

# Understanding Rhode Island Sewer Capacity & Availability

June 6<sup>th</sup> 2024



# SEWER BACKGROUND



## Existing Capacity

- Finite capacity in existing WWTFs and collection systems
- Capacity established through facilities planning and system designs that are reviewed and approved by RIDEM

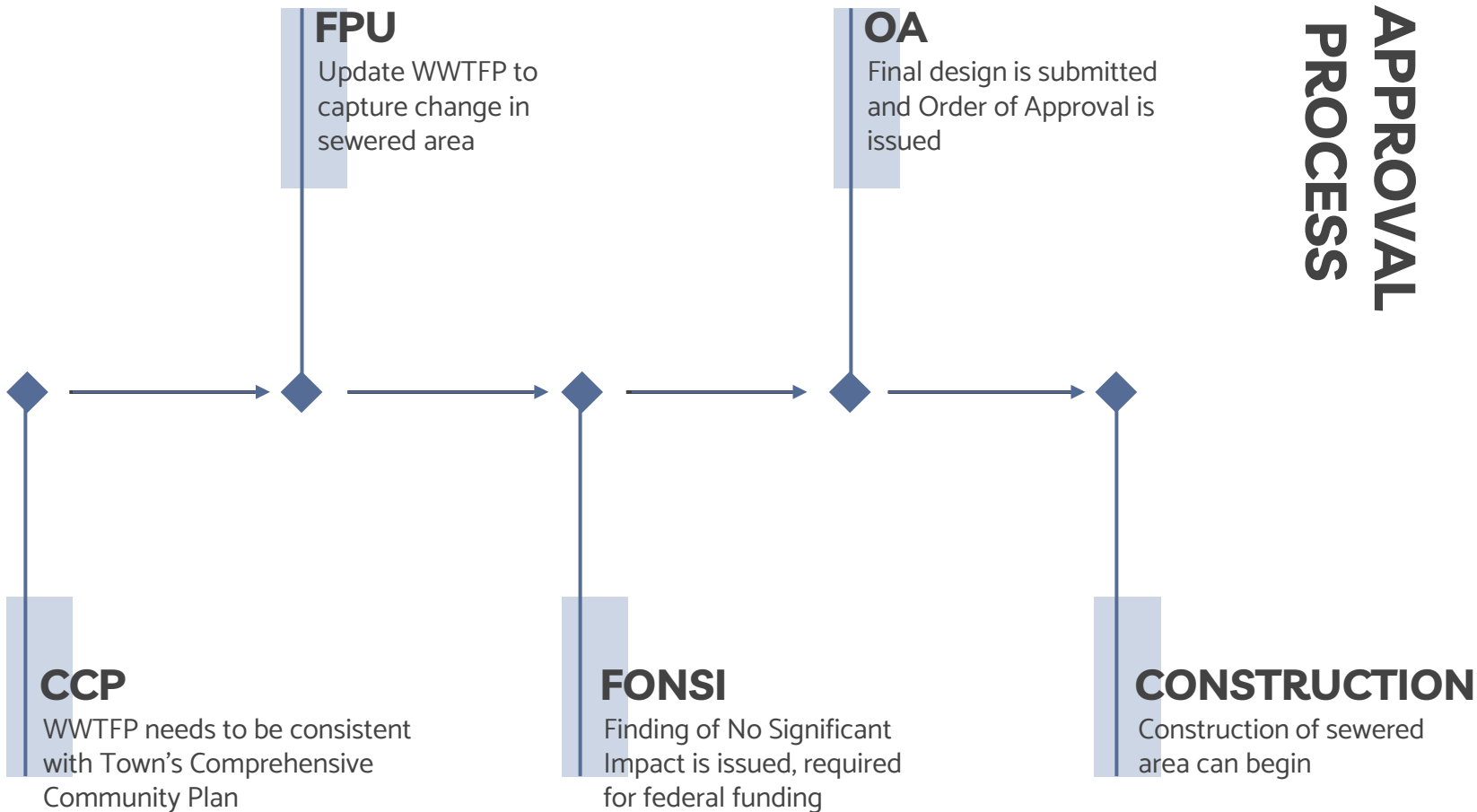
## Facility Planning

- Triggered when:
  - Community intends to expand sewer area beyond current extents
  - Any needs

