

Carmel Utilities Solar

Two solar arrays were installed on City property the second half of 2020; one at the water treatment plant at 106th and Gray Road and the other near the city's largest sewer lift station located off of Hazel Dell Parkway. Both arrays will help power Utilities' water and sewage treatment activities.

A dedication ceremony for the new systems is being planned for the late spring 2021 with tours and educational material being made available to the public as well. Please look for media alerts and visit the City's website for scheduling information in the coming months.



Water Treatment Plant:

1,890 365W panels
Total # of Panels

689.9 kW DC
System Output

971.3 MWh
System Output Per Year

Roughly **1,163 homes** electricity use for one year

Hazel Dell Lift Station:

1,098 365W panels
Total # of Panels

400.8 kW DC
System Output

557.8 MWh
System Output Per Year

Roughly **66.8 homes** electricity use for one year



Water Main Expansion

With the recent addition of the Home Place area into Carmel, a project was begun to bring municipally-treated water to residents there and to portions of southwest Carmel. After this project is completed, more than 44,000 feet of water main will be added to the Carmel Utilities' system. This expansion will aid in maintaining water quality as Carmel Utilities can eliminate some dead-end mains and improve flow rates through more system looping.

CITY OF CARMEL UTILITIES 2020 ANNUAL REPORT



Citizens of the City of Carmel,

As we take a look back on the year 2020, I am proud to report that Carmel Utilities staff members met the challenges that faced all of us during the pandemic while keeping both staff and customers safe and continuing to advance and improve actions concerning our water and sewer systems.

Carmel Utilities implemented or continued with many different projects that invest in our system:

- The addition of more than 44,000 feet of water mains to bring water availability to more than 400 homes that previously did not have municipally treated water available.
- Our Wastewater Treatment Plant is expanding capacity to treat an additional 2 million gallons a day. This will serve our community as we continue to grow in the future.
- The installation of two solar arrays with a system output totaling over 1,500 MWh annually.
- Completion of a 36-inch water line project that starts at 106th and Gray Road and ends on Spring Mill Road between 116th and 131st Streets. This main is to serve growth in the Meridian Corridor and the west side of Carmel.
- The lining of aging sanitary sewer lines which extends the life of those lines another 20 to 50 years.

While we pushed forward with our system improvements, one of the ways in which we adapted to the challenges presented by the pandemic was to implement rotating staffing schedules as well as remote work whenever possible. For our customers, we followed the Governor's moratorium on disconnects and the application of penalties for non-payment. We even exceeded the time-frame for disconnects from August until October, which allowed our customers additional time to make payment arrangements for services they receive from Carmel Utilities. Customers with higher amounts owed were offered a payment plan option and more than 50 of our customers took advantage of this opportunity. We also began the testing of our wastewater influent for the presence of the coronavirus. The data from these test results helps area hospitals anticipate upcoming increases in cases that impact their service systems.

Our activities and results outlined in this report demonstrate our continued value of providing Carmel's residents and businesses safe and reliable water and wastewater services at rates far lower than our surrounding communities. We make the appropriate investments in maintenance and expansion of our systems to meet the needs both today and in the future.

Hoping we all have a safe and healthy 2021.

John Duffy, Utilities Director



The addition of Home Place area to bring municipally-treated water to residents.



Two solar arrays were installed on city property.



Adding lining to existing pipes to extend the life of the sanitary sewer pipes.

Residential Trash & Recycling in 2020



**Reduce
Reuse
Recycle**

30,164
NUMBER OF
CUSTOMERS

35,156
TONS OF TRASH
DISPOSED OF IN 2020

8,657
TONS OF RECYCLING
COLLECTED IN 2020



The Effect of the Pandemic on Residential Trash and Recycling

In normal years, the above statistics are mentioned in the annual report without elaboration. This year, however, was not a normal year. The pandemic had a profound impact on the trash and recycling industry across the country. With people staying at home they had time to clean closets, basements, attics

and other storage areas which resulted in additional waste generated for their home service; trash that would normally end up in commercial waste streams of offices, restaurants, etc.

Staying at home also resulted in additional online ordering. This resulted in A LOT of extra packaging including

boxes for recycling. The overall trash and recycling impact for Carmel was large with the 2020 average home volume 109% of 2019 volume with a high month of April at 121%.

These increased volumes meant trash and recycling trucks became full more quickly, which necessitated

additional trips by Republic Services to the transfer station at 96th Street and US 421 to dump their loads. At times, these additional daily trips caused delays in service but Republic Services worked hard to maintain their schedule. We thank our customers for their understanding in these unprecedented times.

Effect of Covid-19 on Carmel Water Consumption

The pandemic even impacted water consumption. Providing water 24/7 without interruption was more important than ever during Covid-19.

Overall, the use of water in Carmel increased by five percent for 2020. This is due to people being home more; washing hands more frequently and using water for domestic cleaning and outdoor projects, many of which moved to the top of the to-do lists as people were home to do them!

Interestingly, April saw a higher bump particularly when compared to past years. This is due in part to the fact that people were home instead of traveling for Spring Break.

