Utilities Section Newsletter

League of Nebraska Municipalities

July 2022

'Wastewater epidemiology' helping to track spread and prevalence of COVID-19

Omaha, Lincoln, 11 other communities report data to the state

Editor's Note: This article appeared in the June 2022 Nebraska Municipal Review.

BY PAUL HAMMEL Nebraska Examiner See the Nebraska Examiner at https://nebraskaexaminer.com/

Reprinted by permission

LINCOLN – Call it "CSI of the sewers," but public works employees in Lincoln, Omaha and at least 11 other Nebraska communities are conducting surveillance of city wastewater to track the incidence of COVID-19.

The testing is a relatively new thing in the world of public heath and is giving epidemiologists and other health officials a new tool to track the spread of the coronavirus and decide best strategies to deal with it.

Scott Holmes of the Lincoln-Lancaster County Health Department said a rise in COVID-19 in wastewater has been an early warning that an increase in positive tests is coming in the community.

"It's an additional test that gives us a little better heads up" on what's ahead, Holmes said.

He was among Lincoln officials who conducted a tour to explain how samples are drawn at Lincoln's Theresa Street Wastewater

1335 L Street, Lincoln, NE 68508 (402) 476-2829 Fax (402) 476-7052 Treatment Plant, which is located along the Salt Creek near 27th and Cornhusker.

For the past year in Lincoln, a machine at the treatment plant has drawn a sample from incoming wastewater every half hour.

Every day, a 5-liter jar of wastewater is removed from a refrigerated storage area on the machine.

Lab in Massachusetts

Then, three 50-milliliter vials of liquid are drawn off and shipped overnight every Tuesday to a testing lab, Biobot Analytics, in Cambridge, Mass. That firm was co-founded by a Massachusetts Institute of Technology (MIT) student interested in the potential of "wastewater epidemiology."

By Thursday or Friday, Lincoln health officials said they have a report back on how prevalent the COVID virus is in the capital city's wastewater.

Holmes said that since the testing began, the highest peak was in January, when COVID registered more than 3 million "viral copies" per liter of water.

More recently, there was a rise in COVID cases in April, which



UTILITIES SECTION



Lincoln's Theresa Street Wastewater Treatment Plant is one of 13 across the state participating in a surveillance program for CO-VID-19. (Paul Hammel/Nebraska Examiner) Reprinted by permission.

raised readings in Lincoln to about 713,000 viral copies. The most recent tests, though, have been in the 600,000 range, Holmes said. **Testing costs \$350 a week**

The testing costs \$350 a week, or about \$18,200 a year, in Lincoln, an expense that is being picked up by federal coronavirus relief funds.

Holmes said the data is especially valuable since so many COVID cases go unreported now because of the prevalence of home tests – tests that don't generate a report to the local health department. Also, a person who becomes infected and does not show symptoms may *Continued on page 2*

Lash Chaffin Utilities Section Director Rob Pierce Utilities Field Representative

'Wastewater epidemiology' helping to track spread and prevalence of COVID-19

Continued from page 1 not report.

He said the Lincoln-Lancaster County Health Department looks at five other factors besides the wastewater test findings to determine the local response. Those include positive tests, the positivity rate, hospital usage and COVID deaths.

Holmes said it was difficult to estimate the percentage of unreported cases, but one study found that for every COVID case reported, three to five may not have been.

State has surveillance program

The Nebraska Department of Health and Human Services, in collaboration with the University of Nebraska-Lincoln and University of Nebraska Medical Center College of Public Health, began issuing statewide "surveillance reports" every week around the first of the year from 15 testing sites in 13 communities.

The state also is tracking the mutation and evolution of COV-ID-19 through "genomic" testing to determine which variants are present in Nebraska.

All the reporting stations showed spikes in coronavirus cases in early to late January, with some showing slight increases in April.

The cities participating in the testing, besides Lincoln and Omaha, are Atkinson, Chadron, Columbus, Fremont, Norfolk, Grand Island, Kearney, Hastings, North Platte, Scottsbluff and Wayne.



This machine pulls a sample of Lincoln's wastewater every 30 minutes, which is then shipped to a lab in Massachusetts to determine the extent of COVID-19 virus in the city.

Pictured is Todd Boling, supervisor of the Theresa Street Wastewater Treatment Plant. (Paul Hammel/Nebraska Examiner) Reprinted by permission.

2022-2023 Executive Board

President Bill Bischoff

Utility Superintendent Wauneta

Ist Vice President Al Schoemaker Director of Public Works Blair

2nd Vice President Duane Hoffman Public Works Director Oxford

Past President Eric Melcher City Administrator Aurora

Board Member Pat Heath City Administrator Gering

Board Member Gary Thurlow Utility Superintendent Atkinson



UTILITIES SECTION

Board Member Sarah Sawin Asst. Director of Utilities Kearney

Ex Officio Member **Tom Goulette** City Administrator and Utility Superinendent West Point

The Utilities Section Newsletter will continue to feature histories of both utilities and associate members. Any historical data and/or photos of your utilities, a specific facility, or articles already written are welcome, along with permission to print. If you have questions, contact Rob at 402-476-2829 or <u>robp@lonm.org</u>.

By Rob Pierce, LNM Field Rep./ Training Coordinator

rlington is located in Washington County and on Oct. 2, 1857, a post office was established as Belle Creek with a population in the area of 42 by 1860. In 1869, land was platted and the townsite was named Belle Creek for the Belle family. Businesses included a drug store, a blacksmith shop, a general store and a grain elevator by 1870.

A shoe shop opened in 1872 and by fall 1876, a school was erected for \$5,000 as the population increased to about 300. (Note: one source listed the first Arlington school was built in 1879.)

By 1880, the population was 550 as the Sioux City & Pacific Railroad was running through town. (The *Nebraska Blue Book* noted 200 as Bell Creek.) On Jan. 16, 1882, the post office name changed (another source noted Feb. 2, 1882) from Belle Creek to Arlington, named for a city in Virginia on the Potomac River. On April 10, 1882, Arlington was incorporated as a village. About 1884, a park was established around the school. A grist mill was located near the community (1885) and telegraph service was available. The frame "Masonic Block" building was erected in 1886 and the mill/elevator had a fire and was rebuilt in 1892. The Arlington State Bank was organized in April 1890 with a brick building built in June 1891 for \$6,000. By 1894, the community had a bakery, a livery business, a bank, a lumberyard, a grain elevator, an Arlington Mill, a general store (IOOF on upper floor) and the population, listed as 412 in 1890, now was estimated at 700. The fire fighting equipment consisted of a hook and ladder truck. The Elkhorn River ran along the west side of town and the Bell Creek along the east side of town. In 1894, the water facilities were not good and the primary business street was known as Second Street.