## Order of Approval

- Issued for WWTF upgrades, pump station upgrades, new sewer extensions
- Only for sewer extension projects that will generate >30,000 gpd
- Projects must be consistent with Facilities Plan

# APPROVAL PROCESS



# SEWER BUILDOUT



## EXTENSION

- Areas outside of existing sewer network
- Projects > 30,000 gpd require DEM approval



## INFILL

- Areas within existing sewer network
- Expansion of population leads to increase in flows
- Projects > 30,000 gpd require DEM approval



# WASTEWATER TREATMENT FACILITIES

## BRISTOL

- Town of Bristol
- Pop: 22,954

## BURRILLVILLE

- Town of Burrillville
- Pop: 15,955

## CRANSTON

- City of Cranston
- Pop: 80,387

## EAST GREENWICH

- Town of East Greenwich
- Pop: 13,146

## EAST PROVIDENCE

- City of East Providence and Barrington
- Total Pop: 63,337

## JAMESTOWN

- Town of Jamestown
- Pop: 5,405

## BUCKLIN POINT

- Central Falls, Cumberland, East PVD, Lincoln, Pawtucket, and Smithfield
- Total Pop: 213,602

## FIELDS POINT

- Johnston, North PVD, and Providence
- Total Pop: 238,889

## SCARBOROUGH

- Town of Narragansett
- Pop: 15,868

## NEWPORT

- City of Newport, Middletown, and U.S. Navy Base
- Total Pop: 43,809

## NEW SHOREHAM

- Town of New Shoreham
- Pop: 1,010

## QUONSET POINT

- Town of North Kingstown
- Pop: N/A

## SMITHFIELD

- Town of Smithfield
- Pop: 21,430

## SOUTH KINGSTOWN

- Narragansett, South Kingstown, and URI
- Total Pop: 46,507

## WARREN

- Town of Warren
- Pop: 10,611

## WARWICK

- City of Warwick
- Pop: 82,672

## WESTERLY

- Town of Westerly
- Pop: 22,787

## TOWN OF WEST WARWICK

- Coventry, Cranston, East Greenwich, Warwick, and West Greenwich
- Total Pop: 253,545

