit 10: Lead Service Line Inventory Map – East Area





4. PUBLIC WATER SUPPLY REGULATORY COMPLIANCE

IEPA Safe Drinking Water program project planning guidelines require the identification of any existing or possible future violations of any Federal or State public water supply regulations (Maximum Contaminant Levels, Treatment Technique Requirements, Technical Policy Violations, etc.). There are currently no existing or anticipated future violations of public water supply regulations.

Illinois EPA testing conducted in June of 2021 detected trace levels of PFOA and PFOS in the raw water drawn from Lake Michigan at the North Chicago WTP. The levels of PFAS detected at that time, as well as in subsequent testing performed by the City, are well below the 4.0 ppt maximum contaminant limit established by the United States EPA in April of 2024.

5. BASIS OF DESIGN

The basis of design for the replacement of lead water services is listed in **Table 10**.

Table 10: Basis of Design

| Description | Type |
|------------------------|---|
| Pipe materials | Copper Type K |
| Diameter | 1-inch minimum, match existing |
| Extent of replacement | Water main to water meter or 18 inches inside house, whichever is greater |
| Minimum depth of cover | 5-1/2 feet to top of pipe |
| Pipe protection | Polyethylene wrap |
| Service Saddle | Rockwell Model 317 w/stainless steel nuts and bolts |
| Corporation stops | Mueller Model B-25000N |
| Curb stops | Mueller Model B-25154N |
| Buffalo boxes | Screw type – Tyler 6500, 95-E |
| Water meters | Furnished by City |

6. INVENTORY OF ENVIRONMENTAL IMPACTS

Construction of the lead service line replacements and associated site work will be limited to properties currently served with lead water service lines. Currently, the only anticipated environmental impacts are construction-related noise, dust, traffic, and soil displacement. These impacts are minor, temporary, and will be mitigated through best management practices during construction.

The Illinois Historical Preservation Agency (IHPA) and Illinois Department of Natural Resources (IDNR) have been consulted to determine any additional environmental impacts as a result of constructing the proposed Lead Service Line Replacements. The results of these consultations will be forwarded to the IEPA upon their completion. EcoCAT was used to identify protected resources that may be in the vicinity of the proposed project and this information is being provided to the IDNR for their evaluation.

The request for the IHPA Section 106 review was also submitted. The project is currently under review.



7. TOTAL PROBABLE PROJECT COSTS

The cost to replace each lead service line will vary depending on location, diameter, and existing surface features that will need to be avoided or restored. An opinion of probable costs was developed for a typical lead service line replacement to be extended for the entire project. These costs are summarized in **Table 11**.

Table 11: Probable Costs for Typical Lead Service Line Replacement

| Description | | |
|---|----------------------|------------|
| Average Length – water main to ROW | 33 | LF |
| Average Length – ROW to building | 25 | LF |
| Construction: | | |
| Exploratory Excavation | \$ 140 | /EA |
| Water Main Tap and Corporation Stop | \$ 3,500 | /EA |
| Trenchless Water Service Replacement | \$ 2,320 | /EA |
| Curb Stop and Box | \$ 2,500 | /EA |
| Interior Connection to Meter | \$ 3,000 | /EA |
| Trench Backfill | \$ 800 | /EA |
| Lawn Restoration | \$ 625 | /EA |
| Pavement Patch | \$ 600 | /EA |
| Curb and Gutter Replacement | \$ 420 | /EA |
| Sidewalk Replacement | \$1,200 | /EA |
| Plumbing Allowance | \$ 1,000 | /EA |
| Subtotal Direct Construction Cost per Service | \$ 16,105 | /EA |
| Contingency @ 10% | \$ 1,610 | /EA |
| Total Direct Construction Cost per Service | \$ 17,715 | /EA |
| Design Engineering @ 7.5% | \$ 1,330 | /EA |
| Engineering & Administration @ 7.5% | \$ 1,330 | /EA |
| TOTAL CAPITAL COST PER SERVICE | \$ 20,375 | /EA |
| Number of Services | 893 | |
| TOTAL CAPITAL COST | \$ 18,194,875 | |



8. ESTIMATED LOAN TERMS

Estimated loan terms include project capital costs, estimated loan amounts, interest rate, repayment period, and the annual loan repayment.

8.1 PROJECT CAPITAL COSTS

Probable capital costs for the Lead Service Line Replacement projects are summarized in **Table 12**.

Table 12: Probable Capital Costs – Selected Plan (Phases 1 through 6)

| Description | Total Probable Capital Cost Phase 1 | Total Probable Capital Cost Phase 2 | Total Probable Capital Cost Phase 3 | Total Probable Capital Cost Phase 4 | Total Probable Capital Cost Phase 4 | Total Probable Capital Cost Phase 4 |
|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| # of Lead Service Replacements | 150 | 150 | 150 | 150 | 150 | 143 |
| Direct Construction Cost / Service | \$16,105 | \$ 16,105 | \$ 16,105 | \$ 16,105 | \$ 16,105 | \$ 16,105 |
| Total Direct Construction Cost | \$ 2,415,750 | \$ 2,415,750 | \$ 2,415,750 | \$ 2,415,750 | \$ 2,415,750 | \$ 2,303,015 |
| Contingency @ 10% | \$ 241,575 | \$ 241,575 | \$ 241,575 | \$ 241,575 | \$ 241,575 | 230,300 |
| Total Construction Cost | \$ 2,657,325 | \$ 2,657,325 | \$ 2,657,325 | \$ 2,657,325 | \$ 2,657,325 | 2,533,315 |
| Design Engineering @ 7.5% | \$ 199,300 | \$ 199,300 | \$ 199,300 | \$ 199,300 | \$ 199,300 | 190,000 |
| Construction Engineering @ 7.5% | \$ 199,300 | \$ 199,300 | \$ 199,300 | \$ 199,300 | \$ 199,300 | 190,000 |
| TOTAL CAPITAL COST | \$ 3,055,925 | \$ 3,055,925 | \$ 3,055,925 | \$ 3,055,925 | \$ 3,056,925 | \$ 2,913,315 |

8.2 LOAN REPAYMENT SCHEDULE

The City plans on financing the Lead Service Line Replacements program with a low-interest loan secured through the IEPA PWSLP. Based on the opinions of probable capital costs and project schedule presented above, the current IEPA loan base interest rate of 1.87 percent, and a traditional 30-year loan, preliminary loan repayment schedules for Phase 1 through 5 are presented in **Table 13** and for Phase 6 in **Table 14**.

Note that the loan repayment schedules presented in **Tables 13 and 14** are for repayment of the full loan amount, base interest rates, and the standard 30-year repayment period. **The City anticipates receiving principal forgiveness for up to 100% for this project, and approval for reduced interest rates and extended loan terms for any portion of the loan that is not eligible for principal forgiven.**



Table 13: PWSLP LSLR Debt Retirement Schedule - Full Amount, Base Rate & 30-yr Term – Phases 1 through 5

| Loan Principal Amount | \$ 3,055,925 | | | | |
|-----------------------|-----------------------------|-------------------|------------------|---------------|--------------------------|
| Interest Rate: | 1.87% | | | | |
| Loan Term: | 30 years | | | | |
| Annual Payment: | \$134,020 | | | | |
| Year | Beginning Principal Balance | Principal Payment | Interest Payment | Total Payment | Ending Principal Balance |
| 0 | \$ 3,055,925 | \$ 0 | \$ 57,146 | \$ 57,146 | \$ 3,055,925 |
| 1 | \$ 3,055,925 | \$ 76,874 | \$ 57,146 | \$ 134,020 | \$ 2,979,051 |
| 2 | \$ 2,979,051 | \$ 78,312 | \$ 55,708 | \$ 134,020 | \$ 2,900,739 |
| 3 | \$ 2,900,739 | \$ 79,776 | \$ 54,244 | \$ 134,020 | \$ 2,820,963 |
| 4 | \$ 2,820,963 | \$ 81,268 | \$ 52,752 | \$ 134,020 | \$ 2,739,695 |
| 5 | \$ 2,739,695 | \$ 82,788 | \$ 51,232 | \$ 134,020 | \$ 2,656,908 |
| 6 | \$ 2,656,908 | \$ 84,336 | \$ 49,684 | \$ 134,020 | \$ 2,572,572 |
| 7 | \$ 2,572,572 | \$ 85,913 | \$ 48,107 | \$ 134,020 | \$ 2,486,659 |
| 8 | \$ 2,486,659 | \$ 87,519 | \$ 46,501 | \$ 134,020 | \$ 2,399,140 |
| 9 | \$ 2,399,140 | \$ 89,156 | \$ 44,864 | \$ 134,020 | \$ 2,309,984 |
| 10 | \$ 2,309,984 | \$ 90,823 | \$ 43,197 | \$ 134,020 | \$ 2,219,160 |
| 11 | \$ 2,219,160 | \$ 92,522 | \$ 41,498 | \$ 134,020 | \$ 2,126,639 |
| 12 | \$ 2,126,639 | \$ 94,252 | \$ 39,768 | \$ 134,020 | \$ 2,032,387 |
| 13 | \$ 2,032,387 | \$ 96,014 | \$ 38,006 | \$ 134,020 | \$ 1,936,373 |
| 14 | \$ 1,936,373 | \$ 97,810 | \$ 36,210 | \$ 134,020 | \$ 1,838,563 |
| 15 | \$ 1,838,563 | \$ 99,639 | \$ 34,381 | \$ 134,020 | \$ 1,738,924 |
| 16 | \$ 1,738,924 | \$ 101,502 | \$ 32,518 | \$ 134,020 | \$ 1,637,422 |
| 17 | \$ 1,637,422 | \$ 103,400 | \$ 30,620 | \$ 134,020 | \$ 1,534,022 |
| 18 | \$ 1,534,022 | \$ 105,334 | \$ 28,686 | \$ 134,020 | \$ 1,428,688 |
| 19 | \$ 1,428,688 | \$ 107,303 | \$ 26,716 | \$ 134,020 | \$ 1,321,385 |
| 20 | \$ 1,321,385 | \$ 109,310 | \$ 24,710 | \$ 134,020 | \$ 1,212,075 |
| 21 | \$ 1,212,075 | \$ 111,354 | \$ 22,666 | \$ 134,020 | \$ 1,100,721 |
| 22 | \$ 1,100,721 | \$ 113,436 | \$ 20,583 | \$ 134,020 | \$ 987,284 |
| 23 | \$ 987,284 | \$ 115,558 | \$ 18,462 | \$ 134,020 | \$ 871,727 |
| 24 | \$ 871,727 | \$ 117,719 | \$ 16,301 | \$ 134,020 | \$ 754,008 |
| 25 | \$ 754,008 | \$ 119,920 | \$ 14,100 | \$ 134,020 | \$ 634,088 |
| 26 | \$ 634,088 | \$ 122,162 | \$ 11,857 | \$ 134,020 | \$ 511,925 |
| 27 | \$ 511,925 | \$ 124,447 | \$ 9,573 | \$ 134,020 | \$ 387,479 |
| 28 | \$ 387,479 | \$ 126,774 | \$ 7,246 | \$ 134,020 | \$ 260,704 |
| 29 | \$ 260,704 | \$ 129,145 | \$ 4,875 | \$ 134,020 | \$ 131,560 |
| 30 | \$ 131,560 | \$ 131,560 | \$ 2,460 | \$ 134,020 | \$ 0 |



