

Water Supply and Wastewater on the South Shore

South Shore Chamber of Commerce
January 21, 2021

Betsy Cowan Neptune
Chief of Economic Development

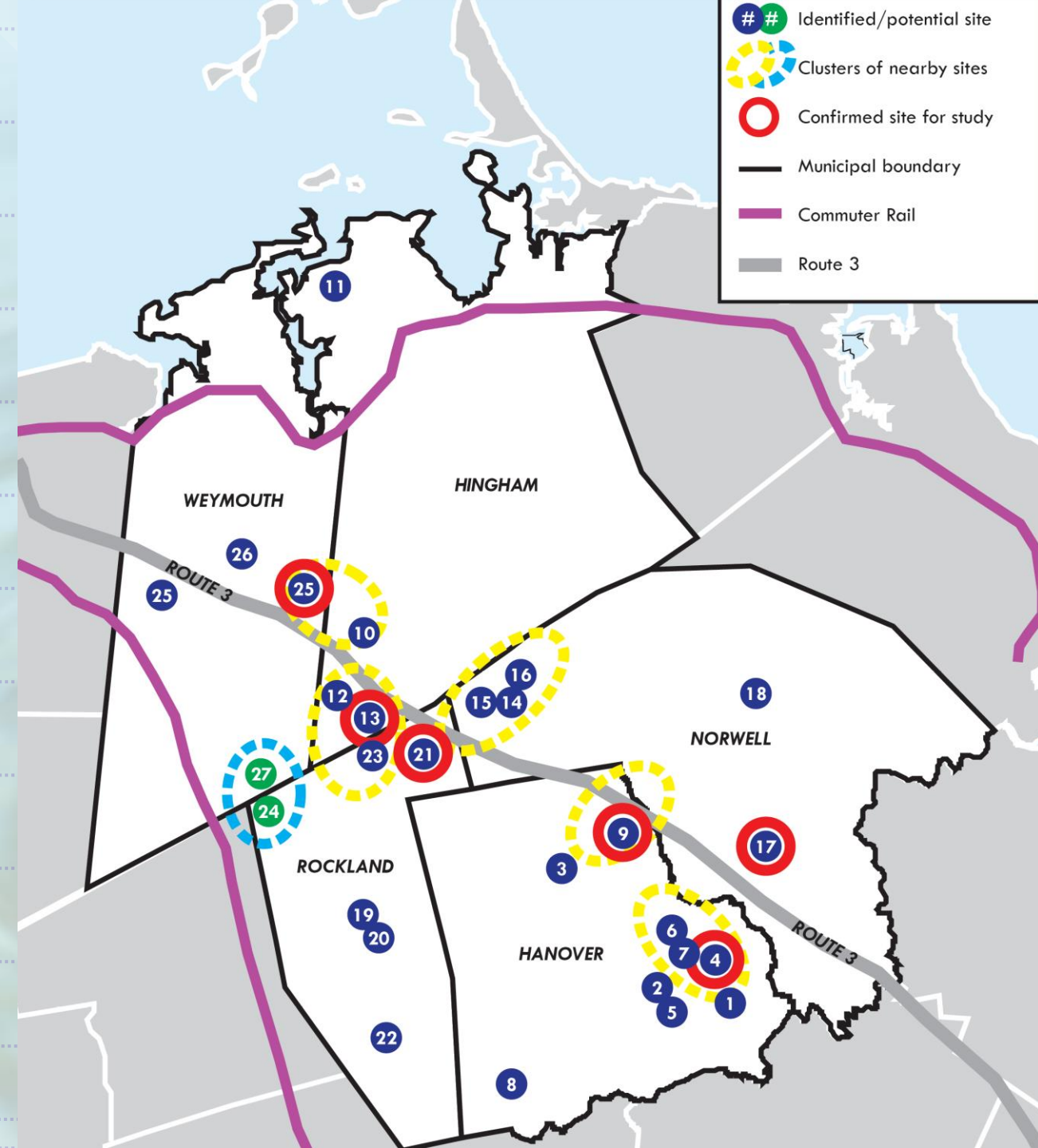
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Director of Environmental Planning