The census population was listed at 579 in 1900, another source listed the population at about 800. By February 1900. the village had two public wells with hand pumps, but no waterworks system. One well was located

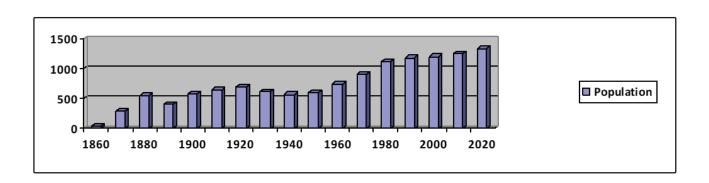
at the



Arlington water tower. 2001 photo.

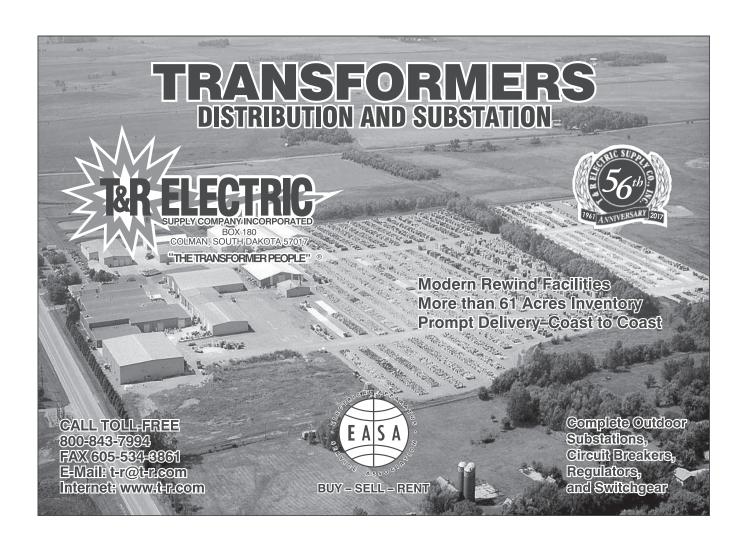
intersection of Eagle and Second Streets, the other well at the intersection of Eagle and Third Streets. Although there was no organized fire department by 1900, fire fighting equipment included a hand cart with 200 feet of two-inch hose and a hook and ladder truck. The school had stoves for heat, but no electric-

Continued on page 4



Continued from page 3 ity as coal oil street lamps lit the unpaved, almost-level streets. Some businesses included Hotel Ludwig, Commercial Hotel, First National Bank and a grain/lumber company. A grain elevator (built in 1885) was operating, which had a capacity 20,000 bushels and used a boiler and a 20-horsepower (HP) engine for power. Phone service was available by 1900 with the Arlington Phone Company headquarters being built in 1903. On Dec. 4, 1904, the Arlington Electric Light & Power Company was in operation from 6-11:45 pm. In the evening, the electric lights would be blinked at 11:45 pm as electricity was shut off by midnight. In 1905, about 9,000 feet of four and six-inch mains were laid along with the installation of 28 double fire hydrants.

On July 21, 1913, stock of \$8,000 was issued by the Arlington Electric Light & Power Company. The electric light plant building (1914) was located on 3rd Street, by the alley between Eagle and Elkhorn Streets. The plant used two boilers, a coal bin, a 70 HP gas engine and a 60-kilowatt (kW) generator. By 1914, the fire department had 20 volunteer firefighters, one hose cart with 500 feet of two-and-one-halfinch hose, one hook and ladder cart with 80 feet of ladders and a whistle on the electric light plant building. The water system by November 1914 consisted of one municipal well (210 feet deep) with a double action, deep-well *Continued on page 5*



Utilities Section Newsletter, page 4

Continued from page 4 pump (six-inch cylinder, 17inch stroke, 32 revolutions per minute), with a capacity of 133 gallons per minute (gpm). Water was pumped to the 40-50 feet tall 40,000-gallon water tank (on steel frame) about 16 feet above the business district. The domestic water pressure when full was 40 pounds (lbs.). The distributions system had 9,000 feet of four and six-inch mains with 22 double fire hydrants. The average daily consumption was 30,000 gallons. The city pumping station, located on 8th Street, pumped water to the storage tower using a 21 HP engine. In 1915, a private power company, the Arlington Light, Heat & Power operated a power plant that consisted of a 100 HP boiler, 75 HP steam engine, with a generator rating of 60 kVA and had a lighting rate of \$0.15 per kWh. In 1919, an application was made for Platte Valley Power of Omaha to construct a transmission line between Arlington and Valley. A brick jail was used (1914), which was located on corner of Elkhorn and 8th Streets.

The population increased from 645 in 1910 to 695 in 1920 (one

source noted 700) and businesses included two auto garages, two banks (First National, Arlington State Bank), a bakery, a hotel, a hardware store, a harness maker. an ice dealer, a meat market, an opera house, a variety store, a livery, implement dealer and the weekly Review Herald newspaper. The village maintained a large park and operated from a frame community hall building. The water system in 1920 had two wells (30 feet and 214 feet), pumped by gas and oil engines. The Platte Valley Power Company provided electric lighting. Construction of a transmission line from Fremont to Arlington in 1921 caused the power plant to be shut down and dismantled. By December 1921, the village purchased electric current. On Nov. 12, 1927, the Arlington Electric Farm Line filed an application for authority to construct, operate and maintain a transmission line to connect with existing line near Fremont. It was granted Jan. 20, 1928. The Platte Valley Electric Company sold the electric system to the Nebraska Power Company in 1928 and power was available 24 hours. The population was 622 by 1930

and in 1934, the water system was completed, which included two 100-foot sandstone wells with turbine pumps. The population decreased slightly to 569 in 1940 as the village operated a library and the natural gas was supplied by Iowa-Nebraska Light & Power Company in 1942. On Dec. 2, 1946, the Omaha Public Power District (OPPD) purchased the Nebraska Power Company, which was a subsidiary of the American Light & Power Company. The Nebraska Power Company served Arlington for the past 18 years.

By 1956, the population was about 600, a school consolidation project was in progress and the auditorium was maintained from a 75 percent tax levy and a 25 percent income received from rentals. The fire department building had a new 10-foot addition and had 25 volunteer firefighters. Garbage collection was provided by a private collector and the cemetery was maintained by the sale of lots and a 0.5 mill levy. The villageowned sewer system and disposal plant was maintained by a tax levy. The water plant in 1956 had 235 meters and a fire hydrant rent-Continued on page 6

- Municipal Pipe Cleaning - CCTV Pipe Inspection - Foam Root Treatment - Manhole Rehabilitation - Trenchless Sewer Liners - Point Repair Liners - Pipe Bursting Phone - (308) 237-6651 Fax - (308) 234-5390 PO Box 1065 Kearney, NE 68848 johnsonservicecompany.com Engineering a world where everyone thrives.