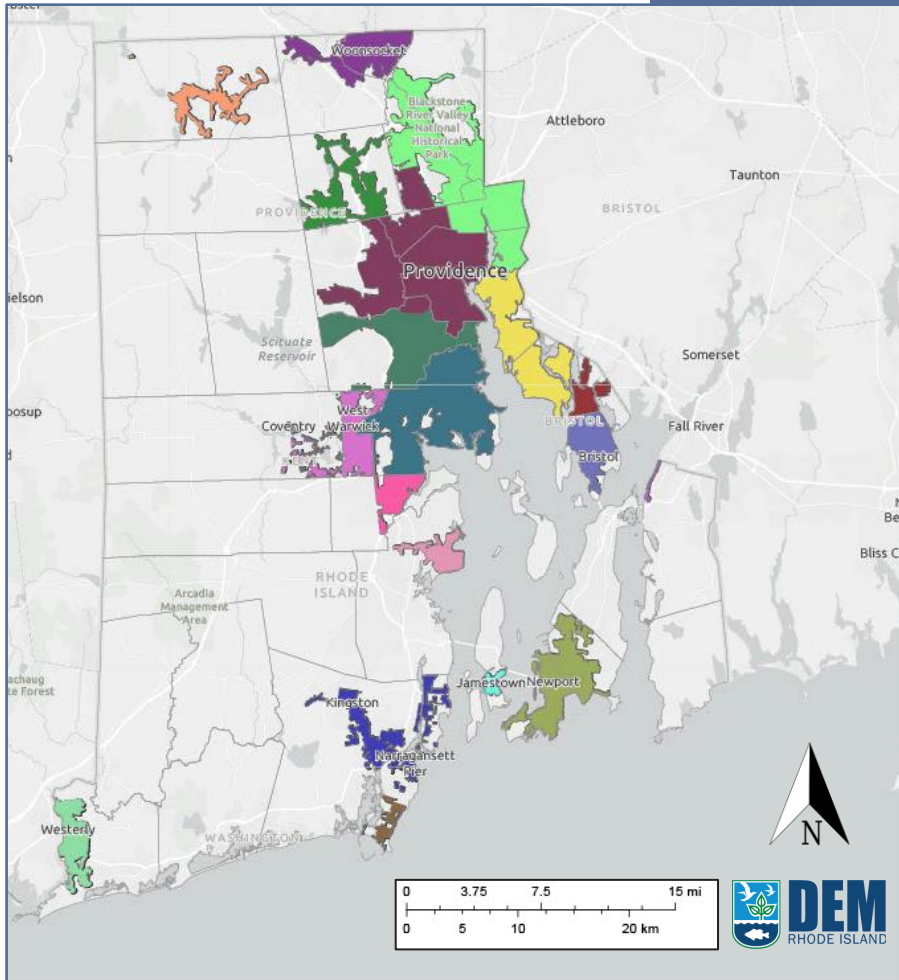
## WOONSOCKET

- North Smithfield, Woonsocket, Blackstone MA, and Bellingham MA
- Total Pop: 67,033



