

# **WATER & SEWER AUTHORITY OF CABARRUS COUNTY**

## **FAQ - WASTEWATER CAPACITY**

### **Actual Capacity**

#### **Is the Rocky River Regional Wastewater Treatment Plant over capacity?**

No. The facility can handle 26.5 million gallons per day of wastewater. In 2021, the average daily flow was 20.97 million gallons per day, or less than 80% capacity.

#### **You refer to the average daily flow. What happens if there is an unusually high-volume day? Will raw sewage flow into the creeks?**

No, the wastewater conveyance system, pump stations, and wastewater treatment plants are designed to handle peak flows that occur during high-volume days. Additionally, our wastewater plant operators take steps within the plant to modify operations to most efficiently process the increased flows.

#### **How can you predict high flow days?**

The biggest impact on daily flow is rain. Rainwater seeps into our sewer pipes and increases the amount of water flowing to the wastewater plants. Preparations are made to accommodate this additional water when heavy rainfall is forecast.

#### **How should I report missing manhole covers, damage to sewer lines or concerns regarding water quality?**

You can report any concerns to the Water and Sewer Authority (WSACC) at 704-786-1783, and we will investigate. The Water and Sewer Authority is required to monitor treated wastewater that is being discharged from the plant on a daily basis. We maintain a state-certified laboratory and conduct testing throughout the day to ensure we are meeting permitted limits on discharges. The Water and Sewer Authority retains an excellent record of compliance.

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### Projected Capacity

#### **If the plant is currently operating at less than 80%, why have I heard that the Treatment Plant is over capacity?**

The state of North Carolina requires wastewater treatment plants to plan for houses and other buildings that have been allocated but not built and count their projected wastewater against the plant's capacity. A rapid increase in new flow allocation requests in Cabarrus County has rapidly increased the amount of wastewater projected to be produced in the coming years.

Cabarrus County has been experiencing new flow allocation requests at a much faster rate than homes have actually been built, resulting in the amount of flow that has been allocated but not yet built almost doubling over the past five years.

The Rocky River Regional facility currently has 2.87 million gallons per day allocated for new construction but not used and 2.66 million gallons per day available to be allocated.

#### **It sounds like it is pretty easy to predict what the average daily flow will be each year based on the number of permits issued?**

Unfortunately, it's not. The biggest variable for average daily flow is rainfall. Rainwater seeps into the wastewater system and increases the amount of water that must be treated. Over the last five years, the most significant increase in average daily flow occurred between 2017 and 2018.