Continued from page 5 al charge of 0.6 mill. The electrical system was supplied by OPPD and the cost of street lighting was \$116.50 per month. Natural gas in 1956 was provided by the Central Electric & Gas Company.

The population by 1960 was 740 and the sewer system was maintained by a one mill tax levy. A private company provided garbage collection with a charge of \$0.75 for each residence and business. In 1962, natural gas was furnished by the Western Power and Gas Company and the electric was provided by OPPD. The water distribution system had 260 meters in service with a meter deposit of \$3.50. A new booster pump and pressure tank were in use to increase water pressure. A swimming pool was built in 1967 and dial phones were installed. The population increased to 910 by 1970, a new fire hall was built in 1971 and a construction project for the wastewater system in 1975. The Bell Creek Memorial Park in 1979 consisted of tennis courts, a ball diamond and playground equipment.

By 1980, the population was 1,117 and a private collection service hauled refuse to the Douglas County Landfill. In 1982, the natural gas system was operated by Cengas and a library was built in 1984. In 1990, the population was 1,178 and Minnegasco operated the gas system (1991-93) until Peoples Natural Gas took over in 1994. In 1997, a new water tower was proposed and in 1998, a 160-foot water storage tower was erected.

A fire station bond of \$37,800 was passed in 1997 and in 1999, a

new water treatment facility was built for \$1 million. The village maintained an activated sludge, extended aeration wastewater treatment system designed for 0.165 million gallons per day (mgd) using gas chlorination and aerobic digester sludge treatment.

The population was 1,197 in 2000, most streets were paved/ curbed with some gravel and by 2004, the natural gas system was operated by Aquila. In 2006, the base water rate was \$27.50 plus \$2.50 per 1,000 gallons and the base sewer rate was a flat fee of \$15. In 2007, Arlington was listed as 41st on Business Weeks Top 50 Towns in the United States in which to raise a family. The library and the city hall buildings were renovated in 2008 (building was built as a feed store in 1890). By 2008, the natural gas system was operated by Black Hills Corp. which purchased Aquila.

The 2010 population in 2010 was 1,178 and by June, the wastewater treatment plant was decommissioning as the effluent was to be sent to Fremont. The collection system mostly had four to six-inch clay tile piping (about 80 years old) and lift stations. In 2016, the sewer rates were a base rate of \$31 then \$2.50 per 1,000 gallons based off January, February and March water rates. The operation of the water and sewer systems were contracted to PeopleService. Water rates were a base rate of \$28.50 then for 0-1,000 gallons at \$2.25 per 1,000 gallons, and over 1,000 gallons at \$2.75 per 1,000 gallons used. The village of Arlington in 2016 contracted with Maguire Iron Inc. to paint the water tower for \$78,840. The

cost also included the highpressure wash and a three-year warranty.

The water system had two wells with capacities of 450 gpm and 800 gpm with piping ranging from one to eightinches in diameter.



Arlington water tower. 2001 photo.

Today, Arlington has a population of 1,331 and is a member of the League of Nebraska Municipalities and Utilities Section. The village maintains three parks: Bell Creek Park, City Park and Veterans Memorial Park. The electrical system has been operated by Omaha Public Power District (OPPD) since 1968.

References: Nebraska Directory of Municipal Officials, 1956, 1958, 1962, 1966-75, 1977-87, 1990-93, 1995-2021; Nebraska Municipal Review magazine, 2016; Pages of History Nebraska High Schools, 1884-1994; Lincoln Journal Star Newspaper, 2007; Perkey's Nebraska Place Names. 1995; Nebraska Place Names, 1925, 1960; Washington County Progress 2006; Sargent Leader newspaper; 1903; Washington County Nebraska History, 1980; Water Resources of Nebraska, December 1936; Maps Tell a Story, 1991; NEDED Website, 2005; Continued on page 7

SAFETY/HEALTH CORNER Material handling safety tips

By Rob Pierce, LNM Field Rep./ Training Coordinator

Often, injuries are a result of material, equipment or tools when they are being lifted, toted, stacked, loaded or set down. Many are just like me and do not properly prep their muscles for these types of activities, not to mention being out of shape or getting older. Sometimes, it is a case of underestimating the load or not taking the time to assess the risk of the task.

A previously published trade magazine article provided the following tips to help reduce incidents when handling material, tools or equipment. Avoid lifting from the floor (below your knees) or when seated, bend knees when lifting, begin lifting with object close to the body, make use of lifting or moving aids (equipment), get assistance from co-workers, reduce the load size when possible, avoid lifting over obstacles, ensure adequate footing, space and lighting, don't bend or twist when lifting, keep lifts between shoulder and knuckle height, avoid sudden or jerky movements, modify or redesign jobs to make the move easier, know your limitations and stay in good shape.

Some of the most common injuries in the workplace are strains, sprains and muscle or back-related injuries. These often are injuries that linger, especially as we age. They also can affect our mental and physical performance at work. Often, these injuries do not appear severe enough to keep us at home or even push us to see a doctor right away, but may result in a more severe issue later. Tasks, such as filing boxes (archiving), loading/unloading vehicles, along with basic housekeeping cleaning of offices/shops, can be the common cause of these types of injuries. Some of our most common tasks, which often do not appear dangerous, are the ones that result in an injury. If the task is a known hazard or danger, we are

more apt to proceed with caution, wear adequate personal protective equipment and/or seek assistance.

Remember to plan out the work task, use adequate equipment or other workers, warm up your muscles before lifting and be smart when moving material, tools or other equipment. Common, everyday tasks can be our enemy when injuries are involved and neglected safety is the culprit.

Service Awards

Remember to recognize your employees' anniversary milestones. The League provides certificates for 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 and 65.

You can request them by emailing the League office at brendah@ lonm.org.

Retirements: Let us help recognize those municipal employees who are retiring after years of service.

Nebraska utilities history – Arlington

Continued from page 6 Arlington Website, 2017, 2021-2022; Wikipedia website, 2019; Nebraska Fast Facts Website, 2010; Annual Report of Nebraska State Railway Commission, Vol. 11, 1918; Electric Power Development in the United States, Dept. of Agriculture, January 1916; BLS Report 1905-06, 1907; Nebraska Blue Book, 1928, 1942, 1946; Sanborn-Perris Maps, April 1894, February 1900, September 1914, November 1914; Twenty-First Annual Report of Nebraska State Railway Commission to the Governor 1928, April 29,1929; Directory of Electric Utilities in the United States, Federal Power Commission, 1941; Utilities Section solid waste survey, 2015; Municipal Ownership and the Electric Light & Power Industry, National Electric Light Association, 1923; Department of Interior, General Land Office State of Nebraska Map, 1879 and the Directory of Gas Utilities in the United States by US Federal Power Commission, 1942.