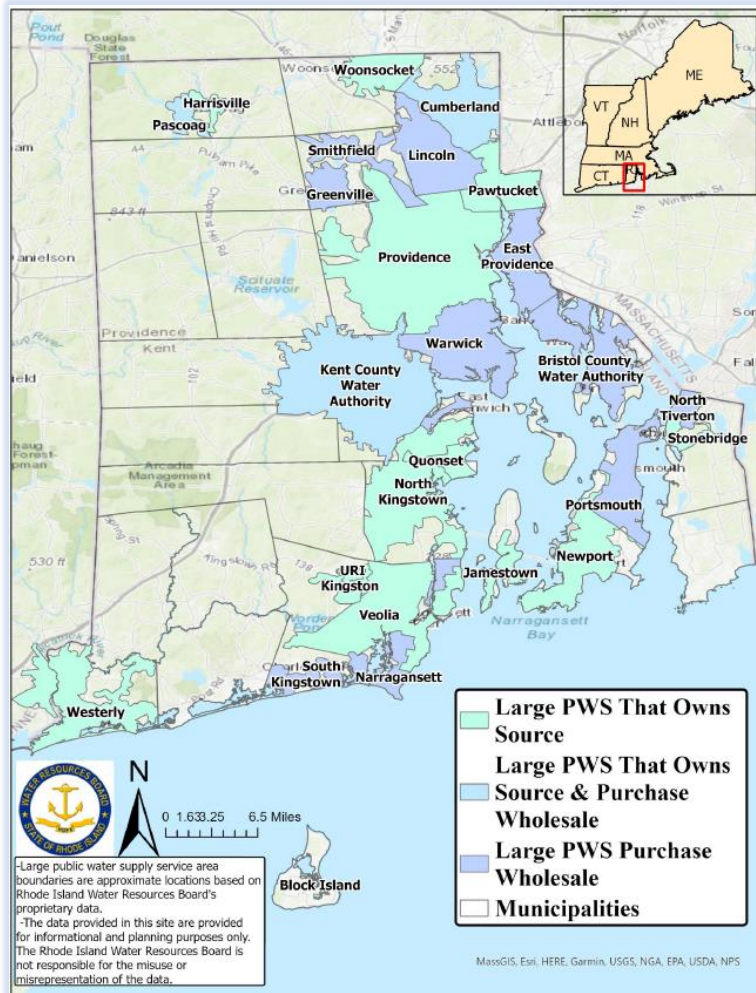
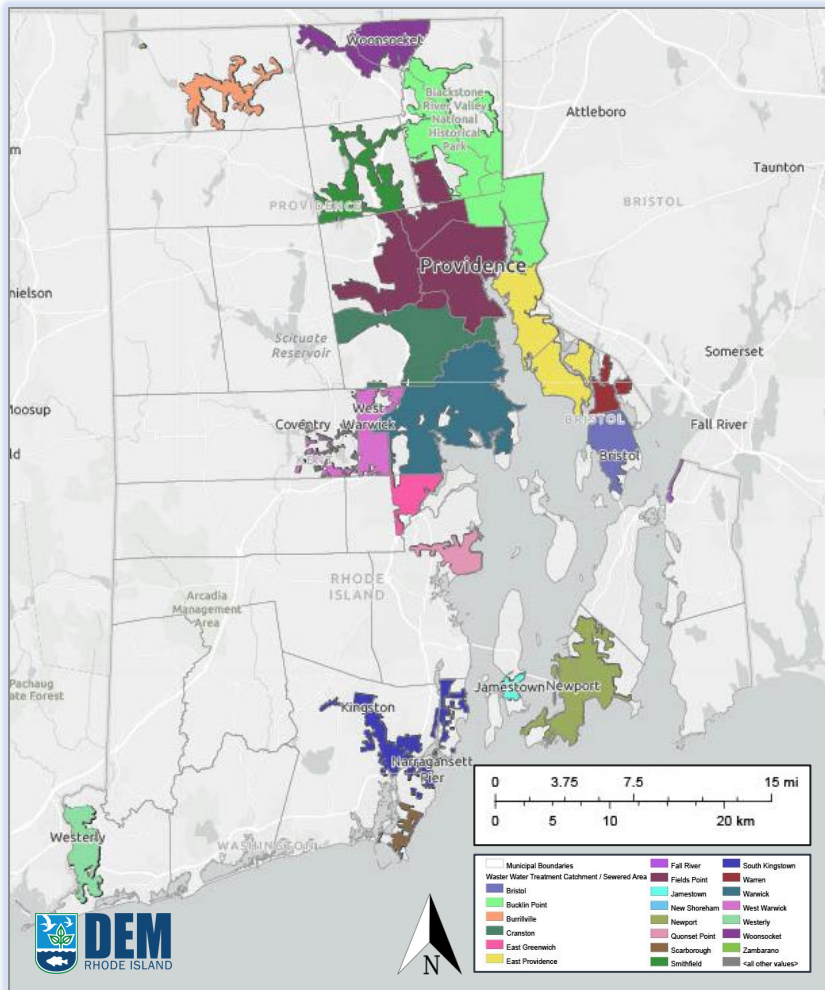
# RHODE ISLAND WWTF SEWERSHEDS

- Areas not within sewersheds are served by OWTS
- OWTS serves approximately 33% of Rhode Island's population





# SEWERED VS PUBLIC WATER SERVICE AREAS



# CURRENT WWTFP FLOWS & APPROVAL DATES



	Bristol*	Burrillville*	Cranston	East Greenwich*	East Providence	Jamestown	Bucklin Point	Fields Point	New Shoreham	Newport	Quonset	Scarborough	Smithfield	South Kingstown	Warren	Warwick	West Warwick	Westerly*	Woonsocket
<b>Latest FP Year</b>	2000	2014	2012	2007	2010	2003	2021	2011	2008	2014	2012	2007	2021	1994	2019	2022	2012	2024	2013
<b>Design Flow (MGD)</b>	3.8	1.5	20.2	1.7	14.2	0.73	46	65	0.45	16	1.78	1.4	3.5	5.0	3.43 / 2.53	7.7	11	3.3	16.0
<b>Current Flow (MGD)</b>	4.1	1.05	10.4	1.06	7.2	0.42	16.2	43.75	0.12	7.86	0.63	0.67	2.29	2.87	2.83 / 1.83	5.69	6.79	2.51	8.80
<b>Pop. Sewered (%)</b>	95	60	91	46	72	39	56	95	85	95	N/A	46	65	63	75	73	12	72	77