Table 14: PWSLP LSLR Debt Retirement Schedule – Full Amount, Base Rate & 30-yr Term – Phase 6

| Loan Principal Amount | \$2,913,315 | | | | |
|-----------------------|-----------------------------|-------------------|------------------|---------------|--------------------------|
| Interest Rate: | 1.87% | | | | |
| Loan Term: | 30 years | | | | |
| Annual Payment: | \$127,766 | | | | |
| Year | Beginning Principal Balance | Principal Payment | Interest Payment | Total Payment | Ending Principal Balance |
| 0.21 | \$2,913,315 | \$0 | \$54,479 | \$54,479 | \$2,913,315 |
| 1 | \$2,913,315 | \$73,287 | \$54,479 | \$127,766 | \$2,840,028 |
| 2 | \$2,840,028 | \$74,657 | \$53,109 | \$127,766 | \$2,765,371 |
| 3 | \$2,765,371 | \$76,053 | \$51,712 | \$127,766 | \$2,689,318 |
| 4 | \$2,689,318 | \$77,475 | \$50,290 | \$127,766 | \$2,611,843 |
| 5 | \$2,611,843 | \$78,924 | \$48,841 | \$127,766 | \$2,532,918 |
| 6 | \$2,532,918 | \$80,400 | \$47,366 | \$127,766 | \$2,452,518 |
| 7 | \$2,452,518 | \$81,904 | \$45,862 | \$127,766 | \$2,370,615 |
| 8 | \$2,370,615 | \$83,435 | \$44,330 | \$127,766 | \$2,287,180 |
| 9 | \$2,287,180 | \$84,995 | \$42,770 | \$127,766 | \$2,202,184 |
| 10 | \$2,202,184 | \$86,585 | \$41,181 | \$127,766 | \$2,115,599 |
| 11 | \$2,115,599 | \$88,204 | \$39,562 | \$127,766 | \$2,027,396 |
| 12 | \$2,027,396 | \$89,853 | \$37,912 | \$127,766 | \$1,937,542 |
| 13 | \$1,937,542 | \$91,534 | \$36,232 | \$127,766 | \$1,846,009 |
| 14 | \$1,846,009 | \$93,245 | \$34,520 | \$127,766 | \$1,752,763 |
| 15 | \$1,752,763 | \$94,989 | \$32,777 | \$127,766 | \$1,657,774 |
| 16 | \$1,657,774 | \$96,765 | \$31,000 | \$127,766 | \$1,561,009 |
| 17 | \$1,561,009 | \$98,575 | \$29,191 | \$127,766 | \$1,462,434 |
| 18 | \$1,462,434 | \$100,418 | \$27,348 | \$127,766 | \$1,362,016 |
| 19 | \$1,362,016 | \$102,296 | \$25,470 | \$127,766 | \$1,259,720 |
| 20 | \$1,259,720 | \$104,209 | \$23,557 | \$127,766 | \$1,155,511 |
| 21 | \$1,155,511 | \$106,158 | \$21,608 | \$127,766 | \$1,049,354 |
| 22 | \$1,049,354 | \$108,143 | \$19,623 | \$127,766 | \$941,211 |
| 23 | \$941,211 | \$110,165 | \$17,601 | \$127,766 | \$831,046 |
| 24 | \$831,046 | \$112,225 | \$15,541 | \$127,766 | \$718,821 |
| 25 | \$718,821 | \$114,324 | \$13,442 | \$127,766 | \$604,497 |
| 26 | \$604,497 | \$116,462 | \$11,304 | \$127,766 | \$488,036 |
| 27 | \$488,036 | \$118,639 | \$9,126 | \$127,766 | \$369,396 |
| 28 | \$369,396 | \$120,858 | \$6,908 | \$127,766 | \$248,538 |
| 29 | \$248,538 | \$123,118 | \$4,648 | \$127,766 | \$125,420 |
| 30 | \$125,420 | \$125,420 | \$2,345 | \$127,766 | (\$0) |



8.3 PRINCIPAL FORGIVENESS

The PWSLP includes provisions for principal forgiveness, discounted interest rates, and loan duration. The IEPA currently offers four options for loan applicants to receive subsidies, in the form of principal forgiveness.

- Lead Service Line Replacement (LSLR) Principal Forgiveness
- Disadvantaged Community Principal Forgiveness
- Small System Compliance Assistance Principal Forgiveness
- One Well Critical Review Principal Forgiveness

8.3.1 Lead Service Line Replacement (LSLR) Principal Forgiveness

Illinois EPA received its FFY23 Bipartisan Infrastructure Law (BIL) DWSRF lead service line replacement funding of \$230,177,000 to assist public water supply systems in Illinois with identification and removal of lead service lines. There is a reallocation of \$9,568,000, and an unspent carryover balance of \$11,860,030 from SFY24 that is being added to the FFY23 BIL Lead Service Line Replacement Grant to make the total funding \$251,605,030. States must provide 49% of the capitalization grant and reallocation amounts as principal forgiveness to water systems that meet the state's disadvantaged community criteria. The other 51% of the Capitalization Grant must be provided as a loan, whose principal must be repaid back to Illinois EPA.

The City of North Chicago meets the state's disadvantaged community criteria and anticipates receiving principal forgiveness in that amount available, up to 100%, of the loan amount, at the time the loan agreement is issued. For FY2025 there was an initial cap of \$3,027,000 per loan recipient for Principal Forgiveness to maximize giving money to as many communities as possible.

8.3.2 Emerging Contaminant Principal Forgiveness

All Emerging Contaminant funds will be provided as 100% Principal Forgiveness. Once all eligible projects are scored and ranked, Emerging Contaminant Principal Forgiveness is allocated using a funding cap, starting at the top of the scoring list. Any loan applicant can receive up to \$7,295,000 in Emerging Contaminants funding in FY2025. A funding cap was established to ensure all loan applicants receive some level of Principal Forgiveness assistance since the demand for this funding was higher than the money available. Projects that are receiving Principal Forgiveness also have the option of applying for the regular PWSLP funding if they wish to cover the remaining cost of their project.

8.3.3 Disadvantaged Community Principal Forgiveness

Section 1452 of the SDWA allows States to provide up to 35 percent of the available Capitalization Grants Fund to provide subsidization, in the form of principal forgiveness, for loan recipients who meet the definition of a disadvantaged community.

Disadvantaged Community – A public water supply owned by a local government unit or not for-profit water corporation that qualifies for either the Small Community Rate or Hardship Rate as defined in Section 662.210.



For Fiscal Year 2025, the maximum amount of principal forgiveness for disadvantaged communities was equivalent to 71 percent of the initial loan amount (exclusive of costs related to, and eligible for, lead service line replacement principal forgiveness) up to a maximum of \$5,000,000.

The criteria for a Hardship Rate apply to public water supplies with service populations of less than 10,000. The City of North Chicago does not meet this criterion.

The City does however meet the criteria for the Small Community Rate, which are:

Small Community Rate – A public water supply with a service population less than 25,000 that also meets any one of the following three criteria qualify for a fixed loan rate equal to 75% of the Base 30 Year Rate:

- 1) The median household income of the public water supply's serviced population is less than the statewide average.*
- 2) The unemployment rate of the public water supply's service population is greater than the statewide average.*
- 3) The public water supply's annual user charge, based upon the average monthly bill of the public water supply's residential customers, is greater than 1.0 % of the median household income of the public water supply service population.*

While the population of North Chicago is 30,490, only 16,813 residents are connected to the City water system. The remainder of the City is served by the United States Navy water system that serves Naval Station Great Lakes. The service population of the North Chicago water system is less than the 25,000 threshold. In addition, the median household income in North Chicago of \$52,011 is less than the statewide average of \$87,820 (Criteria 1) and unemployment in the City is approximately 8.5% while the statewide average is only 5.2% (Criteria 2). Therefore, the City would qualify for this type of principal forgiveness.

Since all costs for this project are related to, and eligible for, Lead Service Line Replacement principal forgiveness, Disadvantaged Community Principal Forgiveness does not apply.

8.3.4 Small System Compliance Assistance Principal Forgiveness

This principal forgiveness is for community water supplies with health-based MCL violations, where the EPA has initiated an enforcement action, the median household income is below the State average median household income, and where fewer than 1,500 customers are served. North Chicago meets none of these criteria.

8.3.5 One Well Critical Review Principal Forgiveness

This principal forgiveness is for community water supplies which are only served by one well and are on the IEPA's Critical Review list. This does not apply to North Chicago.



8.3.6 Principal Forgiveness Summary

The City is requesting that principal forgiveness be granted up to the maximum amount for their Lead Service Line Replacement program. As stated earlier, the City meets the state’s disadvantaged community criteria. The project is planned to be completed in phases over a 6-year period in order to maximize the use of Principal Forgiveness, currently capped at \$3,027,000 per loan recipient per year.

8.4 INTEREST RATE AND DISCOUNTED RATES

The current Base 30-year loan rate for Fiscal Year 2025 is 1.87%. The Loan Rules allow for reduced interest rates, based upon certain criteria, as well as the possibility for a maximum term of up to 40 years for disadvantaged communities. The IEPA currently offers three options for loan applicants to receive a reduced interest rate.

- Small Community Rate
- Hardship Rate
- Environmental Impact Discount

8.4.1 Small Community Rate

As discussed above the City of North Chicago qualifies for the small community rate because the service population is less than 25,000, the median household income is less than the statewide average, the unemployment rate in the City is greater than the statewide average.

8.4.2 Hardship Rate

A public water supply with a service population less than 10,000 may qualify for a fixed loan rate of 1.0%. North Chicago does not meet this criterion.

8.4.3 Environmental Impact Discount

When at least 50% of the eligible project costs fund green infrastructure projects, project lowering water demand, projected reducing energy demands at a public water supply, or projects involving the removal or replacement of lead in water mains or service lines, the loan applicate is eligible to receive a 0.2% discount from the rates established under the Base Rate, Small Community Rate, or Hardship Rate rules. Since all costs for this project are related to the removal or replacement of lean in water mains or service lines, the City qualifies for the 0.2% discount of the base 30-year rate for any portion of the loan that is not eligible for principal forgiveness.

