

Capacity & Expansion



Who We Are

- Formed in 1992
- Independent government under General Statute 162A
- Governed by a 9-member board
- Lead planning organization for water and sewer needs in Cabarrus County





Our Mission

- Provider **wholesale wastewater** transportation and treatment
- Provider of **reservoir management**
- **Planner for** the provision of **wholesale water**
- **Provider of retail water and sewer** service (if tasked by organizing entities)

Our Assets

- Rocky River Regional Wastewater Treatment Plant
- Muddy Creek Wastewater Treatment Plant
- 5 large pump stations
- 145 miles of sewer interceptors
- 2 raw water reservoirs
- Lake Howell
- Lake Concord





Rocky River Regional Wastewater Treatment Plant

Rocky River Regional Overview

Constructed as a 24 million gallon per day (mgd) plant by a partnership between Cabarrus County, the City of Concord, and Cannon Mills.

Late 1970s

Rocky River Regional was re-rated to 26.5 million gallons per day (mgd)

2012

Plant Expansion began

2019

Early 2000s

The plant received several upgrades.

2018

Flow dramatically increased. Plan immediately put into place to expand.

Rocky River Regional Capacity



Previous Calendar Year
Actual Flow

+



Developer Controlled
Capacity*

=



Capacity Used



Permitted
Capacity

-



Capacity
Used

=

Remaining
Available

*Capacity that has been officially allocated to a specific project through the flow allocation process.

Rocky River Regional Capacity

- Regulated by the North Carolina Department of Environmental (DEQ)
- DEQ permits total capacity
- DEQ requires allocation tracking
- DEQ creates formula for projecting future system demand from new residential construction



Rocky River Regional Capacity

Flow acceptance is issued to projects after:

1

Construction drawing approval phase is complete

2

Flow allocation by the local jurisdiction is approved

3

Final flow acceptance approval is sent to WSACC

For Example...