\*Currently in the Facilities Planning Process



# SEWER EXPANSION & FACILITIES PLANNING



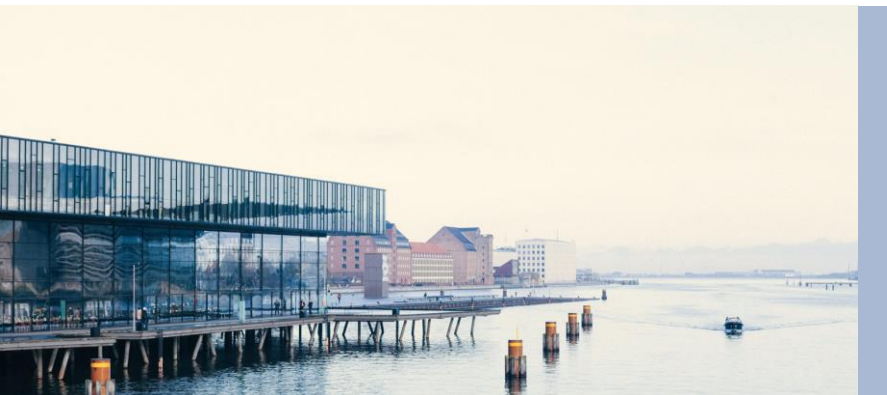
## Host Communities

- Demonstrate that WWTF and collection system have sufficient capacity
- If sufficient capacity is not available, facility planning required to
  - Reallocate flows
  - Upgrade Plant/Collection System

## Satellite Communities

- Must stay within allocated flows to host community
- To expand beyond allocated flows, must amend intermunicipal agreement
- Any increase in allocated flows requires facilities planning by both satellite and host communities

# SEWER EXPANSION TAKEAWAYS

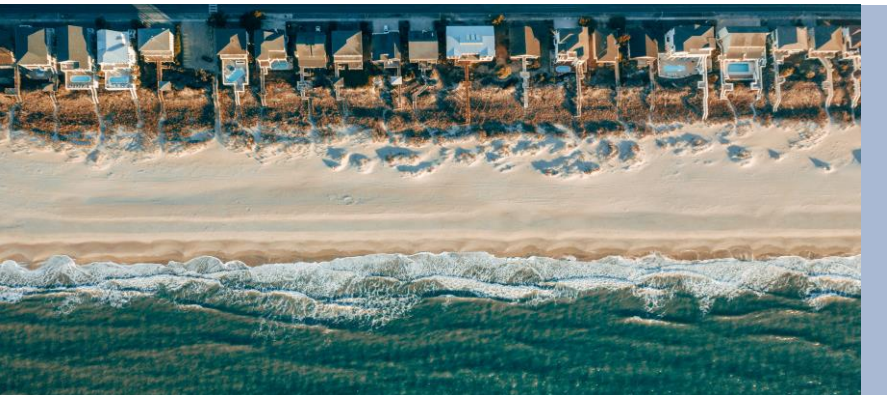


## Extended Planning Process

The facility planning, design, FONSI, and Order of Approval Process is approximately a 1.5-2 year long process

## WWTF Impacts

FPU, Reallocation of Flows, Facility Upgrades



## RIPDES Limits

Changes to WWTF flows may impact RIPDES limits

## Coordination w/ Host Treatment Facility

Host and satellite communities need to coordinate flow allocations



# FOR FURTHER INFORMATION

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