8.5 LOAN TERM

The loan repayment period cannot typically exceed the lesser of 30 years beyond the initiation of operation date, 30 years beyond the initiation of the loan repayment period, or the projected useful life of the project to be financed with proceeds of the loan. For loan applicants that qualify as a disadvantaged



community, for which North Chicago currently meets the criteria, the loan repayment period can be extended to 40 years for any portion of the loan that is not eligible for principal forgiveness.

9. FINANCIAL ARRANGEMENTS

This section includes a discussion of financial arrangements for assuring adequate annual debt service, coverage requirements, and the description of the dedicated source of revenue necessary for loan repayment. Included are current system revenues, operating expenses, debt obligations, capital improvements, cash reserves, and net income.



9.1 ENTERPRISE FUND REVENUES

Water and sewer user charges are included in Enterprise Fund revenues. Recent and current Enterprise Fund revenues as presented in the City’s FY 2025 Budget (2024-2025) are summarized in **Table 15**.

Table 15: Enterprise Fund Revenues

| Account | Account Description | Actuals (FY 2023) | Estimate (FY 2024 YE Projected) | Budget (FY 2025) |
|--------------|--|---------------------|---------------------------------|----------------------|
| 70.000.30000 | Property Tax – Water 2014B | \$ 285,613 | ABATE | ABATE |
| | SUBTOTAL TAXES | \$ 285,613 | - | - |
| 70.00.33000 | Grant Proceeds | - | - | \$ 500,000 |
| | SUBTOTAL GRANT | - | - | \$ 500,000 |
| 70.000.34300 | Water Usage - Commercial | \$ 283,275 | \$ 331,356 | \$ 289,680 |
| 70.000.34305 | Water Usage - Industrial | 1,224,223 | 1,586,307 | 1,000,000 |
| 70.000.34310 | Water Usage - Residential | 1,511,996 | 1,452,965 | 1,499,400 |
| 70.000.34315 | Water Usage – Abbott Park | 877,744 | 308,333 | 943,500 |
| 70.000.34320 | Water Usage – AbbVie Raw Water | 551,434 | 526,840 | 510,000 |
| 70.000.34325 | Water - Penalties/Late Charges | 63,608 | 36,224 | 53,900 |
| 70.000.34330 | Service Restoration Fees | 12,437 | 12,275 | 15,000 |
| 70.000.34335 | Water Meter Sales | 14,278 | 3,725 | 9,690 |
| 70.000.34340 | Tap-On Fees | 14,000 | 34,586 | 5,100 |
| 70.000.34350 | Base Water Fees – Commercial | 115,024 | 108,632 | 115,000 |
| 70.000.34355 | Base Water Fees – Industrial | 62,595 | 90,504 | 62,600 |
| 70.000.34360 | Base Water Fees – Residential | 559,324 | 559,558 | 555,000 |
| 70.000.34365 | Base Water Fees – Abbott Park | 43,506 | 14,502 | 43,505 |
| 70.000.34370 | Base Water Fees – Abbvie | 23,706 | 13,829 | - |
| 70.000.34400 | Sewer Usage – Commercial | 111,597 | 123,891 | 117,300 |
| 70.000.34405 | Sewer Usage – Industrial | 465,872 | 419,738 | 63,852 |
| 70.000.34410 | Sewer Usage – Residential | 672,296 | 713,165 | 566,100 |
| 70.000.34415 | Base Sewer Fees – Commercial | 15,424 | 15,417 | 44,375 |
| 70.000.34420 | Base Sewer Fees – Industrial | 9,256 | 9,067 | 23,706 |
| 70.000.34425 | Base Sewer Fees – Residential | 84,784 | 85,208 | 112,200 |
| 70.000.34430 | Sewer - Penalties/Late Charges | 25,717 | 15,894 | 438,600 |
| 70.000.34700 | Refuse Hauling Fees | 876,793 | 913,672 | 688,500 |
| | SUBTOTAL CHARGES FOR SERVICES | \$ 7,618,892 | \$ 7,374,940 | \$ 7,591,054 |
| 70.000.37000 | Interest | \$ 141,233 | \$ 188,344 | \$ 50,00 |
| 70.000.37020 | Interest – Investments | (59,296) | 58,127 | 54,815 |
| | SUBTOTAL INTEREST | (\$ 56,934) | \$ 246,471 | \$ 104,815 |
| 70.000.39010 | Transfer In - General Fund | \$ 0 | \$ 0 | \$ 0 |
| | SUBTOTAL TRANSFERS | \$ 0 | \$ 0 | \$ 0 |
| 70.000.38210 | IEPA Loan Proceeds – 16 th St Transmission Main | - | \$ 2,481,182 | \$ 8,024,103 |
| | IEPA Loan Proceeds - LSLR | - | - | - |
| 70.000.38070 | Miscellaneous Revenue | 2,526 | 9,650 | 10,200 |
| | SUBTOTAL MISCELLANEOUS | \$ 2,526 | \$ 2,490,832 | \$ 8,034,303 |
| | TOTAL ENTERPRISE FUND REVENUE | \$ 7,770,148 | \$ 10,112,243 | \$ 16,230,172 |



9.2 WATER SYSTEM EXPENSES

Enterprise Fund expenses include water and sewer utility expenses, refuse collection and engineering services. Recent and current Water System expenses as presented in the City’s FY 2025 Budget (2024-2025) are summarized in **Table 16**.

Table 16: Water System Expenses

| Account | Account Description | Actuals (FY 2023) | Estimate (FY 2024 YE Projected) | Budget (FY 2025) |
|--------------|---------------------------------------|-------------------|---------------------------------|---------------------|
| 70.500.40000 | Full-Time Wages | \$ 796,490 | \$ 809,788 | \$ 994,762 |
| | Part-Time Wages | 19,285 | 21,707 | 16,500 |
| | Compensated Absences | (5,867) | - | - |
| 70.500.40010 | Overtime - Straight | - | - | - |
| 70.500.40100 | Overtime – 1.5x | 127,253 | 108,657 | 150,000 |
| 70.500.40300 | Sick Leave Sell Back | - | 333 | - |
| | SUBTOTAL SALARIES AND WAGES | \$ 937,160 | \$ 940,485 | \$ 1,161,262 |
| 70.500.41000 | Health Insurance – ER | \$ 95,275 | \$ 155,377 | \$ 152,759 |
| 70.500.41020 | Dental Insurance – ER | 6,857 | 13,594 | 13,877 |
| 70.500.41023 | Vision Insurance – ER | 6,406 | 557 | 1,795 |
| 70.500.41030 | Life Insurance – ER | 2,132 | 2,126 | 2,694 |
| 70.500.41140 | IMRF Contribution - ER | 48,840 | 26,474 | 28,939 |
| 70.500.41200 | Social Security – ER | 50,304 | 22,000 | 61,378 |
| 70.500.41220 | Medicare - ER | 15,140 | 47,048 | 14,374 |
| | SUBTOTAL EMPLOYEE BENEFITS | \$ 224,954 | \$ 267,175 | \$ 275,816 |
| 70.500.42000 | Travel & Training | \$ 2,143 | \$ 8,845 | \$ 9,000 |
| 70.500.42010 | Dues & Memberships | 3,516 | 765 | 1,000 |
| 70.500.42100 | Uniforms | 9,215 | 7,418 | 10,000 |
| | SUBTOTAL EMPLOYEE - OTHER | \$14,874 | \$ 17,028 | \$ 20,000 |
| 70.500.50000 | Audit Services | \$ 26,130 | \$ 6,700 | \$ 20,000 |
| 70.500.50020 | Accounting Services | 47,903 | 13,579 | - |
| 70.500.50200 | Engineering Services | 216,735 | 122,913 | 150,000 |
| 70.500.50810 | Distribution System Leak Detection | 495 | 5,000 | 60,000 |
| 70.500.50850 | Water Sample Collections Testing | 10,299 | 21,112 | 20,000 |
| 70.500.50860 | Water Meter Testing & Calibration | - | 13,333 | 150,000 |
| 70.500.50900 | Other Professional Services | 98,092 | 16,540 | 56,000 |
| | SUBTOTAL PROFESSIONAL SERVICES | \$ 399,653 | \$ 199,176 | \$ 456,000 |
| 70.500.51000 | Utilities – Electric | \$ 364,804 | \$ 500,322 | \$ 500,000 |
| 70.500.51010 | Utilities – Gas | 63,648 | 27,449 | 40,000 |
| 70.500.51020 | Utilities – Telephone | 7,347 | 5,563 | 6,000 |
| | SUBTOTAL UTILITIES | \$ 435,799 | \$ 533,334 | \$ 546,000 |



| | | | | |
|--------------|--|-------------------|-------------------|-------------------|
| 70.500.52020 | Intake Inspection & Cleaning | \$ 805 | \$ 79,667 | - |
| 70.500.52025 | Janitorial Services | 11,153 | 11,010 | 10,560 |
| 70.500.52030 | Landscape Services | - | 3,333 | 5,000 |
| 70.500.52040 | Pest Control | 386 | | |
| 70.500.52060 | Postage | 15,167 | 13,209 | 15,000 |
| 70.500.52065 | Printing & Publishing | 15,207 | 14,617 | 19,000 |
| 70.500.52070 | Software Licensing & Annual Fees | 11,711 | 15,000 | 40,000 |
| 70.500.52100 | Maintenance – Buildings | 14,880 | 25,631 | 37,000 |
| 70.500.52101 | Maintenance – Boiler | - | 7,134 | 15,000 |
| 70.500.52110 | Maintenance – Equipment | 91,532 | 255,479 | 293,945 |
| 70.500.52113 | Maintenance – High Voltage Electric | - | 3,333 | 45,000 |
| 70.500.52115 | Maintenance – Other | - | - | 12,000 |
| 70.500.52148 | Maintenance – Water Distribution System | | - | 50,000 |
| 70.500.52150 | Maintenance – Vehicles | 6,615 | 7,141 | 10,000 |
| 70.500.52200 | Rentals | - | 333 | 1,000 |
| 70.500.52400 | Sludge Treatment | 1,768 | 3,333 | 100,000 |
| 70.500.52405 | Utility Spoil Disposal | 8,820 | 6,667 | 50,000 |
| | SUBTOTAL PURCHASED SERVICES | \$ 178,044 | \$ 445,888 | \$ 703,505 |
| 70.500.53100 | General Liability Insurance Premiums | \$ 273,000 | \$ 374,920 | \$ 281,190 |
| | SUBTOTAL INSURANCE | \$ 273,000 | \$ 374,920 | \$ 281,190 |
| 70.500.60010 | Gasoline | \$ 7,201 | \$ 8,453 | \$ 9,500 |
| 70.500.60020 | Supplies – Maintenance | 10,813 | 21,006 | 75,000 |
| 70.500.60030 | Supplies – Office | 583 | 892 | 1,500 |
| 70.500.60040 | Supplies – Operating | 135,514 | 288,449 | 300,000 |
| 70.500.60200 | Water Meters | 46,482 | 38,951 | 75,000 |
| | SUBTOTAL COMMODITIES | \$ 200,593 | \$ 357,751 | \$ 461,000 |
| 70.500.65000 | Bank & Credit Card Fees | \$ 27,385 | \$ 13,204 | \$ 25,000 |
| 70.500.65020 | Investment Fees | - | 67 | - |
| | Loss on Disposal of Fixed Assets | - | - | - |
| 70.500.65080 | Miscellaneous Expense | 468 | - | - |
| 70.500.60042 | Emergency Water Supply | | 151,942 | |
| | Miscellaneous Expense – Uncollectable Water | - | - | - |
| | SUBTOTAL OTHER EXPENSES | \$ 27,853 | \$ 165,212 | \$ 25,000 |
| 70.500.70000 | Land – Water Tower Property Acquisition | - | \$ 110,000 | \$ 300,000 |
| 70.500.71000 | Building Improvements | 37,979 | 146,022 | 284,800 |
| 70.500.71800 | Infrastructure – WTP Building and Grounds | 4,500 | 50,000 | 5,520,000 |
| 70.500.73800 | Infrastructure – Water Distribution System | | 237,033 | 465,000 |
| 70.500.73801 | Transmission Main – 16 th Street & Kemble | 22,263 | 3,593,554 | 6,185,762 |
| 70.500.73802 | Infrastructure – Water Misc Improvements | - | 316,032 | 900,000 |