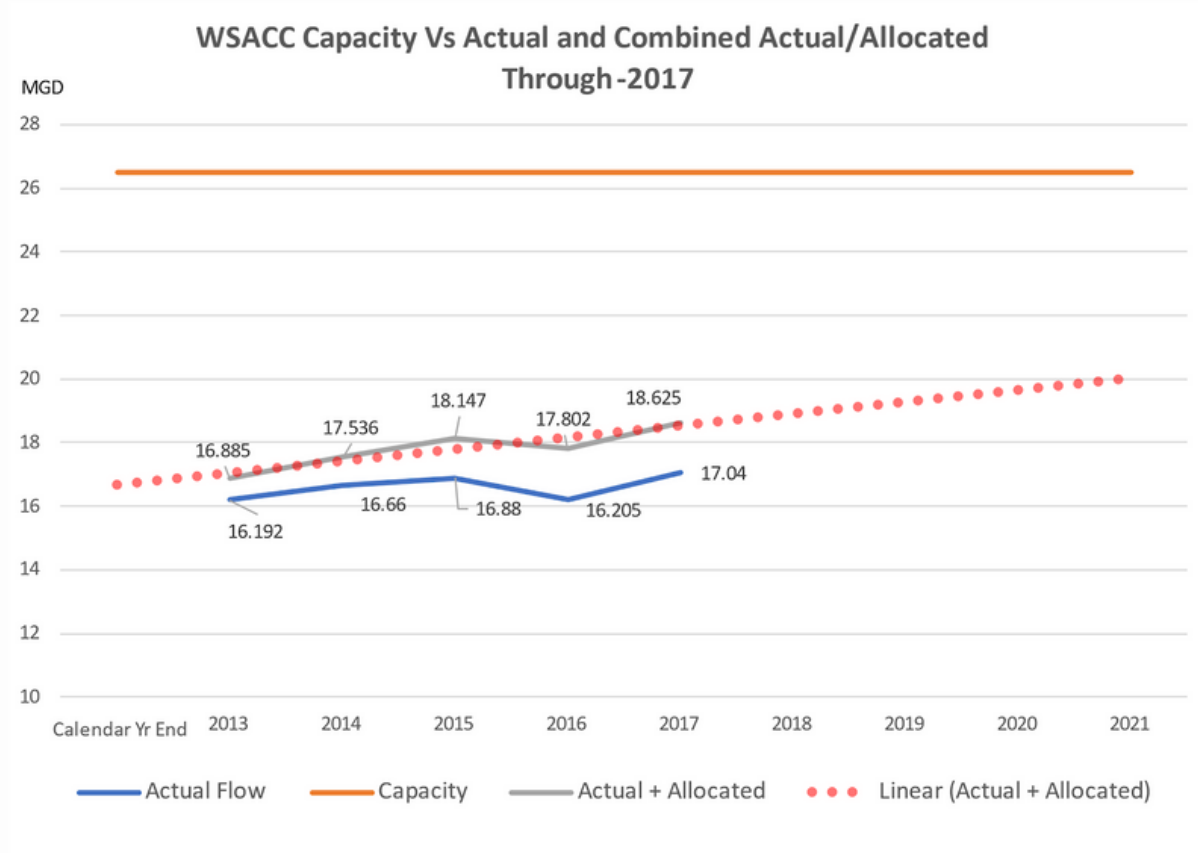
WSACC and its member jurisdictions operate over 3,000 miles of sewer lines, over 40,000 manholes, and over 100,000 sewer connections throughout the service area. These lines, manholes, and sewer clean-out connections allow for access points for rainfall and groundwater to enter the sewer collection system. During very wet periods, this rainfall and groundwater can significantly increase the flows within the wastewater system.

## Projected Capacity

### When did the Water and Sewer Authority recognize that there was a future capacity problem and when did planning for a new facility start?

As you will see from the chart below, based on historical increases, the facility was projected to have 29 years' worth of growth capacity as late as 2017. In 2018, the actual flow to Rocky River Regional increased by the same amount as it had the previous 10 years combined. As soon as this data was available, the staff and board of the Water and Sewer Authority began planning for an expansion of Rocky River Regional.