Metropolitan Area Planning Council



Site Readiness Project

- **SSEDC-MassDevelopment-Weston & Sampson-MAPC**
- **Goal to facilitate development in region by finding solutions to water/wastewater needs**
- **6 sites, 5 municipalities**
- **Final recommendations to be presented in July**



Wastewater by Development Type

Based on MA "Title 5" Flow Design Criteria:

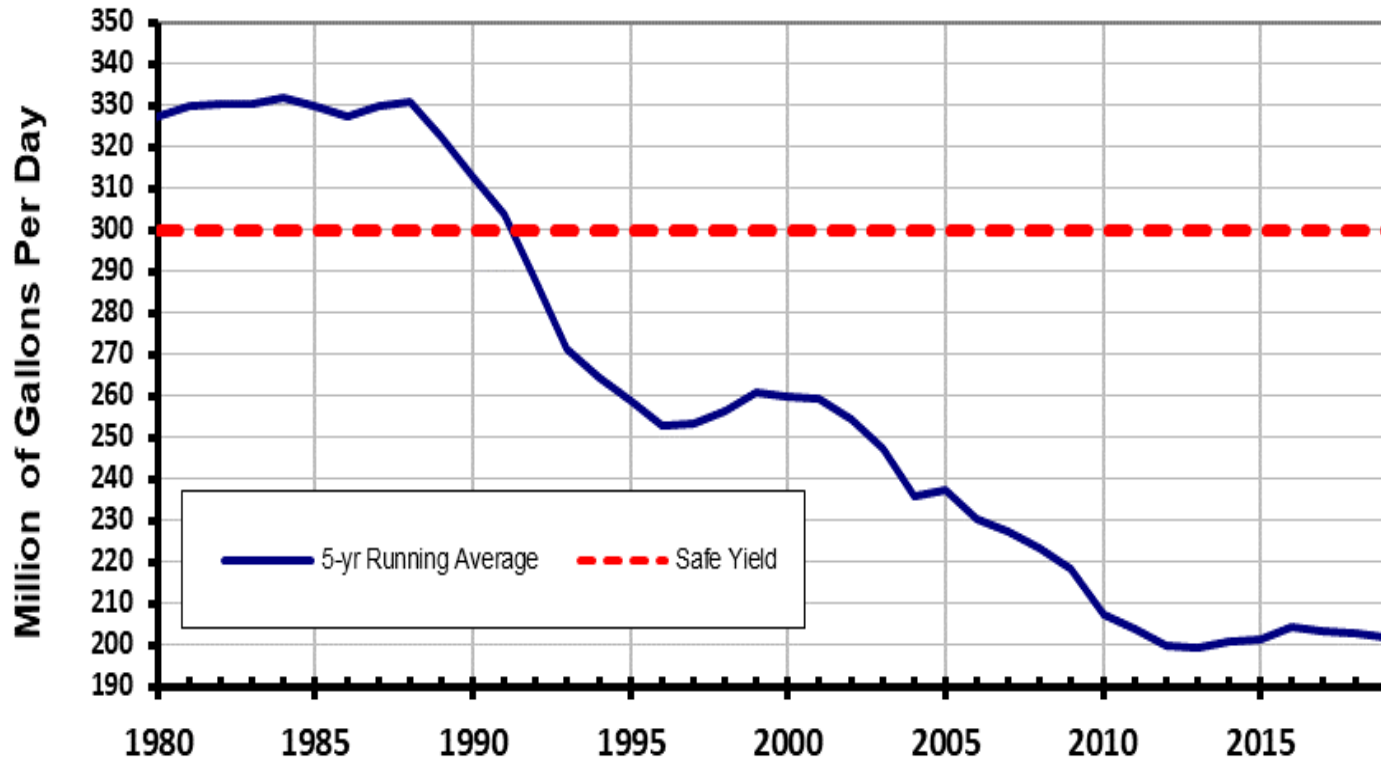
Residential Dwelling, per bedroom	110 GPD
Motel, Hotel, per bedroom	110 GPD
Office building per 1000 sq.ft.	75 GPD
Retail Store, per 1000 sq.ft.	50 GPD
Restaurant, per seat	35 GPD