| | | | | |
|--------------|---|---------------------|---------------------|----------------------|
| 70.500.73804 | Infrastructure – Water Supply | - | 802,226 | 495,000 |
| | 2 MG Elevated Storage Tank | - | - | - |
| 70.500.75000 | Equipment | 7,723 | 70,413 | 90,000 |
| | Water Meter Replacement Program – 10 yrs | - | - | - |
| 70.500.75015 | Surveillance Cameras | 83,706 | - | - |
| 76000 | Vehicles | - | 352,723 | - |
| 70.500.78000 | Other Improvements | 6,101 | - | - |
| | SUBTOTAL CAPITAL OUTLAY | \$ 162,272 | \$ 5,678,003 | \$ 14,240,562 |
| 70.500.80100 | Bond Principal 2014B – Defeasance Bonds | \$ 416,020 | - | - |
| | Defense Bonds | - | - | - |
| 70.500.80110 | Bond Interest 2014B | 20,200 | - | - |
| 70.500.80200 | Lease Principal | 5,023 | 1,792 | - |
| 70.500.80210 | Lease Interest | - | - | - |
| 70.500.80300 | Loan Principal – LCDOT | 233,569 | 233,570 | 233,570 |
| | IEPA Principal Interest – 2 MG Water Tower | - | - | - |
| | IEPA Principal – 16 th St & Kemble Transmission Main | - | - | - |
| | IEPA Interest – 16 th St & Kemble Transmission Main | - | - | - |
| | IEPA Principal Interest – LSLR | - | - | - |
| | Escrow Fee – Defeased 2014B | - | - | - |
| 70.500.80400 | Fiscal Agent Fees 2014B | 488 | 500 | - |
| | SUBTOTAL DEBT SERVICE | \$ 675,300 | \$ 235,862 | \$ 233,570 |
| 70.500.99010 | Transfers Out – General Fund | - | - | - |
| 70.500.99053 | Transfers Out – Debt Service 2014B | - | - | - |
| | SUBTOTAL TRANSFERS OUT | - | - | - |
| | TOTAL WATER FUND EXPENSES | \$ 3,529,503 | \$ 9,214,835 | \$ 18,403,905 |

9.3 CURRENT ENTERPRISE FUND DEBT PAYMENTS

The City of North Chicago Enterprise Fund has current and pending debt payments. An annual principal payment of \$233,570 is made to the Lake County Department of Transportation (DOT)

The City entered into a loan agreement with the IEPA for the construction of the 16th Street and Kemble Avenue Transmission Main. Construction of that project is nearing completion, and it is anticipated that the final costs will be well below the approved amount of the loan. The final figures are not yet available but based on the project budget, the debt service schedule would be as summarized in **Table 17**.



Table 17: PWSLP L175812 - 16th St & Kemble Transmission Main – Tentative Debt Retirement Schedule

| Total Project Budget | \$10,505,285 | | | | |
|-----------------------|-----------------------------|-------------------|------------------|---------------|--------------------------|
| Principal Forgiveness | \$1,250,000 | | | | |
| Loan Principal Amount | \$9,255,285 | | | | |
| Interest Rate: | 0.93% | | | | |
| Loan Term: | 30 years | | | | |
| Annual Payment: | \$354,968 | | | | |
| Year | Beginning Principal Balance | Principal Payment | Interest Payment | Total Payment | Ending Principal Balance |
| 0 | \$9,255,285 | \$0 | \$86,074 | \$86,074 | \$9,255,285 |
| 1 | \$9,255,285 | \$268,894 | \$86,074 | \$354,968 | \$8,986,391 |
| 2 | \$8,986,391 | \$271,395 | \$83,573 | \$354,968 | \$8,714,996 |
| 3 | \$8,714,996 | \$273,919 | \$81,049 | \$354,968 | \$8,441,077 |
| 4 | \$8,441,077 | \$276,466 | \$78,502 | \$354,968 | \$8,164,611 |
| 5 | \$8,164,611 | \$279,037 | \$75,931 | \$354,968 | \$7,885,573 |
| 6 | \$7,885,573 | \$281,633 | \$73,336 | \$354,968 | \$7,603,941 |
| 7 | \$7,603,941 | \$284,252 | \$70,717 | \$354,968 | \$7,319,689 |
| 8 | \$7,319,689 | \$286,895 | \$68,073 | \$354,968 | \$7,032,794 |
| 9 | \$7,032,794 | \$289,563 | \$65,405 | \$354,968 | \$6,743,230 |
| 10 | \$6,743,230 | \$292,256 | \$62,712 | \$354,968 | \$6,450,974 |
| 11 | \$6,450,974 | \$294,974 | \$59,994 | \$354,968 | \$6,156,000 |
| 12 | \$6,156,000 | \$297,718 | \$57,251 | \$354,968 | \$5,858,282 |
| 13 | \$5,858,282 | \$300,486 | \$54,482 | \$354,968 | \$5,557,796 |
| 14 | \$5,557,796 | \$303,281 | \$51,688 | \$354,968 | \$5,254,515 |
| 15 | \$5,254,515 | \$306,101 | \$48,867 | \$354,968 | \$4,948,414 |
| 16 | \$4,948,414 | \$308,948 | \$46,020 | \$354,968 | \$4,639,466 |
| 17 | \$4,639,466 | \$311,821 | \$43,147 | \$354,968 | \$4,327,644 |
| 18 | \$4,327,644 | \$314,721 | \$40,247 | \$354,968 | \$4,012,923 |
| 19 | \$4,012,923 | \$317,648 | \$37,320 | \$354,968 | \$3,695,275 |
| 20 | \$3,695,275 | \$320,602 | \$34,366 | \$354,968 | \$3,374,672 |
| 21 | \$3,374,672 | \$323,584 | \$31,384 | \$354,968 | \$3,051,089 |
| 22 | \$3,051,089 | \$326,593 | \$28,375 | \$354,968 | \$2,724,495 |
| 23 | \$2,724,495 | \$329,631 | \$25,338 | \$354,968 | \$2,394,865 |
| 24 | \$2,394,865 | \$332,696 | \$22,272 | \$354,968 | \$2,062,169 |
| 25 | \$2,062,169 | \$335,790 | \$19,178 | \$354,968 | \$1,726,379 |
| 26 | \$1,726,379 | \$338,913 | \$16,055 | \$354,968 | \$1,387,466 |
| 27 | \$1,387,466 | \$342,065 | \$12,903 | \$354,968 | \$1,045,401 |
| 28 | \$1,045,401 | \$345,246 | \$9,722 | \$354,968 | \$700,154 |
| 29 | \$700,154 | \$348,457 | \$6,511 | \$354,968 | \$351,698 |
| 30 | \$351,698 | \$351,698 | \$3,271 | \$354,968 | \$0 |



9.4 ENTERPRISE FUND NET INCOME

Recent and current net income (or loss) for the Enterprise Fund as presented in the City FY 2025 Budget is summarized in **Table 18**. In FY 2023 the Enterprise Fund operated at a surplus of \$3,397,499, while year-end estimates for FY2024 project a deficit of \$636,820.

Table 18: Enterprise Fund Net Income (Loss)

| Account Description | Actuals (FY 2023) | Estimate (FY 2024 Year End Projected) |
|---------------------------------------|----------------------|---|
| BEGINNING NET POSITION | \$ 5,940,991 | \$ 9,338,491 |
| ENTERPRISE FUND REVENUES | | |
| Taxes | - | - |
| Grant | - | - |
| Charges for Services | 7,618,892 | 7,374,940 |
| Interest | 148,730 | 246,471 |
| Transfers In | - | - |
| Miscellaneous | 2,526 | 2,490,832 |
| TOTAL ENTERPRISE FUND REVENUES | \$ 7,770,148 | \$ 10,112,243 |
| ENTERPRISE FUND EXPENSES | | |
| Salaries and Wages | 1,060,098 | 1,137,339 |
| Employee Benefits | 265,634 | 328,200 |
| Employee - Other | 19,170 | 22,455 |
| Professional Services | 480,739 | 278,736 |
| Utilities | 436,985 | 534,114 |
| Purchased Services | 1,052,414 | 1,523,372 |
| Insurance | 273,000 | 374,920 |
| Commodities | 272,553 | 419,827 |
| Other Expenses | 27,853 | 165,212 |
| Capital Outlay | 169,866 | 5,678,003 |
| Debt Service | 314,336 | 286,886 |
| Transfer Out | - | - |
| TOTAL ENTERPRISE FUND EXPENSES | \$ 4,372,649 | \$ 10,749,063 |
| CHANGE IN NET POSITION | \$ 3,397,499 | (\$ 636,820) |
| ENDING NET POSITION | \$ 9,338,491 | \$ 8,701,671 |



10. WATER USER RATES AND AVERAGE CHARGES

Current water user rate charges are summarized in **Table 19**, assuming an average of 2.6 PE per connection and a per capita demand for water of 50 gcd (130 gallons per day per connection).