Nebraska utilities history – Johnson

The Utilities Section Newsletter will continue to feature histories of both utilities and associate members. Any historical data and/or photos of your utilities, a specific facility, or articles already written are welcome, along with permission to print. If you have questions, contact Rob at 402-476-2829 or <u>robp@lonm.org</u>.

By Rob Pierce, LNM Field Rep./ Training Coordinator

Johnson, located in Nemaha County, had settlers in the area by 1861. In 1869, an original townsite was laid about one-halfmile east of the present site on a parcel of land owned by Julius A. Johnson. The site was selected because the speculation that the Brownville, Fort Kearney and Pacific Railroad would be built through that area. On Feb. 25, 1873, the post office was established.

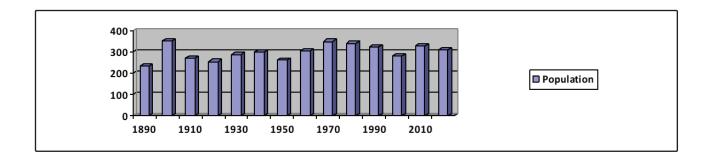
A new site was platted by the Lincoln Land Company west of the original site and later, the store and post office were moved. The new site was named after Julius A. Johnson, an official of the Brownville, Fort Kearney and Pacific Railroad and the original townsite owner. The Burlington & Missouri River Railroad was completed by 1882 and a depot was built. A two-story hotel, a drug store and a general store were erected and the Methodist Society was organized. By 1884, a grain elevator, a hardware store and a new frame school

were built. In June 1884, Johnson was incorporated as a village (one reference noted 1882). The first cemetery was located south of the railroad tracks in the southwest part of town. In 1888, the Johnson Cemetery Association was formed when the new cemetery was established. Those buried in old plots were moved to the new site.

By 1890, the population was 234 and the Johnson News newspaper began publishing. In 1892, two freight trains served the community daily and a dray line was established to manage freight. The Baptist Church was dedicated, a jail was erected, the German National Bank was built and the First State Bank of Johnson opened. A volunteer fire department was organized in 1896 and a brick school building was in operation. A Dry Goods Store and a Livery/ Feed Stable were operating by 1898 and the Evangelical Church, organized in 1894, had a building dedicated in 1900.

The population was 352 and in 1906, the First National Bank and St. Matthews Lutheran Church were organized. The school was a two-story brick structure with a bell tower and the population decreased to 273 by 1910. The first electric generation plant was installed in 1913 by Ed Bartels with the electricity shut off at 11 p.m. each night. The first water supply was hand pumped into a wooden water tank. On July 14, 1915, water project bonds of \$9,000 at 5 percent interest were approved. By 1917, a water storage standpipe had been built replacing the wood tank. The American Legion Post #330 was organized in 1919 and in 1923, was chartered. An electric bond issue in 1920 was submitted for a vote with the purpose of erecting a transmission line from Auburn or to the Graf terminus of the Tecumseh power plant.

The population increased from 255 in 1920 to 288 in 1930 and a gas system was to be installed by 1932. On Jan. 1, 1935, the electric distributions system was operated by the Western Public Service Company. Electricity was supplied via transmission lines from the Auburn power plant and *Continued on page 9*



Nebraska utilities history – Johnson

Continued from page 8 operated by the Western Public Service Company.

In 1939, Auburn purchased the electric system owned by Western Public Service Company and the Auburn power plant provided electric service to Brownville, Johnson and Nemaha. The old 1896 school building was replaced with a new (72 feet x 89 feet) school building, which included a 40 x 70-foot gym and stage (1936).

By 1940, the population was 301 and in 1942. Main Street was the first street in Johnson paved. From 1942-1967, many of the side streets were paved and the Chamber of Commerce organized in 1949. In 1946, the Johnson fishing lake was officially opened and in 1947, a direct dial telephone system was installed. Mercury Vapor streetlights were installed in 1950 and a school building was erected as 10 rural school districts consolidated to form the Johnson School District. In 1956, a lagoon-type sewer treatment system was installed and in 1962, was maintained from a \$2 per month sewer charge and a 10.10 mill levy. The Rural Fire Department was organized in 1959 and the population increased from 262 in 1950 to 304 in 1960. The natural gas system was operated/supplied by Peoples Natural Gas Company and the water system had 151 meters in service by 1962. The meter deposit was \$7 and water rates were: first 3,000 gallons (gals.) at \$1.25 per 1,000 gallons, next 2,000 gals. at \$0.75, next 2,000 gals. at \$0.60 per 1,000 gals., next 2,000 gals. at \$0.50 per 1,000 gals. and the next 2,000

gals. at \$0.40 per 1,000 gallons. Six blocks of streets were paved in 1964-65, the water tower was repainted inside and outside in 1965 and the village was a semifinalist in its class in the statewide Community Betterment Program.

The Johnson-Brock School District was formed in 1968 and the population was 350 by 1970. The population was 341 in 1980 and in 1985, a lagoon project was in progress. By 1990, the population was 323 and the village was operating a facultative controlled discharge lagoon system designed for 0.047 million gallons per day (mgd).

The population was 280 by 2000 and a gymnasium was added to the school in 2001-2002. The village park in 2004 had a ballfield, playground equipment and a concession building. The natural gas system was operated by Peoples Natural Gas and the electric system by Auburn Board of Public Works.

By 2009, the natural gas system was operated by Black Hills Energy Inc. In 2015, the solid waste collection service was provided by American Recycling and Sanitation.

Today, Johnson has a population of 309, has been incorporated for 138 years and a long-standing member of the League of Nebraska Municipalities. Johnson has been a member of the Utilities Section since 1985. The electric system has been operated by the Auburn Board of Public Works since 1939 (86 years). The village has a metal office building with mostly paved streets with newer sidewalks on Main Street. The Johnson Cemetery is located on the northwest edge of town, south of 5th Street and the St. Matthews Cemetery is to the southwest on the northeast corner of Highway 105 and 730 Road.