EXAMPLES:

Gallons/Day

Apt/Condo, 150-Units, avg 2 BR	33,000
Hotel, 150 Rooms	22,000
Office, 100,000 sf	7,500
Retail, 200,000 sf	10,000
Restaurant, 200 seats	7,000
<u>TOTAL MIXED USE DEVELOPMENT</u>	<u>79,500</u>

Water Supply Summary



Regional Context:

MWRA has capacity and is interested in new communities

But there is a cost!

**Entrance fee=
\$1 million per
100,000 GPD**

Plus any infrastructure needed to connect

Water Supply Summary

Hanover Water Department

Population Served	15,000
Water System	3 WTP's / GW
Permitted Withdrawal (WMA)	1.38 MGD
2019 Water Demand	1.25 MGD

Hingham - Weir River Water System

Population Served	35,000 (Hull, Cohasset)
Water System /Sources	1 WTP / SW & GW
Permitted Withdrawal (WMA)	3.51 MGD
2019 Water Demand	3.16 MGD

Water Supply Summary

Norwell Water Department

Population Served	11,500
Water System	2 WTP's / GW
Permitted Withdrawal (WMA)	1.14 MGD (up to 1.21)
2019 Water Demand	0.922 MGD

Rockland: Abington & Rockland Joint Water Works

Population Served	34,000
Water System	3 WTP's / 2 SW, 1 GW
Permitted Withdrawal (WMA)	3.11 MGD (up to 3.36)
2019 Water Demand	2.72 MGD