Table 19: Water and Sewer User Rates

| Description | Rate Structure (Up to 3/4" Meter) | Rate Structure (1" Meter) |
|-----------------------------------|--------------------------------------|------------------------------|
| Monthly Water Base Fee | \$ 10.37 | \$ 17.20 |
| Water Use Charge per 1000 gallons | \$ 5.11 | \$ 5.11 |
| Monthly Water use charge | 19.93 | 19.93 |
| Total Monthly Water Charge | 30.30 | 37.13 |
| Median Household Income | \$ 52,011 | \$52,011 |
| % of MHI for Water Charges | 0.70% | 0.86% |

The City's water user rate structure includes a discount for senior or disabled citizens who receive their first two thousand (2,000) gallons of water each bi-monthly billing period at no charge.

10.1 ECONOMIC IMPACT

The Median Household Income for the City of North Chicago is \$52,011. The estimated percentage of MHI used for payment of water fees is currently approximately 0.70% to 0.86%.

The City anticipates receiving Principal Forgiveness for 100% of the amount of the IEPA low-interest loan. Therefore, this project will have no impact on water charges paid by the City's customers. Based on the affordability criteria established by the IEPA, no significant economic impacts are expected from the proposed project.

11. GREEN COMPONENTS

The entirety of this project involves the removal or replacement of lead from water mains or service lines in the North Chicago water distribution system.



12. PROJECT SCHEDULE

The City anticipates that construction of the Phase 1 project will commence in July 2026 and be completed by July 2027 as shown on the Project Schedule presented in **Table 20**. Phases 2 through 6 would follow in each subsequent year in a similar manner.

Table 20: Project Schedule

| Task | Phase 1 Completion Date |
|---|-------------------------|
| Submit Funding Nomination Form | March 2024 |
| Submit Project Plan | October 2024 |
| Submit Design Documents and IEPA Permit Application ⁽¹⁾ | January 2025 |
| Submit Complete Low-Interest Loan Application | January 2025 |
| Advertisement to Bid Published | January 2025 |
| Construction Bid Opening | February 2025 |
| Close on Low-Interest Loan | June 2025 |
| Commence Construction | July 2025 |
| Substantial Completion | July 2026 |
| Final Completion | October 2026 |
| ⁽¹⁾ It is anticipated that an IEPA construction permit will not be required. | |



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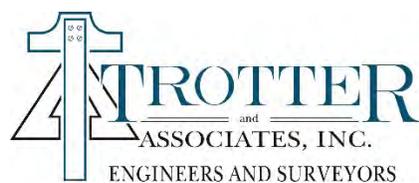
CITY OF NORTH CHICAGO

**LEAD SERVICE LINE REPLACEMENTS
PROJECT PLANNING REPORT**

APPENDIX A

**FUNDING NOMINATION FORM FOR PUBLIC WATER SUPPLY LOAN PROGRAM
LEAD SERVICE LINE REPLACEMENT PROJECTS**

Prepared By:





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Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217)782-2027

RESET FORM



FUNDING NOMINATION FORM FOR PUBLIC WATER SUPPLY LOAN PROGRAM LEAD SERVICE LINE REPLACEMENT PROJECTS

Annual Filing Deadline: March 31st

FOR AGENCY USE ONLY

LOAN NUMBER: L17 Check here if NEW project without a loan number

1. LEGAL NAME OF APPLICANT: City of North Chicago

2. ADDRESS OF APPLICANT: 1850 Lewis Ave
North Chicago, IL 60064

3. ORGANIZATIONAL TYPE:
- Unit of Local Government
 - Investor-Owned Water Utility
 - Not for Profit Water Corporation
 - Mutually or Cooperatively Owned Water System
 - Other: _____

4. LOCATION INFORMATION:
- a. County: Lake County
 - b. U.S. Congressional District #: 10
 - c. IL House District #: 58/60
 - d. IL Senate District #: 29/30
 - e. Public Water Supply ID #: IL 0971250

5. AUTHORIZED REPRESENTATIVE:

Name: Bob Miller
 Title: Interim Public Works Director
 Phone: 847-875-4649
 Email: bmillier@northchicago.org

6. ENGINEER:

Name: Steve Cieslica, P.E.
 Firm: City Engineer
 Phone: 847-596-8870
 Email: s.cieslica@trotter-inc.com
 Address: 1850 Lewis Ave
North Chicago, IL 60064

7. BRIEF PROJECT DESCRIPTION – CURRENT FISCAL YEAR ONLY ESTIMATED COST: \$11,640,000
(Description must identify the number of lead service lines that you are seeking funding for in the current fiscal year)

Lead Service Line Replacement -The City of North Chicago has 1,164 that service lines that are lead or galvanized that will need replacement out of 4,494 water accounts. Phase 1 of the LSLR project will replace the lead service lines in the most congested areas first which aligns with the oldest area of the City. This will be a multi-year project as the cost to replace the lines far exceeds what the City can budget for.

8. POPULATION SERVED BY THE LOAN APPLICANT: 16,813
(Provide the entire service population of the applicant, not just the service population of the project area)

9. PROPOSED PROJECT SCHEDULE:
- a. Project Plan Approval Date: 09/01/2024
 - b. Advertise for Bids: 01/01/2025
 - c. Construction Start Date: 07/01/2025
 - d. Completion of Construction: 06/30/2026

10. Additional Questions regarding this Project:

- a. In the space below, provide the census tract(s) of the project area from the U.S. Department of Commerce, Bureau of Census of where the project described in #7 will take place:

(Find your census tract information here: [Census Bureau Data](#))

| | |
|------------------------------|---------------------|
| Census Tract: <u>8628</u> | County: <u>Lake</u> |
| Census Tract: <u>8629.02</u> | County: <u>Lake</u> |
| Census Tract: <u>8629.01</u> | County: <u>Lake</u> |
| Census Tract: <u>8632.01</u> | County: <u>Lake</u> |
| Census Tract: <u>8631</u> | County: <u>Lake</u> |
| Census Tract: <u>8630.04</u> | County: <u>Lake</u> |
| Census Tract: <u>8637.02</u> | County: <u>Lake</u> |
| Census Tract: _____ | County: _____ |

**If your project includes more census tracts than the space provided above, provide the additional census tract and corresponding county on a supplemental attachment. **

- b. Provide the outermost street names outlining the project area of the above-mentioned census tracts:

Beginning at the Southwest edge of the project boundary and moving clockwise: Atkinson Rd, Waukegan Rd, W Heiden Cir, Waukegan Rd, Buckley Rd, N Skokie Hwy, 10th St, 14th St, Glenn Dr, 10th St, Lakeview, Foss Park Ave, Sheridan Rd, Marrow Ave, 24th St, Greenbay Road, Buckley Road, Huron St, South to the railroad, west to N Skokie Hwy, back to Atkinson Rd.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____



DATE: _____

3/25/2024

DISCLAIMER:

1. In accordance with 35 Illinois Administrative Code Part 663, the priority scoring of lead service line replacement projects will occur during April and May of each year. Scoring will be based on the data from the US Department of Commerce, Bureau of Census' most recent American Community Survey 5-year estimate. Census data as of March 31 of each year to be utilized for scoring, will be posted on the Agency website.
2. Community water supply systems which have not completed their service line inventory in accordance with Section 17.12(d) of the Act are not eligible to be considered a Disadvantaged Community per 35 Illinois Administrative Code Part 663. Therefore, they are considered ineligible to receive additional subsidization (commonly known as principal forgiveness) funding for lead service line replacement through 35 Illinois Administrative Code Part 663.



CITY OF NORTH CHICAGO

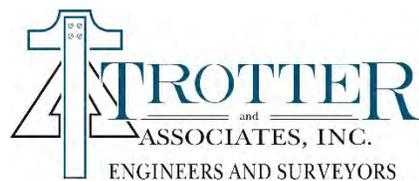
**LEAD SERVICE LINE REPLACEMENTS
PROJECT PLANNING REPORT**

APPENDIX B

DRINKING WATER PROJECT PLANNING SUBMITTAL CHECKLIST

EXISTING USER CHARGE AND O, M, AND R CERTIFICATION SHEET

Prepared By:





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Illinois Environmental Protection Agency

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Drinking Water Project Planning Submittal Checklist

Planning File

Before the Agency will begin review of a Project Plan, **a completed Funding Nomination Form** along with **ALL of the items below**, comprising the basic minimum requirements of a Project Plan, must be included and the page number(s) of all items noted. Project planning must contain all pertinent information detailed in Ill. Adm. Code 35 Section 662.320(e). The loan applicant should be familiar with their planning responsibilities as detailed in Sections 662.320 and 662.330. **If any of the basic information is not provided, the planning documentation may be returned.**

Loan Applicant: City of North Chicago

Consulting Engineer: Trotter and Associates, Inc.

Cons. Engr. Phone Number: (630) 587-4107 Email: b.benson@trotter-inc.com

Project Description:

Replacement of existing lead water services from the connection to the water main to the building plumbing at the first shut-off valve, or 18 inches inside the building, whichever is shorter.

Fill in the blank with the page(s) where each item below is found in the project plan. Additional information and/or examples for each item number are provided by corresponding numbers contained in the attached instructions.

| No. | Page(s) | Information |
|-----|---------|---|
| 1. | 1 - 7 | Loan applicant's background, total population served by the applicant, customer base, and project location information. |
| 2. | 8 - 16 | Detailed description of the EXISTING public water supply source(s), treatment facilities, water storage facilities, and distribution system. |
| 3. | 16 - 20 | Project description that explains the need and justification of the proposed project, including the benefits of the project. |
| 4. | 21 | Discussion of the system's compliance with all applicable laws and regulations governing public water systems. |
| 5. | 21 | Basis of design for chosen alternative. |
| 6. | 21 | Inventory of environmental impacts from the chosen alternative and a discussion of the measures required during design and construction to mitigate or minimize negative environmental impacts. The discussion must address at a minimum; rare and endangered species, historic and cultural resources, prime agricultural land, air and water quality, recreational areas, wetlands, floodplains and other sensitive environmental areas. Note: The IEPA Loan Applicant Environmental Checklist must be signed by the loan applicant's authorized representative and submitted to the Agency with all applicable clearances and all records of consultation documentation. The records of consultation for all necessary environmental evaluations must be provided to the IEPA before a Final Planning Approval can be issued. The checklist is available at: https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/grants-loans/state-revolving-fund/documents/environmental_checklist.pdf . |

| | | |
|-----|----------|--|
| 7. | Attached | Reproducible 8.5 X 11-inch map(s) showing the project(s) location(s) relative to the community. |
| 8. | 22 | An estimate of the total project costs and a detailed estimate of construction item costs. |
| 9. | 23 - 29 | Estimated loan terms, including: IEPA loan amount, interest rate, repayment period in years, and the annual loan repayment. |
| 10. | 29 - 35 | Financial arrangements for assuring adequate annual debt service and O, M, and R coverage, a description of the dedicated source of revenue necessary for loan repayment, and any other funding involved in the project. |
| 11. | 36 | Detailed description of the existing residential water rate structure, water consumption, any proposed rate changes, and an example of the existing and the proposed average monthly residential water bill because of the project(s). |
| 12. | Attached | One copy of completed Existing User Charge and O, M, and R Certification Sheet found on page 3 (attached) should be submitted with the Project Plan. |
| 13. | 36 | Discussion of any "green" project components that are part of the proposed project. |
| 14. | 37 | Schedule for project implementation. |
| 15. | n/a | Copies of inter-governmental and/or service agreements. |
| 16. | n/a | IEPA construction permit status. |
| | | |

A Funding Nomination Form (FNF) must be submitted with the Project Plan and then annually (prior to March 31st) until a loan is issued, the project is funded by another source, or canceled. The FNF and complete instructions are available at the IEPA web site at this link: <https://epa.illinois.gov/content/dam/soi/en/web/epa/documents/epa-forms/water/financial-assistance/drinking-water/funding-nomination-form-pws-loan.pdf> .