300 single family homes



100 4-bedrooms homes
80 gpd/br
32,000 gpd



200 3-bedrooms homes
80 gpd/br
48,000 gpd



80,000 gpd

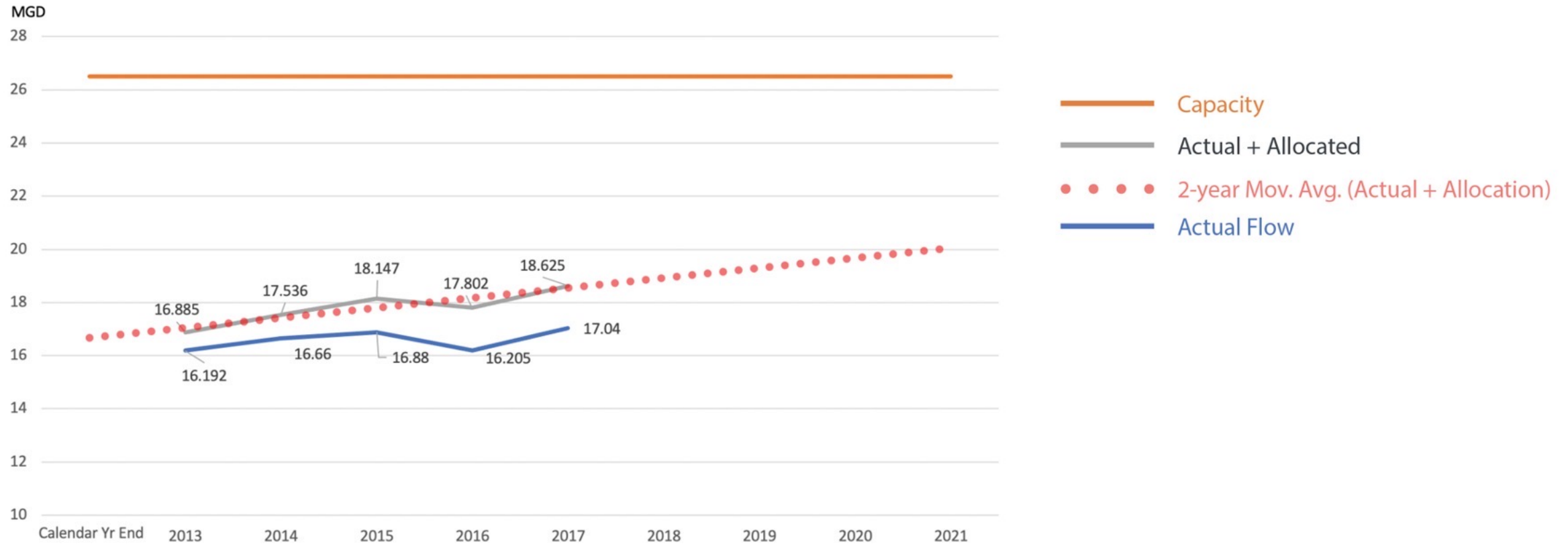
Rocky River Regional Flows & Capacity

	2017	2018	2019	2020	2021	2022	2023
Previous Year Flow (mgd)	16.21	17.04	20.07	19.91	21.95	20.97	21.11
Total Calendar Year Flow Acceptance (mgd)	0.94	1.23	1.28	2.15	1.83	0.93	-
Developer Controlled Capacity(mgd)	1.60	1.59	1.79	1.94	2.36	2.87	3.18
Jurisdictional Controlled Capacity(mgd)	8.70	7.88	4.65	4.66	2.19	2.66	2.21

The 2023 numbers equal 5.39 mgd of currently not being used capacity at the Rocky River Regional.

