



# Appendix 4-3

## Cumulative Impact Analysis Calculations: Water Supply and Sewage Generation

**CUMULATIVE IMPACT ANALYSIS CALCULATIONS  
 WATER SUPPLY AND SEWAGE GENERATION**

Data Source: Gail Pesner email dated 11/15/2023, Gail Pesner email date 3/13/2024

**PENDING DEVELOPMENT**

**FLOW CALCULATIONS**

Unit Quantity	Unit Flow Rate	Flow Rate (gpd)
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**The Gardens at Buffalo**

17-33 Buffalo Avenue, Freeport

Apartment/Condo Unit:

- Studio/One-Bedroom

110 units x 200 gpd/unit = 22,000 gpd

- Two-Bedroom

70 units x 300 gpd/unit = 21,000 gpd

- Three-Bedroom

20 units x 400 gpd/unit = 8,000 gpd

**TOTAL FLOW:**

**51,000 gpd**

**The Bridge**

212 Third Street, Mineola

Apartment/Condo Unit:

- Studio/One-Bedroom

89 units x 200 gpd/unit = 17,800 gpd

- Two-Bedroom

32 units x 300 gpd/unit = 9,600 gpd

Event Space

10,000 sf x 0.30 gpd/sf = 3,000 gpd

**TOTAL FLOW:**

**30,400 gpd**

**The Royal Blue**

101 & 105 Searing Avenue, Mineola

Apartment/Condo Unit:

- Studio/One-Bedroom

46 units x 200 gpd/unit = 9,200 gpd

- Two-Bedroom

8 units x 300 gpd/unit = 2,400 gpd

**TOTAL FLOW:**

**11,600 gpd**

120 & 125 Third Street, Mineola

Apartment/Condo Unit:

- Studio/One-Bedroom

181 units x 200 gpd/unit = 36,200 gpd

- Two-Bedroom

259 units x 300 gpd/unit = 77,700 gpd

Retail

9,840 sf x 0.03 gpd/sf = 295 gpd

**TOTAL FLOW:**

**114,195 gpd**

85 Willis/111 Second Street, Mineola

Apartment/Condo Unit:

- Studio/One-Bedroom

85 units x 200 gpd/unit = 17,000 gpd

- Two-Bedroom

7 units x 300 gpd/unit = 2,100 gpd

**TOTAL FLOW:**

**19,100 gpd**

**The Cornerstone at Westbury**

Apartment/Condo Unit:

- Studio/One-Bedroom

118 units x 200 gpd/unit = 23,600 gpd

- Two-Bedroom

13 units x 300 gpd/unit = 3,900 gpd

**TOTAL FLOW:**

**27,500 gpd**

**Proposed Shopping Center**

357 & 440 Old Country Road, Carle Place

Retail

35,558 sf x 0.03 gpd/sf = 1,067 gpd

Drive-thru Bank

3,015 sf x 0.03 gpd/sf = 90 gpd

Restaurant with drive-thru (assume 1 seat per 37 sf or Restaurant use)

2,818 sf @ 37 sf/seat = 77 seats

= 77 seats x 30 gpd/seat = 2,310 gpd

**TOTAL FLOW:**

**3,467 gpd**

**Hotel (Pad Site) and Medical Office Building**

Roosevelt Field Mall property, Old Country Road, Garden City

Hotel (assume all rooms are larger than 400 sf)

170 rooms x 150 gpd/room = 25,500 gpd

Restaurant

85 seats x 30 gpd/seat = 2,550 gpd

Medical Office

90,000 sf x 0.10 gpd/sf = 9,000 gpd

**TOTAL FLOW:**

**37,050 gpd**

**NYU Langone Hospital**

Nassau Community College Campus, Uniondale

Hospital

800 beds x 300 gpd/bed = 240,000 gpd

Academic/Research and Administration Offices (non-medical office)

350,000 sf x 0.06 gpd/sf = 21,000 gpd

Student/Staff Housing (assume one-bedroom units averaging 750 sf/unit)	200,000 sf @ 750 sf/unit	=	
	= 267 units x 200 gpd/unit	=	53,400 gpd
Ambulatory Medical Use (medical office)	250,000 sf x 0.10 gpd/sf	=	<u>25,000 gpd</u>
<b>TOTAL FLOW:</b>			<b>339,400 gpd</b>

### Faith Baptist Church of Hempstead

145 North Franklin Street, Village of Hempstead

Senior Apartments	244 units x 200 gpd/unit	=	48,800 gpd
Retail Space	8,667 sf x 0.03 gpd/sf	=	<u>260 gpd</u>
<b>TOTAL FLOW:</b>			<b>49,060 gpd</b>

### Carman Place

126 Bedell Street, Village of Hempstead

Apartment Units	228 units x 200 gpd/unit	=	45,600 gpd
Retail Space	22,290 sf x 0.03 gpd/sf	=	<u>669 gpd</u>
<b>TOTAL FLOW:</b>			<b>46,269 gpd</b>

### Estella Housing

Bedell Street, Village of Hempstead

Apartments	66 units x 200 gpd/unit	=	13,200 gpd
Independent Living Dwelling Units	30 units x 200 gpd/unit	=	6,000 gpd
Retail Space	5,540 sf x 0.03 gpd/sf	=	<u>166 gpd</u>
<b>TOTAL FLOW:</b>			<b>19,366 gpd</b>

### Grubb Site Plan

257 Main Street, Village of Hempstead

Apartments	173 units x 200 gpd/unit	=	34,600 gpd
Retail Space	2,069 sf x 0.03 gpd/sf	=	<u>62 gpd</u>
<b>TOTAL FLOW:</b>			<b>34,662 gpd</b>

### 226 Clinton Street

226 Clinton Street, Hempstead NY

Senior Housing	60 units x 200 gpd/unit	=	12,000 gpd
Multifamily Housing Units	60 units x 600 gpd/unit	=	<u>36,000 gpd</u>
<b>TOTAL FLOW:</b>			<b>48,000 gpd</b>

### Memorial Sloan Kettering Uniondale

1101 Hempstead Tpke, Uniondale, NY 11553

Out-patient facility	26,000 sf x 0.10 gpd/sf	=	<b>2,600 gpd</b>
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#### Note:

- All rates are based on the "Minimum Design Sewage Flow Rates" published by the Nassau County Department of Public Works (NCDPW).
- It is assumed the domestic water demands will be equal to the sewage flow rates. Fixture unit counts, water saving devices and other potential measures to reduce water demand are unknown and have not been considered with the flow estimates.
- Water demands from irrigation and/or fire water services are not able to be calculated from the information provided and have not been considered with the flow estimates.
- It is assumed that "senior apartment units" and "independent living dwelling units" will be equal to the flow of "One bedroom apartment / condo" which is 200 gpd/day
- Memorial Sloan Kettering assumed to be "Medical Arts" for sewage flow calculation purposes at .10 gpd/sf.

Sewer District  
NC #2  
Bay Park Sewage Treatment Plant

Water District  
Village of Hempstead

NC #2  
Bay Park Sewage Treatment Plant

Village of Hempstead

NC #2  
Bay Park Sewage Treatment Plant

Village of Hempstead

NC #2  
Bay Park Sewage Treatment Plant

Village of Hempstead

NC #2  
Bay Park Sewage Treatment Plant

Village of Hempstead

NC #3  
Cedar Creek Water Pollution Control Plant

Uniondale Water District