Three (3) copies of the Project Plan and related documents should be submitted along with one (1) copy of this completed checklist (Pages 1 through 3) and one (1) copy of the completed Funding Nomination Form to:

Infrastructure Financial Assistance Section (IFAS)
 Illinois Environmental Protection Agency
 1021 North Grand Ave. East
 P.O. Box 19276
 Springfield, Illinois 62794

IFAS will distribute the planning documents to the appropriate Agency staff for review, comment, and approval. IFAS will contact the loan applicant if further information is needed.

Please use the box below for any special instructions or notes.



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Existing User Charge and O, M, and R Certification Sheet

3,893 Number of current residential customers served by the system.
6,623 Actual average residential water use per customer per month (based on historical billing data)
\$ 51.04 Current average Monthly residential bill

Provide details that apply to your specific user rate charges:

Water use charges: \$ 5.11 per 1,000 gallons
 _____ per _____ cubic feet

Flat Fee or Monthly User Charge: \$17.20

Debt Service Charge: _____

Capital Improvement Charge: _____

Wholesale Charge: _____

Meter Service Fee (average-sized meter): _____

Other Charge: _____

Explain: _____

Other Charge: _____

Explain: _____

1. Is the water/sewer fund annually operating in a positive or negative balance at this time? (select one)

Positive Negative

2. Based upon your most recent annual budget please indicate the net operating income for your water/sewer fund:

\$ 3,397,499 (FY 2023)

- **Net Operating Income = Total Revenue - Total Cost of Providing Service**
- **Total Revenue = Revenue from user charges, commercial, residential, or wholesale, plus any other dedicated water/sewer fund revenue**
- **Total Cost of Providing Service = All Operation and Maintenance costs (including replacement fund) plus dedicated water/sewer fund debt**

3. Will a rate increase or other revenue generating action be necessary to pay for this project? (select one)

Yes No

4. If a rate increase (or other cost increase) is necessary, please provide the proposed user rate charges and proposed average monthly residential water bill as an attachment.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Leon Rockingham, Jr.

Mayor

Authorized Representative (Printed)

Title

Leon Rockingham, Jr.
Signature

9/26/2024
Date



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CITY OF NORTH CHICAGO

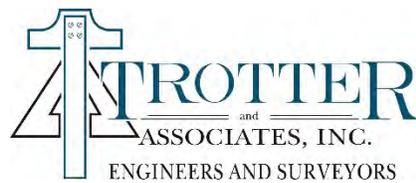
LEAD SERVICE LINE REPLACEMENTS

PROJECT PLANNING REPORT

APPENDIX C

LEAD SERVICE LINE INVENTORY - LEAD SERVICE LINES

Prepared By:





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| Address | Private Side Service Pipe Material |
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| 3041 15Th Pl., North Chicago, Il, 60064 | Lead |
| 1322 Lincoln Street, North Chicago, Il, 60064 | Lead |
| 1611 Elizabeth, North Chicago, Il, 60064 | Lead |
| 2920 20Th Street, North Chicago, Il, 60064 | Lead |
| 1720 Sheridan, North Chicago, Il, 60064 | Lead |
| 1716 Jackson Street, North Chicago, Il, 60064 | Lead |
| 818 13Th Street, North Chicago, Il, 60064 | Lead |
| 1821 Elizabeth Avenue, North Chicago, Il, 60064 | Lead |
| 2016 Lewis Avenue, North Chicago, Il, 60064 | Lead |
| 1801 Milk, North Chicago, Il, 60064 | Lead |
| 1741 Grove Avenue, North Chicago, Il, 60064 | Lead |
| 1044 Wadsworth, North Chicago, Il, 60064 | Lead |
| 1000 Audrey Nixon, North Chicago, Il, 60064 | Lead |
| 1540 Park, North Chicago, Il, 60064 | Lead |
| 1639 Seymour, North Chicago, Il, 60064 | Lead |
| 1418 Seymour, North Chicago, Il, 60064 | Lead |
| 2131 Hervey Avenue, North Chicago, Il, 60064 | Lead |
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| 1035 Mcalister, North Chicago, Il, 60064 | Lead |
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| 2128 Hervey Avenue, North Chicago, Il, 60064 | Lead |
| 2100 Kristan Avenue, North Chicago, Il, 60064 | Lead |
| 1801 Glenn Drive, North Chicago, Il, 60064 | Lead |
| 917 Argonne Drive, North Chicago, Il, 60064 | Lead |
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| 2961 21St Pl, North Chicago, Il, 60064 | Lead |
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| 1500 Park, North Chicago, Il, 60064 | Lead |
| 1503 Park, North Chicago, Il, 60064 | Lead |
| 1820 Seymour, North Chicago, Il, 60064 | Lead |
| 2057 Grove, North Chicago, Il, 60064 | Lead |
| 2022 Grove, North Chicago, Il, 60064 | Lead |
| 1923 Grove, North Chicago, Il, 60064 | Lead |
| 1418 Grove, North Chicago, Il, 60064 | Lead |
| 1539 Morrow, North Chicago, Il, 60064 | Lead |
| 1746 Elizabeth, North Chicago, Il, 60064 | Lead |
| 1824 Greenfield, North Chicago, Il, 60064 | Lead |
| 1015 18Th St, North Chicago, Il, 60064 | Lead |
| 1011 18Th St, North Chicago, Il, 60064 | Lead |
| 1115 Argonne, North Chicago, Il, 60064 | Lead |
| 1226 Sheridan, North Chicago, Il, 60064 | Lead |
| 2030 Hervey, North Chicago, Il, 60064 | Lead |
| 1724 Greenbay, North Chicago, Il, 60064 | Lead |
| 2129 Kemble, North Chicago, Il, 60064 | Lead |
| 1600 17Th St, North Chicago, Il, 60064 | Lead |
| 2304 20Th St, North Chicago, Il, 60064 | Lead |
| 2044 Seymour, North Chicago, Il, 60064 | Lead |
| 2017 23Rd St, North Chicago, Il, 60064 | Lead |
| 2014 Seymour, North Chicago, Il, 60064 | Lead |
| 1007 Adam Pls St, North Chicago, Il, 60064 | Lead |
| 1201 Wadsworth Avenue, North Chicago, Il, 60064 | Lead |
| 1129 Wadsworth Avenue, North Chicago, Il, 60064 | Lead |
| 1103 Wordsworth Avenue, North Chicago, Il, 60064 | Lead |
| 3122 16Th Street, North Chicago, Il, 60064 | Lead |
| 1523 Park Avenue, North Chicago, Il, 60064 | Lead |
| 1110 14Th St, North Chicago, Il, 60064 | Lead |
| 1612 20Th St, North Chicago, Il, 60064 | Lead |
| 2008 20Th St, North Chicago, Il, 60064 | Lead |
| 3116 16Th St, North Chicago, Il, 60064 | Lead |
| 911 Audrey Nixon Blvd, North Chicago, Il, 60064 | Lead |
| 1815 Seymour Avenue, North Chicago, Il, 60064 | Lead |