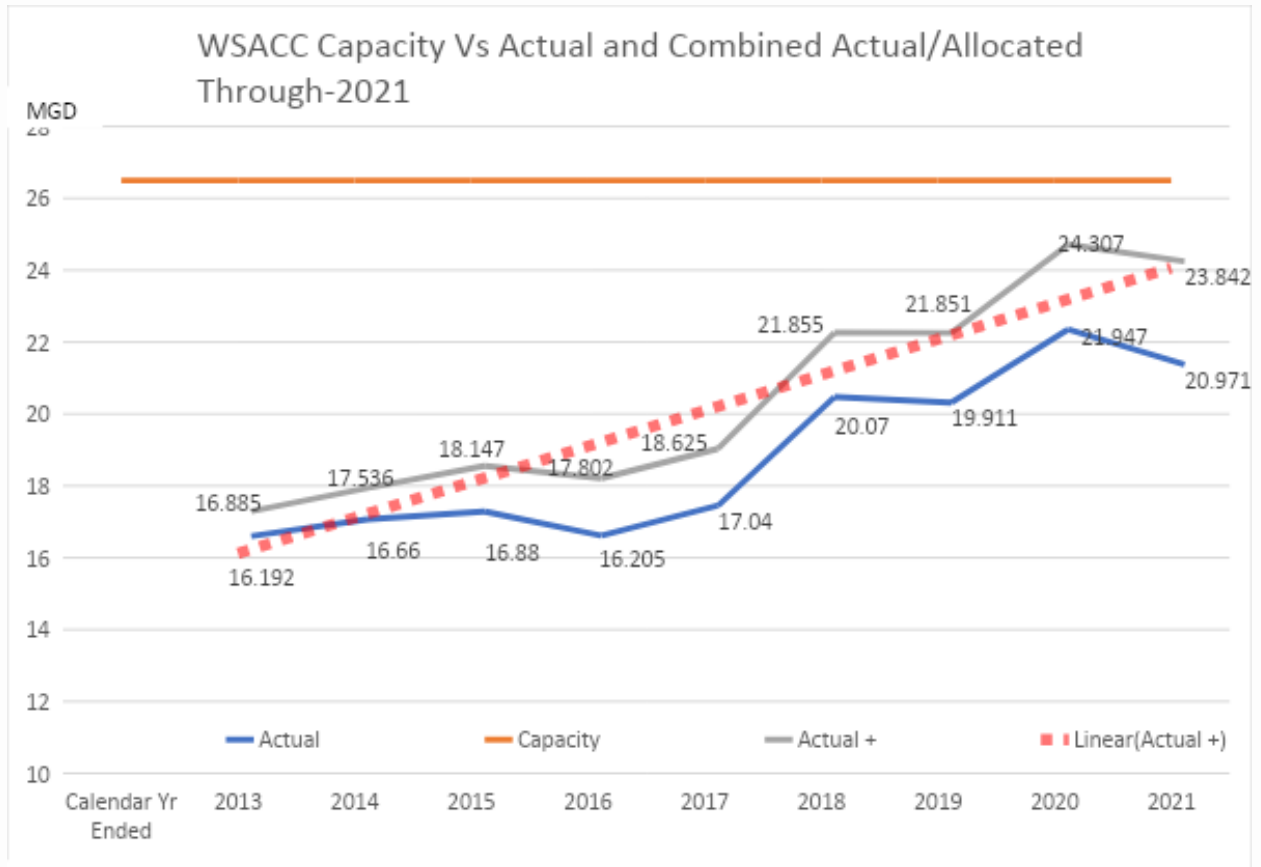
Here is the data that the Water and Sewer Authority was looking at.



Note that from 2013 to 2017, the actual and allocated daily flow grew by less than 500 thousand gallons per year, and at that growth rate, the Rocky River facility had adequate capacity to handle growth for decades.

## Projected Capacity

Two years of historically high rainfall tilted the long-term trend line in 2018 and 2020. After the rapid increase in 2018, the Water and Sewer Authority began planning to expand its treatment capacity.



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### Future Capacity

#### **What is the timeline for additional capacity to come online at Rocky River Regional?**

Planning began in 2019 to add an additional 3.5 million gallons per day by 2024 and another 4 million gallons per day by 2027. Construction has already begun on that project using an innovative design/build process. While the typical timeframe for an expansion of this size is 6-8 years, this project will be completed in less than five years. Additionally, the Water and Sewer Authority has begun a long-range master planning process to plan for all water and sewer needs in the county for the next 20 years.

#### **What is the Water and Sewer Authority doing to address the allocated capacity at Rocky River Regional prior to new actual capacity coming online?**

The Water and Sewer Authority has taken several steps to ensure that allocated capacity accurately reflects the actual amount of wastewater that a new residence will require. The Authority successfully petitioned the state Department of Environmental Quality to lower the projected amount of wastewater per bedroom for a new residence from 120 gallons per day to 80 gallons per day. However, this required projection is still significantly higher than what the Authority believes will be actually produced and higher than the requirement for other systems in the region, such as Charlotte Water.

The Authority is working with other local governments to confirm when housing units are occupied so that a housing unit isn't counted as a permitted/allocated unit and producing actual flow at the same time. The Authority is also working with the Department of Environmental Quality to allow permitting against the future actual capacity for development projects that will not be occupied before the expansion project is completed in 2024.

#### **Is it true that the Water and Sewer Authority is denying new building permits?**

No, the Water and Sewer Authority and the governments that it serves have entered into an interlocal agreement so that the municipalities can decide how best to allocate the remaining capacity at the Rocky River facility. Before entering this agreement, the Water and Sewer Authority approved permits on a first-come-first-served basis.