References: Nebraska Directory of Municipal Officials, 1962, 1964-75, 1977-87, 1990-2020; Water Resources of Nebraska, December 1936; Nemaha County Herald Newspaper, 1936; A History of Nemaha County, 1987; Nemaha County Historic Building Survey, August 2004; An Informal History of Nemaha County (1854-1967), 1967; Nebraska Our Towns...East Southeast. 1992: Maps Tell A Story, 1991; The Johnson Citizen newspaper, 1898; 1937 Auburn Journal newspaper, 1937; Johnson County website, 2018-2019; Wikipedia website, 2017-2021; Nebraska Blue Book, 1942, 1946, 1978; NEDED Website, 2005; Andrea's History of the State of Nebraska, 1882; Nemaha County History Website, 2009; Nemaha County Website, 2009; U. S. Atlas Nemaha County, 1890; Electrical World, 1920; Biennial Report of Audits of Public Accounts to the Governor, 1935; U.S. Congressional Serial Set, House Document, Vol. 238, April 14, 1936; Utilities Section solid waste survey, 2015 and the Electric Rate Survey: Domestic and Residential Electric Rates in Effect January 1, 1935 by U.S. Federal Power Commission, 1935

Checkout the League's Facebook page at www.facebook.com/leaguene. Be sure to "Like" us.

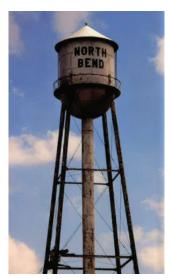
The Utilities Section Newsletter will continue to feature histories of both utilities and associate members. Any historical data and/or photos of your utilities, a specific facility, or articles already written are welcome, along with permission to print. If you have questions, contact Rob at 402-476-2829 or <u>robp@lonm.org</u>.

By Rob Pierce, LNM Field Rep./ Training Coordinator

North Bend, located near the south-central border of Dodge County, first saw settlement when some Scotch families from Illinois camped at a bend of the northernmost point of the Platte River by July 4, 1856. A 16 ft x 40 ft "Town House" was erected. Soon shanties were built in the settlement initially called Franklin, the name used for the first post office and the survey map of 1857. The North Bend Town Company was formed, the site surveyed in July 1857 and lots were sold at \$50-\$100. The first steam mill in the county was set up in 1857 as the population was 37. On Feb. 3, 1858, a post office was established as Franklin and in the spring, settlers filed claims in the area. By July 4, the first mail arrived over the tri-weekly stage line operated by the Northwestern Stage Company between Omaha and Fort Kearney, with an area station point. Before that, settlers had to depend on trips by someone to Omaha for their mail facilities.

A school was built, a pioneer cemetery was established and a prairie fire destroyed the mill in the fall. A post office was established as Emerson and on Dec. 28, 1858, the name changed from Emerson to Wallace (one source noted 1863). The population was pushing 58 and in the fall, a prairie fire destroyed the first sawmill of Dodge County. By 1859, the stage line was running daily due to gold mining in the Black Hills.

A preliminary survey for a railroad was done in 1864 and an "Old Town House" was built, replacing the 1856 building to accommodate the railroad. The Franklin Post Office was discontinued Nov. 25, 1864, and rails were laid in the spring of 1866. A depot was built and on April 16, the first train arrived. On June 25, 1867, following an affidavit execution, the name of the town officially changed and became North Bend. The site was surveved and platted in October 1867 by S.S. Caldwell, M.S. Cotterell and the Union Pacific Railroad Company. A store, a blacksmith shop opened and a hotel built in



North Bend water tower.

1867 was moved to the railroad tracks and converted into a warehouse for grain in 1872. On Aug. 12, 1869, the post office name officially changed from Wallace to North Bend. In the 1870s, a pontoon bridge was used for a ferry to cross the Platte River. A bridge was to be built across the Platte River in 1875 with bonds of \$10,000 issued. A lumberyard was operating by 1875 and the *Continued on page 11*

1500 1000 500 1857 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010

Continued from page 10 population increased to 250 by 1876. North Bend was incorporated as a village April 20, 1876. In January 1879, a bucket brigade was formed with a request for \$80 to acquire ladders, buckets, fire hooks and axes.

The *Independent* newspaper was started in 1879 and the population reached 415 by 1880. Another bond issue of \$4,000 was approved in 1880 to complete the bridge project. On Jan. 5, 1881, a new city hall building with a fire department housed on the first floor, was located on 7th Street. Fire Department No. 1 was organized with a hook and ladder and engine company. A cistern well was located in the sidewalk line in the west alley on Main Street between 7th and 8th Streets. By March 1881, the bridge was completed across the Platte River by the Union Pacific for \$15,300. An alarm bell was purchased for \$28 in October and a nursery was started in 1882.

A large two-story brick/block

Opera House was built for \$4,000 and was destroyed by fire September 1892.

Land was purchased for use as a park and in August 1885, the southeastern business block was destroyed by fire. North Bend was incorporated as a city of the second class in 1886-87 and by 1890, had a population of 897 with gas street lighting. A two-story brick city building was erected for \$6,000 and businesses consisted of a hardware store, a lumberyard, *Continued on page 12*



Continued from page 11 a shoe maker, a photographer, Bank of North Bend, baker, a confectionery, a lumber/coal yard, an ag implement dealer, three hotels (Commercial House, Oxtoby House and Windsor Hotel), general stores, a blacksmith, a saddle maker, a meat market, saloons, a billiard hall, a grain elevator, a millinery, Nebraska Telephone Company, Oxtoby House Hotel, a cigar manufacturer, a nursery, grocery store, liveries, North Bend Opera House, confectioneries, a laundry, a roller flour mill and Farmers Cooperative Association. A July fire in the Doubrava building may have prompted fire protection as an engine/chemical company and a new hose company was organized.

By Sept. 15, 1890, bonds of \$6,000 at 6 percent interest were approved for constructing a waterworks. In 1890-91, the city had two newspapers being published, The Argus and North Bend *Star*. By 1891, the population was estimated at 1,000 and by 1892, a hook/ladder and engine company of volunteer firefighters was formed. The Mines Brick Company was operating, but a Sept. 29 fire destroyed the Opera House, First National Bank, the post office and other buildings. The population by 1895 was estimated to be 1,227 and the water storage standpipe was next to the fire hall building (1899).