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| 2213 Dickey, North Chicago, Il, 60064 | Lead |
| 811 14 St, North Chicago, Il, 60064 | Lead |
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| 1224 Jackson, North Chicago, Il, 60064 | Lead |
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| 1917 Elizabeth, North Chicago, Il, 60064 | Lead |
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| 1802 Morrow, North Chicago, Il, 60064 | Lead |
| 1219 Wadsworth, North Chicago, Il, 60064 | Lead |
| 1217 Wadsworth, North Chicago, Il, 60064 | Lead |
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| 1215 Glenn, North Chicago, Il, 60064 | Lead |
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| 1312 Adams Street, North Chicago, Il, 60064 | Lead |
| 1122 Wadsworth Avenue, North Chicago, Il, 60064 | Lead |
| 1117 Adams Street, North Chicago, Il, 60064 | Lead |
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| 1032 Mcalister Avenue, North Chicago, Il, 60064 | Lead |
| 1029 Mcalister Avenue, North Chicago, Il, 60064 | Lead |
| 1430 Greenfield Avenue, North Chicago, Il, 60064 | Lead |
| 1211 Victoria Avenue, North Chicago, Il, 60064 | Lead |
| 1145 Victoria Avenue, North Chicago, Il, 60064 | Lead |
| 1024 Victoria Avenue, North Chicago, Il, 60064 | Lead |
| 819 11Th Street, North Chicago, Il, 60064 | Lead |
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| 927 Broadway, North Chicago, Il, 60064 | Lead |
| 1700 Martin Luther King, North Chicago, Il, 60064 | Lead |
| 2336 Wright St, North Chicago, Il, 60064 | Lead |
| 1228 Park Up, North Chicago, Il, 60064 | Lead |
| 1228 Park Down, North Chicago, Il, 60064 | Lead |
| 1117 Lincoln, North Chicago, Il, 60064 | Lead |
| 1533 Jackson, North Chicago, Il, 60064 | Lead |
| 1920 Greenbay Rd, North Chicago, Il, 60064 | Lead |
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| 1800 Jackson, North Chicago, Il, 60064 | Lead |
| 1313 Glen Dr, North Chicago, Il, 60064 | Lead |
| 1025 Jackson, North Chicago, Il, 60064 | Lead |
| 1017 Mcalister, North Chicago, Il, 60064 | Lead |
| 1118 Argonne, North Chicago, Il, 60064 | Lead |
| 1833 Greenfield, North Chicago, Il, 60064 | Lead |
| 1136 Adamma,s, North Chicago, Il, 60064 | Lead |
| 1707 20Th St, North Chicago, Il, 60064 | Lead |
| 1618 20Th St, North Chicago, Il, 60064 | Lead |
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| 1509 Grove, North Chicago, Il, 60064 | Lead |
| 1409 14Th St, North Chicago, Il, 60064 | Lead |
| 1316 20Th St, North Chicago, Il, 60064 | Lead |
| 1527 Hervey, North Chicago, Il, 60064 | Lead |
| 2526 25Th St, North Chicago, Il, 60064 | Lead |
| 931 Broadway, North Chicago, Il, 60064 | Lead |
| 937 Broadway, North Chicago, Il, 60064 | Lead |
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| 937 Broadway, North Chicago, Il, 60064 | Lead |
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| 1022 Audrey Nixon, North Chicago, Il, 60064 | Lead |
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| 1218 Victoria, North Chicago, Il, 60064 | Lead |
| 1504 Elizabeth, North Chicago, Il, 60064 | Lead |
| 1016 Audrey Nixon, North Chicago, Il, 60064 | Lead |
| 1109 Audrey Nixon, North Chicago, Il, 60064 | Lead |
| 1107 Audrey Nixon, North Chicago, Il, 60064 | Lead |
| 1801 Audrey Nixon, North Chicago, Il, 60064 | Lead |
| 2338 Dickey Ave, North Chicago, Il, 60064 | Lead |
| 712 Broadway, North Chicago, Il, 60064 | Lead |
| 1744 Greenfield, North Chicago, Il, 60064 | Lead |
| 1817 Victoria Ave, North Chicago, Il, 60064 | Lead |
| 1808 Victoria Avenue, North Chicago, Il, 60064 | Lead |
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| 1640 Jackson St, North Chicago, Il, 60064 | Lead |
| 1636 Jackson Street, North Chicago, Il, 60064 | Lead |
| 1621 Jackson Street, North Chicago, Il, 60064 | Lead |
| 1543 Jackson Street, North Chicago, Il, 60064 | Lead |
| 1411 Jackson, North Chicago, Il, 60064 | Lead |
| 821 12 Th Street, North Chicago, Il, 60064 | Lead |
| 1538 Jackson Streer, North Chicago, Il, 60064 | Lead |
| 1101 Adams Street, North Chicago, Il, 60064 | Lead |
| 1509 Kristan, North Chicago, Il, 60064 | Lead |
| 1311 Glen Drive, North Chicago, Il, 60064 | Lead |
| 1827 Seymour Ave, North Chicago, Il, 60064 | Lead |
| 1301 Glenn Drive, North Chicago, Il, 60064 | Lead |
| 1833 Seymour Ave, North Chicago, Il, 60064 | Lead |
| 1910 Seymour Ave, North Chicago, Il, 60064 | Lead |
| 1914 Seymour Ave, North Chicago, Il, 60064 | Lead |
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| 800 Argonne Drive, North Chicago, Il, 60064 | Lead |
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| 1009Argonne Dr, North Chicago, Il, 60064 | Lead |
| 2450 Commonwealth, North Chicago, Il, 60064 | Lead |
| 1132 Mcalister, North Chicago, Il, 60064 | Lead |



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| 1300 Park, North Chicago, IL, 60064 | Lead |
| 1039 Park, North Chicago, IL, 60064 | Lead |
| 1022 Lenox, North Chicago, IL, 60064 | Lead |
| 1018 Adams, North Chicago, IL, 60064 | Lead |
| 1745 Greenfield, North Chicago, IL, 60064 | Lead |
| 1916 Greenfield, North Chicago, IL, 60064 | Lead |
| 1816 Elizabeth Ave, North Chicago, IL, 60064 | Lead |
| 1728 Elizabeth Ave, North Chicago, IL, 60064 | Lead |
| 1936 Greenfield, North Chicago, IL, 60064 | Lead |
| 1939 Greenfield, North Chicago, IL, 60064 | Lead |
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| 2126 Grove, North Chicago, IL, 60064 | Lead |
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| 2120 Grove, North Chicago, IL, 60064 | Lead |
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| 1910 Hervey, North Chicago, IL, 60064 | Lead |
| 2012 Hervey, North Chicago, IL, 60064 | Lead |
| 1922 Hervey, North Chicago, IL, 60064 | Lead |
| 2016 Hervey, North Chicago, IL, 60064 | Lead |
| 2020 Hervey, North Chicago, IL, 60064 | Lead |
| 2043 Hervey, North Chicago, IL, 60064 | Lead |
| 2107 Hervey, North Chicago, IL, 60064 | Lead |
| 2118 Hervey, North Chicago, IL, 60064 | Lead |
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| 2234 Hervey, North Chicago, IL, 60064 | Lead |
| 2217 Kristan, North Chicago, IL, 60064 | Lead |
| 1923 Kristan, North Chicago, IL, 60064 | Lead |
| 1909 Kristan, North Chicago, IL, 60064 | Lead |
| 1611 Kristan, North Chicago, IL, 60064 | Lead |
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| 404 11Th St, North Chicago, IL, 60064 | Lead |
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| 822 13Th St, North Chicago, IL, 60064 | Lead |
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| 1703 Argonne, North Chicago, IL, 60064 | Lead |
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| 1513 Argonne, North Chicago, IL, 60064 | Lead |
| 1005 Audrey Nixon, North Chicago, IL, 60064 | Lead |
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| 1046 Wadsworth, North Chicago, IL, 60064 | Lead |
| 1840 Lincoln, North Chicago, IL, 60064 | Lead |
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| 604 N Metropolitan Ave, Waukegan, Il, 60085 | Lead |
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| 1011 Adams St, North Chicago, 60064 | Lead |
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| 1325 Victoria Ave, Apartment 3, North Chicago, 60064 | Lead |
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| 1016 Lenox Ave, Apartment 2, North Chicago, 60064 | Lead |
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| 2222 Seymour Ave, North Chicago, 60064 | Lead |
| 1005 Adams St, Apartment 1, North Chicago, 60064 | Lead |
| 1005 Adams St, Apartment 3, North Chicago, 60064 | Lead |
| 1005 Adams St, Apartment 2, North Chicago, 60064 | Lead |
| 1704 Sheridan Rd, North Chicago, 60064 | Lead |
| 1313 Lincoln St, Apartment Rh, North Chicago, 60064 | Lead |
| 510 12Th St, Apartment B, North Chicago, 60064 | Lead |
| 510 12Th St, Apartment A, North Chicago, 60064 | Lead |
| 315 10Th St, North Chicago, 60064 | Lead |
| 317 10Th St, North Chicago, 60064 | Lead |
| 319 10Th St, North Chicago, 60064 | Lead |
| 321 10Th St, North Chicago, 60064 | Lead |
| 323 10Th St, North Chicago, 60064 | Lead |
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| 2127 Lewis Ave, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 1, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 2, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 103, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 4, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 3, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 5, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, Apartment 6, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 105, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 104, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 106, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 107, North Chicago, 60064 | Lead |



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| 1702 Sheridan Rd, Apartment 200, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 201, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 202, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 203, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 204, North Chicago, 60064 | Lead |
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| 1702 Sheridan Rd, Apartment 301B, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 301C, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 302A, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 302B, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, Apartment 302C, North Chicago, 60064 | Lead |
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| 417 10Th St, Apartment 1W, North Chicago, 60064 | Lead |
| 417 10Th St, Apartment 2E, North Chicago, 60064 | Lead |
| 417 10Th St, Apartment 2W, North Chicago, 60064 | Lead |
| 1606 Martin Luther King Jr Dr, North Chicago, 60064 | Lead |
| 1443 Elizabeth Ave, North Chicago, 60064 | Lead |
| 1429 Elizabeth Ave, Apartment 1, North Chicago, 60064 | Lead |
| 1429 Elizabeth Ave, Apartment 2, North Chicago, 60064 | Lead |
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| 707 17Th St, Apartment 207, North Chicago, 60064 | Lead |
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| 2137 Dickey Ave, Apartment 1E, North Chicago, 60064 | Lead |
| 2137 Dickey Ave, Apartment 1W, North Chicago, 60064 | Lead |
| 2137 Dickey Ave, Apartment 2E, North Chicago, 60064 | Lead |
| 2137 Dickey Ave, Apartment 2W, North Chicago, 60064 | Lead |
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| 1115 10Th St, North Chicago, 60064 | Lead |
| 707 17Th St, Apartment 303, North Chicago, 60064 | Lead |
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| 707 17Th St, Apartment 306, North Chicago, 60064 | Lead |



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| 1245 Glenn Dr, North Chicago, 60064 | Lead |
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| 1109 10Th St, Apartment 1, North Chicago, 60064 | Lead |
| 1606 Martin Luther King Jr Dr, Apartment 2, North Chicago, 60064 | Lead |
| 1109 10Th St, Apartment 2, North Chicago, 60064 | Lead |
| 701 Audrey Nixon Blvd, North Chicago, 60064 | Lead |
| 1008 Audrey Nixon Blvd, Apartment 1, North Chicago, 60064 | Lead |
| 1008 Audrey Nixon Blvd, Apartment 2F, North Chicago, 60064 | Lead |
| 1008 Audrey Nixon Blvd, Apartment 2R, North Chicago, 60064 | Lead |
| 806 Audrey Nixon Blvd, Apartment B, North Chicago, 60064 | Lead |
| 806 Audrey Nixon Blvd, Apartment C, North Chicago, 60064 | Lead |
| 806 Audrey Nixon Blvd, Apartment A, North Chicago, 60064 | Lead |
| 810 Audrey Nixon Blvd, North Chicago, 60064 | Lead |
| 905 Audrey Nixon Blvd, North Chicago, 60064 | Lead |
| 806 Audrey Nixon Blvd, Apartment D, North Chicago, 60064 | Lead |
| 810 Audrey Nixon Blvd, Apartment 1, North Chicago, 60064 | Lead |
| 810 Audrey Nixon Blvd, Apartment 2, North Chicago, 60064 | Lead |
| 1008 Audrey Nixon Blvd, North Chicago, 60064 | Lead |
| 1016 Lenox Ave, North Chicago, 60064 | Lead |
| 1005 Adams St, North Chicago, 60064 | Lead |
| 1325 Victoria Ave, North Chicago, 60064 | Lead |
| 1429 Elizabeth Ave, North Chicago, 60064 | Lead |
| 1515 Broadway Ave, North Chicago, 60064 | Lead |
| 1702 Sheridan Rd, North Chicago, 60064 | Lead |
| 2137 Dickey Ave, North Chicago, 60064 | Lead |
| 417 10Th St, North Chicago, 60064 | Lead |
| 510 12Th St, North Chicago, 60064 | Lead |
| 806 Audrey Nixon Blvd, North Chicago, 60064 | Lead |
| 707 17Th St, North Chicago, 60064 | Lead |
| 1102 Lincoln St, North Chicago, 60064 | Lead |