Water Supply Summary

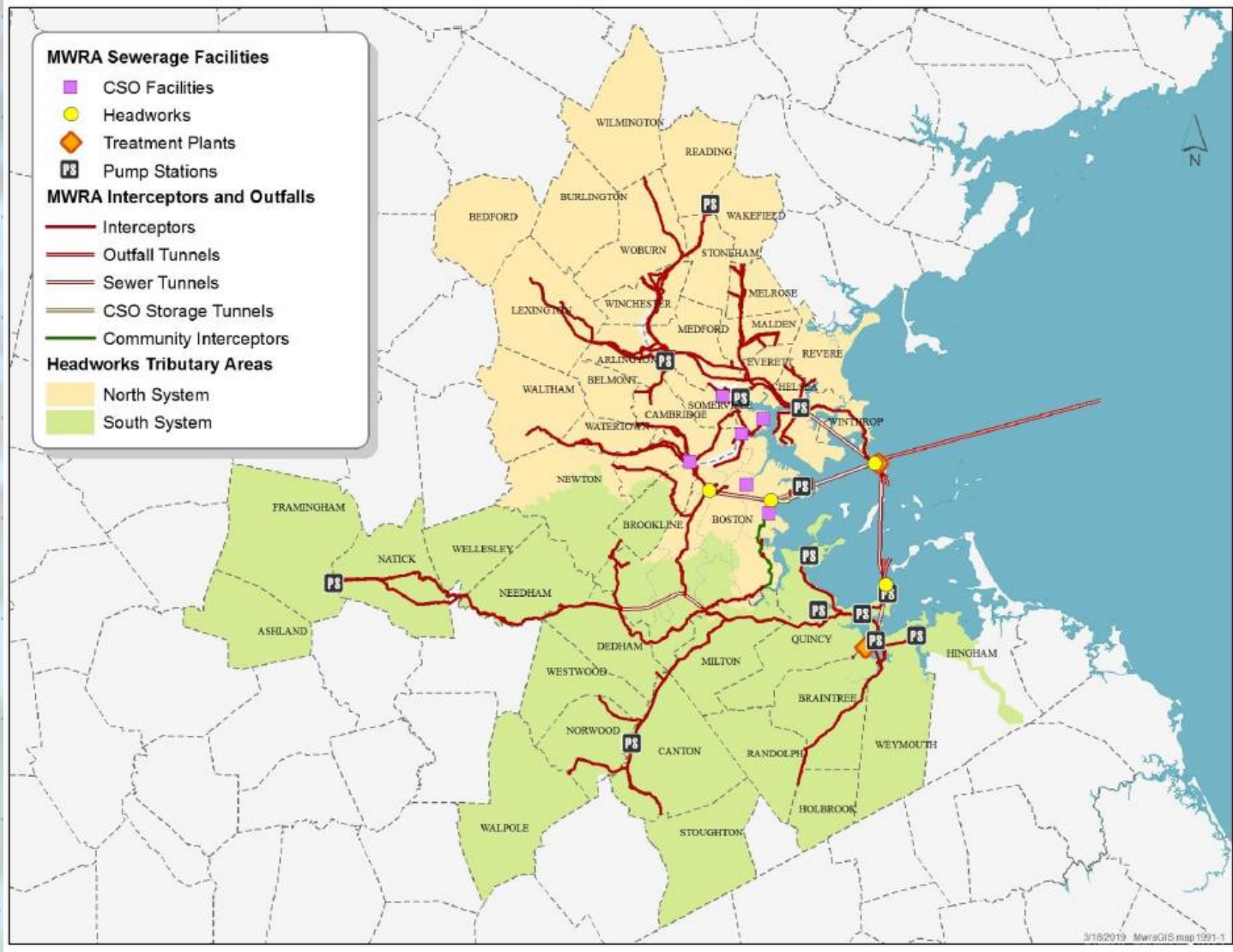
Weymouth Department

Population Served	54,000
Water System	2 WTP's, GW & SW
Permitted Withdrawal (WMA)	5.0 MGD
2019 Water Demand	4.5 MGD

TOTAL FOR 5 TOWNS

Population Served-5 Towns	149,500
Water Systems	12 WTP's / GW & SW
Permitted Withdrawal (WMA)	14.1 MGD (up to 14.5)
2019 Water Demand	12.5 MGD

Wastewater Summary



Regional Context:

**MWRA serves:
Weymouth and
North Hingham**

**MWRA not looking
to expand due to
capacity limits**

Wastewater Summary



Regional Context:

Wastewater flow to the MWRA from Weymouth and Hingham is conveyed through the Braintree-Weymouth Tunnel