The census had the population at 1,010 in 1900 and the water system consisted of six drilled wells (30-75 ft) pumped to 41,000-gallon (10x70 ft) standpipe and direct into mains by a Deming triplex pump which had a capacity of 356

gallons per minute (gpm). The pump was run by a 21 horsepower (HP) gasoline engine. The domestic water pressure was 30 pounds per square inch (psi) with average consumption in the summer of 135,000 gallons and winter of 45,000 gallons. The fire department had 55 volunteer firefighters. In 1909, the Union Pacific Railroad operated a passenger depot, which had a railroad water tower just to the west and a pumping station located in the northwest corner of Railroad Park. The city streets were leveled but not paved and there were 60 volunteer firefighters in four companies with two independent hose carts and a village hook and ladder truck, one chemical engine with a 56-gallon tank, 1,200 feet (ft) of hose along with a fire alarm hand bell at city hall. The municipal water system in 1909 had two (6x72) and eight (8x72) wells with three miles of four and six-inch cast iron mains (1899) and 19 double hydrants. The average daily consumption in the summer was 50,000-gallons and 25,000-gallons in the winter. The North Bend Cement Tile Manufacturing Company was in operation and by 1910, the population was 1,105. The Carnegie Library was built in 1913 and by 1915, the stone City Hall building was located next to the fire hall. The municipal water system wells in 1915 pumped directly into mains or the iron standpipe, pumped by two pump/engines with a capacity of one million gallons per day (gpd) to two-andone-half miles of mains four to six-inch diameter, 19 hydrants, to 90 services (galvanized pipe services). Consumption averaged

40,000 gpd with a system pressure of 30 psi. The fire department had 55 volunteer firefighters, a hook and ladder truck, a chemical engine and two hose carts with 1,500 ft of hose. In October 1915, the new North Bend electric system was assessed with electric current supplied by the municipal power plant in Fremont via transmission lines. On Oct. 30, 1916. an application was filed by Morse Bluff and North Bend to construct a transmission line between the two communities. By 1920, the population was 1,087, an electric light plant was operating and a paving project was started. The Farmers Telephone Company was operating and in the 1920s-1930s, ice was harvested at Scott Lake east of Morse Bluff.

By 1930, the population was 1,108, streetlights lined the sidewalks, a traffic signal light was installed and an elevated water storage tank was erected in 1931. On March 14, 1930, the Nebraska Power Company of Omaha purchased the electric lines for \$300,000 (valued at most \$30,000). The City of Fremont filed a lawsuit against the Nebraska Power Company claiming monopoly (the claim was either \$75,000 or \$105,000 depending on which source is correct). In 1934, the city purchased two new fire trucks and became a member of the League of Nebraska Municipalities. The electric distribution system was provided power by the Nebraska Power Company. In April 1931, a vote for \$20,000 to construct an auditorium was defeated. In 1933, the vote passed for an auditorium to cost \$18,000 *Continued on page 13*

Continued from page 12 with 30 percent coming from the federal government, but legal technicalities halted the construction. On April 6, 1937, another auditorium vote for \$18,000 was approved with a federal PWA grant build the auditorium for \$38,774 with \$21,504 supplied by the city and the rest by a federal PWA grant. The auditorium was built and dedicated April 20, 1939.

By 1940, the population was 1,003 and in 1941, the iron removal plant was upgraded as a WPA project and new water mains were installed. The city's share of the project amounted to \$9,000, which was covered by issuing water bonds. In 1946, the Omaha Public Power District acquired the Nebraska properties of the Nebraska Power Company. A new school was built in 1956 and a new swimming pool opened in 1958. The natural gas system was operated by Peoples Natural Gas and the city auditorium was maintained from 50 percent tax levy and 50 percent from rentals. Solid waste was collected by a private company with monthly fees charged. The water system had 400 meters in service and the cost of current for pumping water

ranged from \$65-\$150 per month. By 1958, the publicly owned sewer system and disposal plant was maintained by a tax levy and sewer charge of \$0.35 per month for residential and \$1 per month for business. Those fees were changed in 1960 to a sewer charge of \$1 per quarter from residents and \$3 from businesses. In 1958, the street lighting was \$153 per month and by 1962, the cost of street lighting was \$174.40. The cost of current for pumping water averaged \$100 per month. Consolidation with nearby school districts occurred in the 1960s, forming School District #95 (North Bend Central). A new brick school was constructed and a pavilion was built in the park for \$2,781 in 1964. The population increased from 906 in 1950 to 1,174 in 1960 and by 1970, the population was 1,350. In 1978, a sewer disposal facility project was underway and the population decreased from 1.368 in 1980 to 1.249 in 1990. A new fire truck was purchased from Smeal Manufacturing in 1995. The city maintained the activated sludge extended aeration wastewater treatment system designed for 0.184 million gallons per

day (mgd) with aerobic digester sludge treatment.

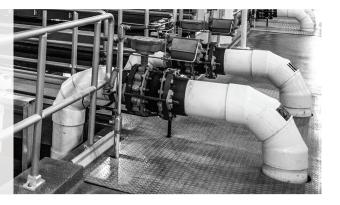
By 2000, the population was 1,213, PeopleService was operating the water and wastewater systems (2001) and electricity was provided by OPPD. A Veteran Memorial was being constructed in 2002 and the gas system was operated by Aquila in 2003. In 2003, a new spheroid shaped water storage tower replaced the 1931 water tower and an addition was made to the water treatment building. By 2009, the natural gas system was operated by Black Hills Energy. In 2010, the population was 1,242. In 2015, private solid waste collection companies were hauling waste to the Elkhorn Transfer Station then to the Fremont landfill. By 2017, a wastewater sanitary improvement project was in progress.

Today, North Bend has a population of 1,279, has been incorporated for 146 years and is a League of Nebraska Municipalities and Utilities Section Member. PeopleService is contracted to maintain the water and wastewater systems. Natural gas is provided by Black Hills Energy and the electrical system is supplied *Continued on page 14*

Ideas transform communities At HDR, we're helping our clients push open the doors to what's possible, every day.

F

hdrinc.com 402.399.1000



Continued from page 13 by Omaha Public Power District. References: Nebraska Directory of Municipal Officials, 1958, 1960, 1962, 1964-75, 1977-87, 1990-2022; Nebraska Municipal Review Magazine, 1934; Water Resources of Nebraska, December 1936; Washington County Progress 2006; Nebraska Traveler Magazine, 2003; Sargent Leader newspaper, 1915; Nebraska Place Names, 1925, 1960; North Bend Internet Website, 2002, 2009-2022; Maps Tell Nebraska's History, 1991; Nebraska State Gazetteer & Business Directory, 1890-91; Wikipedia website, 2020; History of Dodge and Washington Counties, 1921: A 150 Year History of North Bend, Nebraska 1856-2006, 2006; The First Twenty Years History of North Bend Centennial Year (1876-1976); Nebraska Blue Book, 1928, 1942, 1946, 1978;

Hand Tool Safety Tips

By Rob Pierce, LNM Field Rep./ Training Coordinator

During the summer, a lot of hand tools are used that are often stored over the winter. Some handy tips concerning hand tools are: 1) use the correct tool for the job; 2) use all hand tools correctly (as they were intended); 3) inspect all hand tools before using and maintain tools to perform properly (sharp, clean and lubricated); 5) do not modify tools; 6) store and handle tools properly; 7) use appropriate personal protective equipment (PPE) for the intended work; 8) follow all lock-out tagout procedures; 9) keep the work area neat, not cluttered; and 10) follow manufacturer recommendations for use, care and storage.