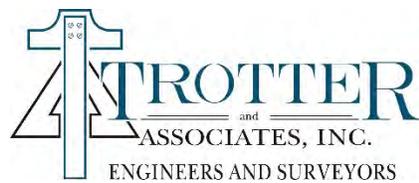
CITY OF NORTH CHICAGO

**LEAD SERVICE LINE REPLACEMENTS
PROJECT PLANNING REPORT**

APPENDIX D

LEAD SERVICE LINE INVENTORY - GALVANIZED SERVICE LINES

Prepared By:





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| Address | Private Side Service Pipe Material |
|---|------------------------------------|
| 2019 Elizabeth Avenue, North Chicago, IL, 60064 | Galvanized |
| 1153 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1310 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1204 Victoria Street, North Chicago, IL, 60064 | Galvanized |
| 1122 Lincoln Street, North Chicago, IL, 60064 | Galvanized |
| 1311 Lincoln Street, North Chicago, IL, 60064 | Galvanized |
| 822 Lincoln Street, North Chicago, IL, 60064 | Galvanized |
| 1233 Park, North Chicago, IL, 60064 | Galvanized |
| 1127 Park, North Chicago, IL, 60064 | Galvanized |
| 1116 Park Ave, North Chicago, IL, 60064 | Galvanized |
| 1114 Park Avenue, North Chicago, IL, 60064 | Galvanized |
| 1028 Park Ave, North Chicago, IL, 60064 | Galvanized |
| 1114 12Th Street, North Chicago, IL, 60064 | Galvanized |
| 1232 Adams St, North Chicago, IL, 60064 | Galvanized |
| 1316 Adams Street, North Chicago, IL, 60064 | Galvanized |
| 1314 Adams Street, North Chicago, IL, 60064 | Galvanized |
| 1322 Adams St, North Chicago, IL, 60064 | Galvanized |
| 1516 Hervey Ave, North Chicago, IL, 60064 | Galvanized |
| 1829 Hervey Ave, North Chicago, IL, 60064 | Galvanized |
| 1724 Grove Avenue, North Chicago, IL, 60064 | Galvanized |
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| 1531 Seymour Ave, North Chicago, IL, 60064 | Galvanized |
| 1633 Elizabeth, North Chicago, IL, 60064 | Galvanized |
| 1505 Greenfield, North Chicago, IL, 60064 | Galvanized |
| 1521 Greenfeild, North Chicago, IL, 60064 | Galvanized |
| 1748 Greenfield, North Chicago, IL, 60064 | Galvanized |
| 1829 Victoria Street, North Chicago, IL, 60064 | Galvanized |
| 1705 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1511 Lincoln Ave, North Chicago, IL, 60064 | Galvanized |
| 1721 Lincoln Ave, North Chicago, IL, 60064 | Galvanized |
| 1821 Lincoln Ave, North Chicago, IL, 60064 | Galvanized |
| 1314 Lincoln, North Chicago, IL, 60064 | Galvanized |
| 1833 Glenn Drive, North Chicago, IL, 60064 | Galvanized |
| 1835 Glenn Drive, North Chicago, IL, 60064 | Galvanized |
| 1809 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1834 Jackson Street, North Chicago, IL, 60064 | Galvanized |



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| 1510 Lincoln Street, North Chicago, Il, 60064 | Galvanized |
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| 1318 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1225 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1121 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1037 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1123 Broadway Avenue, North Chicago, Il, 60064 | Galvanized |
| 1425 Jackson Street, North Chicago, Il, 60064 | Galvanized |
| 1240 Victoria Avenue, North Chicago, Il, 60064 | Galvanized |
| 1244 Victoria Avenue, North Chicago, Il, 60064 | Galvanized |
| 1120 11Th Street, North Chicago, Il, 60064 | Galvanized |
| 1516 Lincoln Street, North Chicago, Il, 60064 | Galvanized |
| 1231 Park Avenue, North Chicago, Il, 60064 | Galvanized |
| 1028 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1125 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1224 Adams Street, North Chicago, Il, 60064 | Galvanized |
| 1119 Wadsworth Avenue, North Chicago, Il, 60064 | Galvanized |
| 1131 Wadsworth Avenue, North Chicago, Il, 60064 | Galvanized |
| 1809 Greenfield Avenue, North Chicago, Il, 60064 | Galvanized |
| 1806 Greenfield Avenue, North Chicago, Il, 60064 | Galvanized |
| 1911 Greenfield Avenue, North Chicago, Il, 60064 | Galvanized |
| 1914 Elizabeth Avenue, North Chicago, Il, 60064 | Galvanized |
| 2311 Lewis Avenue, North Chicago, Il, 60064 | Galvanized |
| 1734 Seymour Avenue, North Chicago, Il, 60064 | Galvanized |
| 1931 Seymour Avenue, North Chicago, Il, 60064 | Galvanized |
| 2032 Grove Avenue, North Chicago, Il, 60064 | Galvanized |
| 1827 Grove Avenue, North Chicago, Il, 60064 | Galvanized |
| 1427 Grove Avenue, North Chicago, Il, 60064 | Galvanized |
| 1517 Hervey Avenue, North Chicago, Il, 60064 | Galvanized |
| 1827 Hervey Avenue, North Chicago, Il, 60064 | Galvanized |
| 2128 Kemble Avenue, North Chicago, Il, 60064 | Galvanized |
| 918 Argonne Drive, North Chicago, Il, 60064 | Galvanized |
| 903 Broadway Avenue, North Chicago, Il, 60064 | Galvanized |
| 1023 Jackson Street, North Chicago, Il, 60064 | Galvanized |



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| 1510 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1016 Broadway Avenue, North Chicago, IL, 60064 | Galvanized |
| 1432 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1432 Elizabeth Avenue, North Chicago, IL, 60064 | Galvanized |
| 1823 Glenn Drive, North Chicago, IL, 60064 | Galvanized |
| 1927 Seymour Avenue, North Chicago, IL, 60064 | Galvanized |
| 1805 Hervey Avenue, North Chicago, IL, 60064 | Galvanized |
| 2217 Honore Avenue, North Chicago, IL, 60064 | Galvanized |
| 2016 Grove Avenue, North Chicago, IL, 60064 | Galvanized |
| 1801 Park Avenue, North Chicago, IL, 60064 | Galvanized |
| 1507 Kristan Avenue, North Chicago, IL, 60064 | Galvanized |
| 1812 Martin Luther King Jr Drive, North Chicago, IL, 60064 | Galvanized |
| 2104 Grove Avenue, North Chicago, IL, 60064 | Galvanized |
| 1024 Lincoln Street, North Chicago, IL, 60064 | Galvanized |
| 1119 Park Avenue, North Chicago, IL, 60064 | Galvanized |
| 1141 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1228 Adams Street, North Chicago, IL, 60064 | Galvanized |
| 1035 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1742 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1411 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1729 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 707 10Th Street, North Chicago, IL, 60064 | Galvanized |
| 705 10Th Street, North Chicago, IL, 60064 | Galvanized |
| 1020 Broadway Avenue, North Chicago, IL, 60064 | Galvanized |
| 1414 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1205 Adams Street, North Chicago, IL, 60064 | Galvanized |
| 1326 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1102 Park Avenue, North Chicago, IL, 60064 | Galvanized |
| 1115 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 2651 Kennedy Drive, North Chicago, IL, 60064 | Galvanized |
| 2220 Kristan Avenue, North Chicago, IL, 60064 | Galvanized |
| 2214 Commonwealth Avenue, North Chicago, IL, 60064 | Galvanized |
| 1019 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1124 Jackson Street, North Chicago, IL, 60064 | Galvanized |
| 1012 Victoria Avenue, North Chicago, IL, 60064 | Galvanized |
| 1014 Adams Street, North Chicago, IL, 60064 | Galvanized |
| 1440 Kristan Avenue, North Chicago, IL, 60064 | Galvanized |
| 1617 Jackson Street, North Chicago, IL, 60064 | Galvanized |

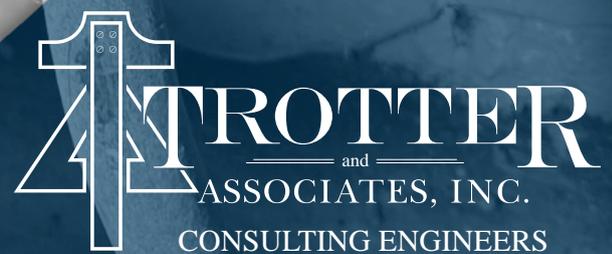


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| 1723 Elizabeth Avenue, North Chicago, Il, 60064 | Galvanized |
| 1645 Jackson Street, North Chicago, Il, 60064 | Galvanized |
| 1007 14Th St, North Chicago, Il, 60064 | Galvanized |
| 1106 14Th St, North Chicago, Il, 60064 | Galvanized |
| 1114 Wadsworth, North Chicago, Il, 60064 | Galvanized |
| 1524 Lincoln St, North Chicago, Il, 60064 | Galvanized |
| 2123 Sherman, North Chicago, Il, 60064 | Galvanized |
| 1819 Victoria, North Chicago, Il, 60064 | Galvanized |
| 1531 Lincoln, North Chicago, Il, 60064 | Galvanized |
| 1535 Lincoln, North Chicago, Il, 60064 | Galvanized |
| 919 Audrey Nixon Boulevard, North Chicago, Il, 60064 | Galvanized |
| 1003 Argonne Drive, North Chicago, Il, 60064 | Galvanized |
| 2301 Honore Avenue, North Chicago, Il, 60064 | Galvanized |
| 1619 Elizabeth, North Chicago, Il, 60064 | Galvanized |
| 1137 Wadsworth, North Chicago, Il, 60064 | Galvanized |
| 1521 Glen Dr, North Chicago, Il, 60064 | Galvanized |
| 1131 Alister, North Chicago, Il, 60064 | Galvanized |
| 2300 Hillcrest, North Chicago, Il, 60064 | Galvanized |
| 1925 Greenfield, North Chicago, Il, 60064 | Galvanized |
| 1921 Greenfield, North Chicago, Il, 60064 | Galvanized |
| 1242 Lincoln St, North Chicago, Il, 60064 | Galvanized |
| 1715 20Th Street, North Chicago, Il, 60064 | Galvanized |
| 1911 Jackson, North Chicago, Il, 60064 | Galvanized |
| 1100 Wadsworth, North Chicago, Il, 60064 | Galvanized |
| Prarie View 2, North Chicago, Il, 60064 | Galvanized |
| 711 18Th Street, North Chicago, Il, 60064 | Galvanized |
| 1236 Park Ave, North Chicago, Il, 60064 | Galvanized |
| 2172 W. Wicklow Ln, North Chicago, Il, 60064 | Galvanized |

City of North Chicago



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