Wastewater Summary

South Shore Coalition

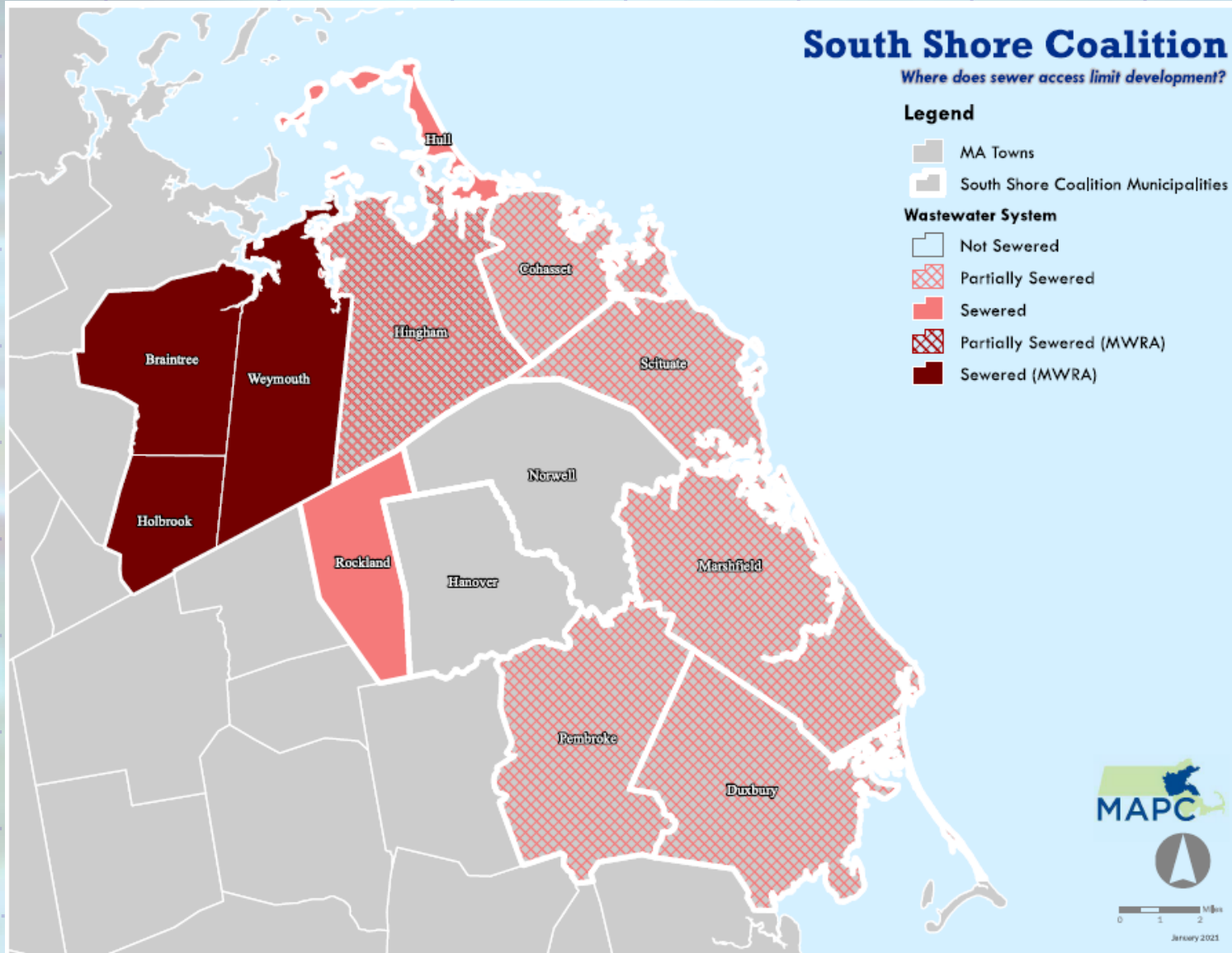
Where does sewer access limit development?

Legend

- MA Towns
- South Shore Coalition Municipalities

Wastewater System

- Not Sewered
- Partially Sewered
- Sewered
- Partially Sewered (MWRA)
- Sewered (MWRA)



Regional Context:

Towns with MWRA and Local Wastewater Systems, fully and partially sewered

Wastewater Summary

Hanover

No Municipal Wastewater System

Private WWTP's near potential development sites (capacity?)

Cardinal Cushing: St. Coletta's School	32,000 gpd	NO
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Unicorn Dev: Hanover Mall	63,000 gpd	?
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Unicorn Dev: Merchant's Row	18,000 gpd	?
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Wastewater Summary

Hingham

North Sewer District (MWRA)	2,500 residences & bus
Weir River Sewer District (Hull)	275 residences
Private WWTP near potential development sites:	
South Shore Industrial Park and Derby Street	

Norwell

No Municipal Wastewater System

1 Private WWTP	24,000 GPD
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Connection to potential dev. site could be expensive

Wastewater Summary

Rockland

Municipal WWTP (also serves Abington)

Discharge Permit	2.5 MGD
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Inflow & Infiltration requires high flow management

Town is starting a Comprehensive WW Assessment

Weymouth

MWRA Wastewater service	8.48 MGD
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1 Potential Dev. Site - potential connection to system

Strategies for Capacity Constraints

Inter-municipal initiatives
Public/Private initiatives

Water Supply:

Demand management, water efficiency
Seasonal Peak Demand Reduction
Water Banking

Wastewater:

Inflow and Infiltration removal
Water Reuse