Hand tools are usually not associated with fatalities, but they cause a lot of near misses, minor cuts, scratches and other first aidrelated injuries that may affect our work later on. It is sad to think a lot of minor injuries occur using hand tools, but very little attention is given to information or training to those using them. Often, trial and error methods are used when working with hand tools and that is a deficiency in our safety programs. Sanborn Maps, January 1900, September 1909; 15th Annual Report of Nebraska State Railway Commission to the Governor, Issue 15, 1922; Utilities Section solid waste survey, 2015; Federal Power Consumers Electric Rate Survey, Domestic and Residential Electric Rates in Effect January 1, 1935 in the state of Nebraska, 1935; and the Insurance Yearbook 1915-16 Fire and Marine 43rd Annual Issue, 1915.

Water Conservation

This year is a good time to review your municipality's water restriction and/or water conservation ordinances or policies as Nebraska once again has drought or abnormally dry conditions in several parts of the state.

Upcoming Snowball Conference dates: Jan. 25-26, 2023

Jan. 23-20, 2023 Jan. 24-25, 2024 Jan. 22-23, 2025

Nebraska Breaktime Trivia "Just For Fun"

- Q-1. What Nebraska village/ city in 1879 was located southeast of Paisley, northeast of Solon and north of Burr Oak?
- **Q-2.** What utility section member has a Legends Butte Golf Course?
- **Q-3.** Where in Nebraska is Cottonwood Lake located?
- Q-4. In what Nebraska County is Box Butte Reservoir located in and what river feeds into it?Answers on page 17.
- Utilities Section Newsletter, page 14

Classifieds

Water/Wastewater Apprentice/ **Operator.** The City of Broken Bow Water/Wastewater Department is accepting applications for full-time employment. This position involves, but not limited to, construction of new water and sewer mains, tapping services, maintain city infrastructure, clean-up of job sites, and assisting other departments as needed. Multiple skill levels are needed. Department of Health and Human Services certification and NDEE certification preferred, but not required. CDL not required, but must be able to obtain CDL within 6 months. Willing to train the right person. Wage dependent on qualifications and a better than average benefit package. Applications and job description are available at the City of Broken Bow located on the main floor at 314 S 10th Avenue or www.cityofbrokenbow.org. Submit application and related information to the City of Broken Bow, 314 S 10th Avenue, PO Box 504, Broken Bow, NE 68822, or via email at ccranwell@ cityofbrokenbow.org. Broken Bow is an EOE. For more information, please contact Water/Wastewater Superintendent Craig Cranwell at (308) 870-1203.

Journey Lineman/Electric Foreman. The Bridgeport Municipal Utility System has an immediate opening for a Journey Lineman/Electric Foreman. Applicants must have a strong journeyman rating and must be able to perform all duties with regard to overhead and underground electric line construction and maintenance. Must be willing and capable to work on water, wastewater, and street operations. Must be or able to become a Grade 3 water operator and Class L wastewater operator if so required. Must live or be willing to live within 15 minutes of Bridgeport, comply with on-call requirements and possess and comply with Nebraska CDL regulations. Paid vacation, sick days, holidays, 401K and employer-paid health insurance are included with the benefits package. To obtain the position description and an application, contact City Hall at 809 Main Street (308.262.1623) or visit www.cityofbport.com. Salary negotiable depending on qualifications. Resumes and applications will be accepted until position is filled and may be emailed to lheinrich@cityofbport.com. The City of Bridgeport is EOE and Veteran Preference. Applications will be accepted until the position is filled. Send a resume and completed application to City of Bridgeport, NE; 809 Main Street, PO Box 280; Bridgeport, NE 69336 or to lheinrich@cityofbport.com. NO phone calls, please.

Parks Foreman/Facility Maintenance. The City of Bridgeport has an immediate opening for a Park Foreman/Facility Maintenance person. Applicants must have a strong background in building maintenance and park department operations and maintenance and must be able to perform all duties with regard to operation and maintenance of park system. Will also be responsible for maintenance items at the Prairie Winds Community Center that Center staff is unable to perform. Must be willing and capable to assist the electric, water, wastewater, and street operations. Must be or able to be become a Grade 3 water



operator and Class L wastewater operator if so required. Must live or be willing to live within 30 minutes of Bridgeport, comply with on-call requirements as required and possess and comply with Nebraska CDL regulations. Paid vacation, sick days, holidays, 401K and employer-paid health insurance are included with the benefits package. To obtain the position description and an application, contact City Hall at 809 Main Street (308.262.1623) or visit www.cityofbport.com. Salary negotiable depending on qualifications. Resumes and applications will be accepted until position is filled and may be emailed to lheinrich@cityofbport. com. The City of Bridgeport is EOE and Veteran Preference. Applications will be accepted until the position is filled. Send resume and completed application to City of Bridgeport, NE; 809 Main Street, PO Box 280; Bridgeport, NE 69336 or to lheinrich@ cityofbport.com. NO phone calls, please.

Public Works & Utilities Director. Gretna, Nebraska is a booming city of the first class located in Sarpy County and the Omaha Metro. With the expansion of the city's corporate limits including additional streets, sewer lines, and sewer lift stations, the city is seeking a highly skilled person to oversee all aspects of *Continued on page 16*

Classifieds

Continued from page 15 the Gretna Public Works Departments on a day to day basis. The Public Works & Utilities Director is directly responsible for supervision of staff, functionality of all aspects of the department and performance of senior-level professional work. This person is also accountable for various administrative and managerial duties including evaluating projects to maintain budgetary restrictions, ensuring compliance with all city policies, procedures and codes, and reviewing plans and specifications for infrastructure construction. The following education and experience is preferred:

1. Must possess a valid driver's license.

2. Bachelor degree in Civil Engineering, Project Management, Construction Engineering, or related field.

3. Minimum 7 years' experience in local government, specifically public works, of which 3 years must be in a supervisory role.

4. Class 3 Water Certification.

5. Class 2 Street Superintendent License.

6. State of Nebraska On-Site Wastewater Treatment Certification, not currently required.

7. Must be willing to

obtain further education, training, and certifications as deemed appropriate and within timeframe as established by the employer.