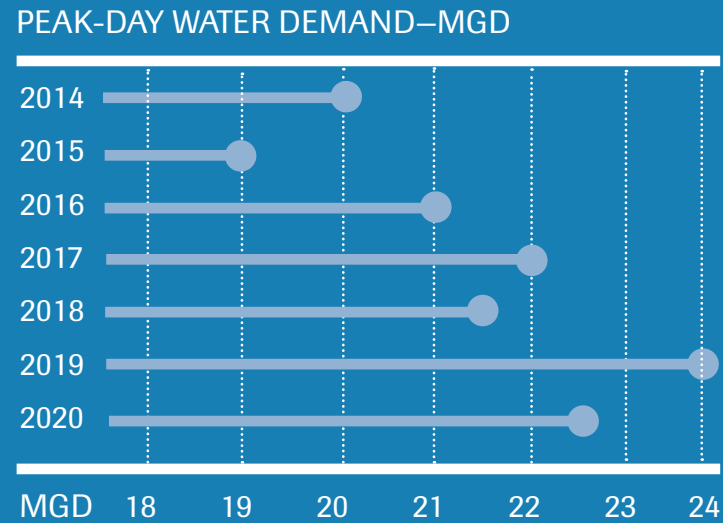




WATER UTILITY

ANNUAL WATER PRODUCTION
3,966,363,000 GALLONS

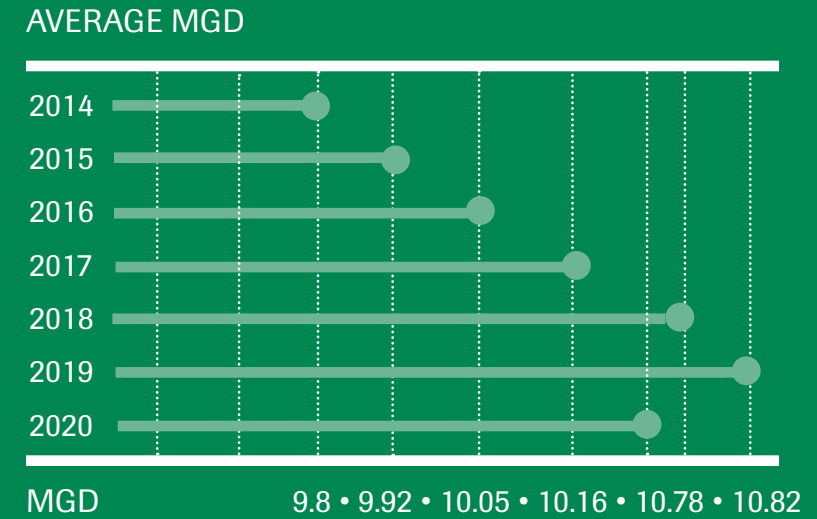
AVERAGE WATER DEMAND
10.87 MILLION
GALLONS PER DAY



WASTEWATER UTILITY

ANNUAL WASTEWATER FLOW
3,748,000,000 GALLONS

CLASS IV CONVENTIONAL-ACTIVATED SLUDGE-TYPE PLANT
10.24 MILLION
GALLONS PER DAY



FACILITY INFORMATION

4
TREATMENT PLANTS

TREATMENT CAPACITY MGD
CURRENT: **34 MGD**
EXPANSION: **38 MGD**

SIZE OF SERVICE AREA
SQ. MILES/ACRES:
50.23 SQ MILES



365
NUMBER OF DAYS
IN OPERATION 2020

252 MILES
OF SANITARY MAIN

16,729
NUMBER OF CUSTOMERS

27 MILES
SANITARY SEWER MAIN
CLEANED/TV INSPECTED 2020

\$11,620,000
2020 OPERATING BUDGET

31,174
NUMBER OF CUSTOMERS

555
MILES OF WATER MAINS

\$166,500,000
TOTAL ASSET VALUE

669 TOTAL
275 EMERGENCY
NUMBER OF CUSTOMER
CALL-INS FOR EMERGENCY
RESPONSES

7,295
NUMBER OF FIRE HYDRANTS
INSPECTED/SERVED

57
NUMBER OF EMPLOYEES



2,294
NUMBER OF WORK
ORDERS SERVICED



40,344
NUMBER OF 811
WATER LINE LOCATES



\$8,240,000
2020 OPERATING BUDGET

105
NUMBER OF CUSTOMER
CALL-INS FOR EMERGENCY
RESPONSES

17,629
NUMBER OF 811
SEWER LINE LOCATES

\$64,000,000
TOTAL ASSET VALUE

47
NUMBER OF EMPLOYEES

5,845
NUMBER OF CUSTOMER
WORK ORDERS SERVICED



7 MILES
OF SEWERS LINED

CUSTOMER SERVICE & BILLING

365,041
(1,450/BUSINESS DAY AVG)
NUMBER OF PAYMENTS
PROCESSED

\$37,831,464.56
(FOR 4 SERVICES)
GRAND TOTAL PAYMENTS
PROCESSED

392,578
METER READINGS
11,231
NUMBER OF WORK
ORDERS SERVICED

WASTEWATER PLANT EXPANSION

To meet Carmel's continued growth, the Wastewater Treatment Plant, located at 96th Street and Hazel Dell Parkway, is expanding its capacity from 12 million gallons per day to 14 million gallons per day. The expansion includes the addition of two new aeration tanks, and one final clarifier along with piping/pump replacements and additions. This project is financed through a low interest loan (2.25%)



offered through the Indiana Finance Authority State Revolving Loan Fund. When the expansion project is completed, a series of improvement projects will begin that will allow the plant to biologically or chemically



remove phosphorus from Carmel's wastewater effluent. Final effluent limitations of phosphorus will be permit-regulated by the Indiana Department of Environmental Management effective Dec. 1, 2021.