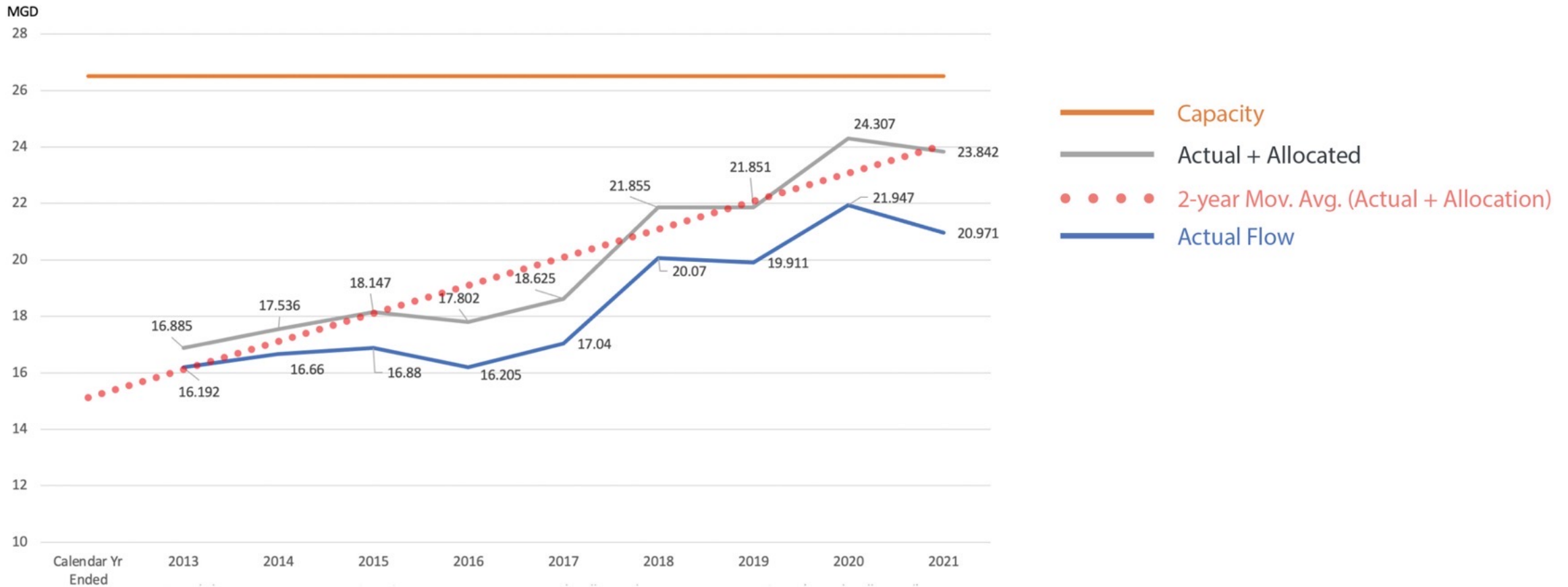
ROCKY RIVER REGIONAL FLOWS & CAPACITY

Capacity vs. Actual and Combined Actual/Allocated Through 2017



ROCKY RIVER REGIONAL FLOWS & CAPACITY

Capacity vs. Actual and Combined Actual/Allocated Through 2021

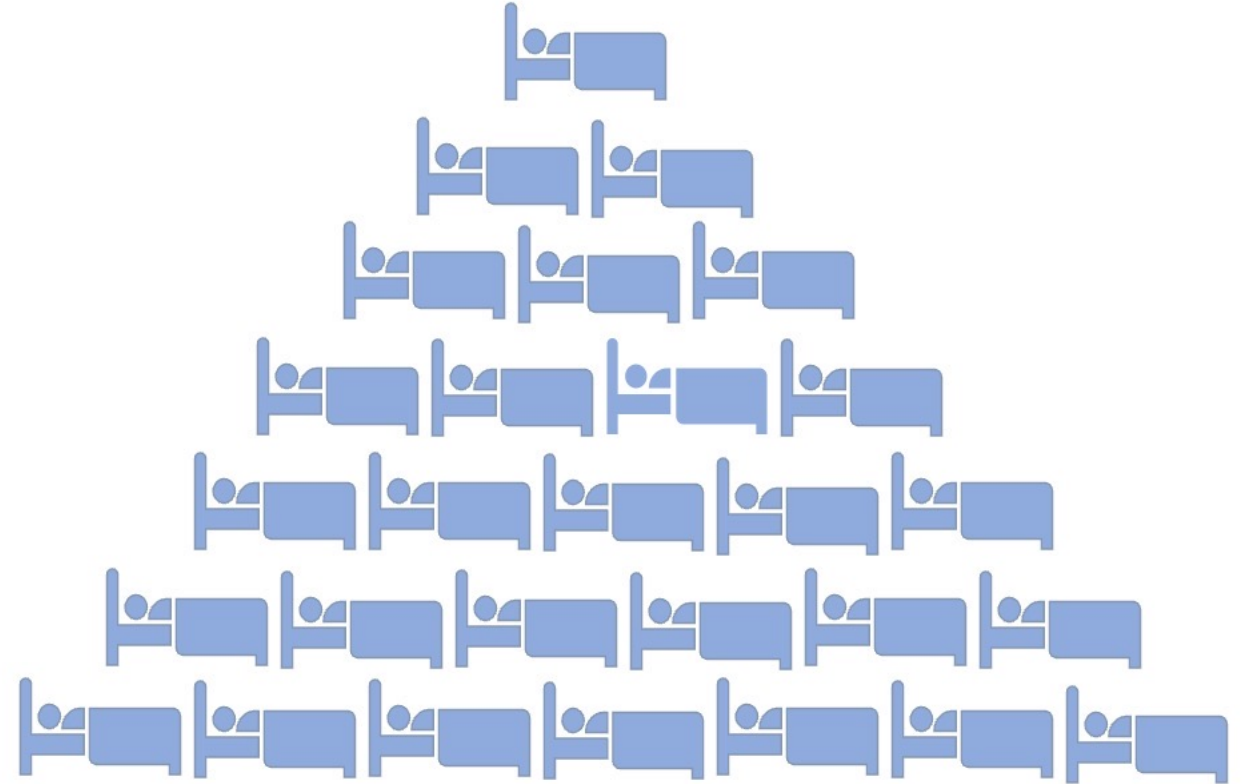


Rocky River Regional Flows & Capacity

5.39 mgd
Currently Unused
Capacity



Equivalent of



23,042 3-Bedroom Units

Rocky River Regional Expansion

- Rocky River Regional is constructed for 26.5 mgd
- Rocky River Regional is permitted to 34 mgd
- Expansion design began in 2019
- Design-build agreement with Crowder Construction signed in 2021

2027 Capacity & Total Permitted = 34 mgd ←

2024 Capacity = 30 mgd ←

Constructed Capacity = 26.5 mgd ←

Current Flow = 21.11 mgd ←



Rocky River Regional Expansion

Phase 1

- 2024
- New capacity 30mgd
- Cost: \$100m

Phase 2

- 2027
- New capacity 34mgd
- Cost: TBD.

Rocky River Regional – Capacity Allocations

- Prior to 2021 - flow acceptance on a first-come, first-serve basis.
- In 2021, the WSACC Board adopted a strategic allocation process
 - Allocation divided among jurisdictions
 - Jurisdictions establish a local policy on allocation



WSACC Rocky River Regional – Capacity Allocations



Jurisdictional Controlled Capacity

	Flow Allocated
Charlotte Water	538,000 gpd
Concord	875,869 gpd
Kannapolis	522,775 gpd
Harrisburg	211,022 gpd
Mt. Pleasant	65,667 gpd
Totals	2,213,333 gpd

Planning for the Future

2022 - Began Master Planning process

- Team: professional engineers and planners that are experts in their fields
- Timeline: 20-year plan with focus on initial 10-years
- Report:
 - Population/flow projections
 - Permitting future expansion needs
 - Drinking water needs projections
 - Begin permitting process







CONCLUSION

- 2017: Projected 29 years' worth of growth capacity
- 2018: Actual flow increased as much as previous 10 years combined
- WSACC swiftly began planning the plant's expansion. First phase will be completed in 2024
- Municipalities have an agreement to decide how best to allocate the remaining capacity at the Rocky River facility.
- 2022 Calendar Year Actual Flow = 21.11 MGD (79.7% of capacity)

Contact Us



www.wsacc.org



(704) 786-1783



info@wsacc.org