Candidates should have working knowledge of all municipal public works and utilities activities including streets, storm sewer, traffic control, water, and wastewater operations, building and asset management systems, and engineering principles. Please see the full job description for information about this position. This is an exciting time to join the City of Gretna team to aid in the future of Gretna. The Public Works & Utilities Director position range is \$71,281-\$95,097 with initial starting salary at \$71,281 DOQ, with excellent benefits. Application and Job Description is available from the Gretna City Clerk, 204 N McKenna Avenue, PO Box 69. Gretna, NE 68028-0069 or at www. gretnane.org. This position remains open until filled. Initial review of applications begins May 2, 2022.

Utility Employee. The City of Cambridge, EOE, is now accepting applications for a fulltime utility employee. Successful candidate must possess or be able to obtain, within one year, a grade IV water operator license through the State of Nebraska. General maintenance duties in water, wastewater, parks, streets, and equipment. Will train the right person. Must have a valid driver's license. Drug test required. Wage negotiable based on experience. Applications can be picked up at the Cambridge City Office between the hours of 7:30-4 M-F. For more information. contact David Houghtelling, Utility Supervisor, 308-340-3213. Benefits include health insurance. vacation, sick leave, holidays and retirement investment.

Apprentice Lineman. City of Benkelman is accepting applications for the position of Apprentice Lineman in the Electric Department. This position's responsibilities include, but aren't limited to: Construction and maintenance of overhead and underground electric distribution systems; Sets poles, lays cable, and installs wire, installs and repairs transformers and installs primary and secondary conductors; Troubleshoots faulty circuits and transformers; trims trees as required: ability to use electrical test equipment; Operates a high lift bucket truck, digger derrick, and other equipment; assists other City operations and perform other duties as required; available for 24-hour emergency calls. **Requirements** include high school graduation, experience working with secondary and high voltage electric circuits and/ or post-secondary electric training preferred, but not required. Additional consideration may be given to those who have completed a DOL Line Program, ability to obtain a CDL license issued by the State of NE Continued on page 17

HAROLD K SCHOLZ CO.

SWITCHGEAR ASSEMBLERS

Switchgear Generation Controls Automation Relaying Metering Substations Service Breakers

7800 Serum Ave. - Ralston, Nebraska 68127 PH: (402)339-7600 FAX: (402)339-1821 E-MAIL: <u>power@hkscholz.com</u> www.hkscholz.com

Classifieds

Continued from page 16 within 1 year of hire, understanding of basic electrical theory including working voltages of 120V to 480V Secondary Y & Delta and 2400V to 12.470V Primaries Y & Delta, math abilities to support reporting, metering and calculations of amps, volts, watts, and

"Just For Fun" Answers

- A-1. Unadilla.
- A-2. Crawford.
- A-3. The Cottonwood Lake and State Recreation area is located east of Merriman and south of Highway 20 in Cherry County. There also is a West Cottonwood Lake located in the sandhills east of Highway 61 between Merriman and Hyannis. Take your pick.
- A-4. The Box Butte Reservoir and State Recreation area is located in Dawes County and fed by the Niobrara River.

other electrical formulas. Excellent benefits package is included. Employment is contingent upon successful completion of a postoffer physical and drug test. The City of Benkelman is an EOE. Return completed application to: City of Benkelman, 126 7th Ave E, PO Box 347, Benkelman, NE 69021; 308-423-2540.

Maintenance Supervisor. Village of Davenport, NE, is accepting applications for a full time maintenance worker. Grade IV water and pesticide certification preferred, but will send right person for training. Responsibilities include, but not limited to, water, sewer and street maintenance. mowing, spraying etc. Electrical system owned by village so electrical knowledge a plus. List of duties available at Village Office. Must have a valid drivers license. Wage negotiable based on experience. Contact Village Clerk at 402-364-2292 or davenportvillage@hotmail.com. Applications accepted until position filled. EOE.

Water Utility Supervisor. The City of Kimball is accepting



applications for a Water Utility Supervisor. Salary negotiable based on experience. Primarily responsible for the general operations of the Water Department. Requires a high school diploma or GED and three years' experience in water related field. Applicant must have required certification of Grade 3 Water License. Must have valid Nebraska driver's license and be insurable under the City of Kimball's automobile policy. Preemployment drug test is required. Applications and job description may be obtained at City Hall at 223 South Chestnut, Kimball, NE 69145 or at www.kimballne.org. Please submit resume and applications to Mayor Prunty, 223 South Chestnut, Kimball, NE 69145. Applications will be accepted until position is filled. EOE.

Crow Line: A line of positive communication that all can share

Congratulations! Incorporation Anniversary Recognition: 135 years – Clarkson (July 19, 1887-village) and Davenport (July 7, 1887-village); 140 years – Creighton (July 28, 1882-village) and Stratton (July 17, 1882-village).

Congratulations to Tanner Mc-Call, Utility Superintendent of **Curtis,** who received the Rudy Hultgren Dedicated Service Award and Jerry Fales, Electric Commissioner of **Cozad**, who received the Bob Arraj Innovative Service Award from NMPP Energy. Also receiving "Project of the Year" awards from NMPP Energy included the Village of **Shickley**, the City of **Sidney**, the Village of **Lyman** and the City of **Franklin**.

Utilities Section members and associate members are bolded.

Do you, your department or facility have something to crow



about – new hires, promotions, awards, certifications, anniversaries/milestones, accomplishments or grants/funding and projects?

Let us help you celebrate the events and accomplishments! Please send information to any of the League/Utilities staff.

2022-2023 Training calendar

Visit our website at www.lonm.org for a complete list of workshops and conferences.

October 2022

Oct. 11 Water Operator Tra	ining Workshop	.Kilgore Memorial Library, York
Oct. 12 Water Operator Tra	ining Workshop	.Scout Lodge, Red Cloud

December 2022

Dec. 7	Water Operator	Training V	Workshop	Water	Department Facil	lity, Lincoln
Dec. 8	Water Operator	Training V	Workshop	Utility	Building, Hastin	ıgs

January 2023

Jan. 11-13	Utilities/Public Works Annual Conference	Embassy Suites, Lincoln
Jan. 24	Water Operator Training Workshop	Holiday Inn, Kearney
Jan. 25-26	Snowball Conference	Holiday Inn, Kearney

February 2023

Feb. 7-8	. Meter Conference	Holiday Inn, Kearney
Feb. 27-28	. League Midwinter Conference	Cornhusker Marriott Hotel, Lincoln



PAINTING CO., INC.

Floor Coatings * Sandblasting * Epoxy Coatings Water Plants * Storage Tanks * Swimming Pools Sewage Plants * Ethanol Plant PO Box 515 - Cherokee, Iowa 51012 Phone (712)225-0626 Fax (712)225-0627 Email: monganmd@ncn.net





SURVEYING ARCHITECTURE PLANNING GRANT WRITING

ENGINEERING

ENVIRONMENTAL SERVICES