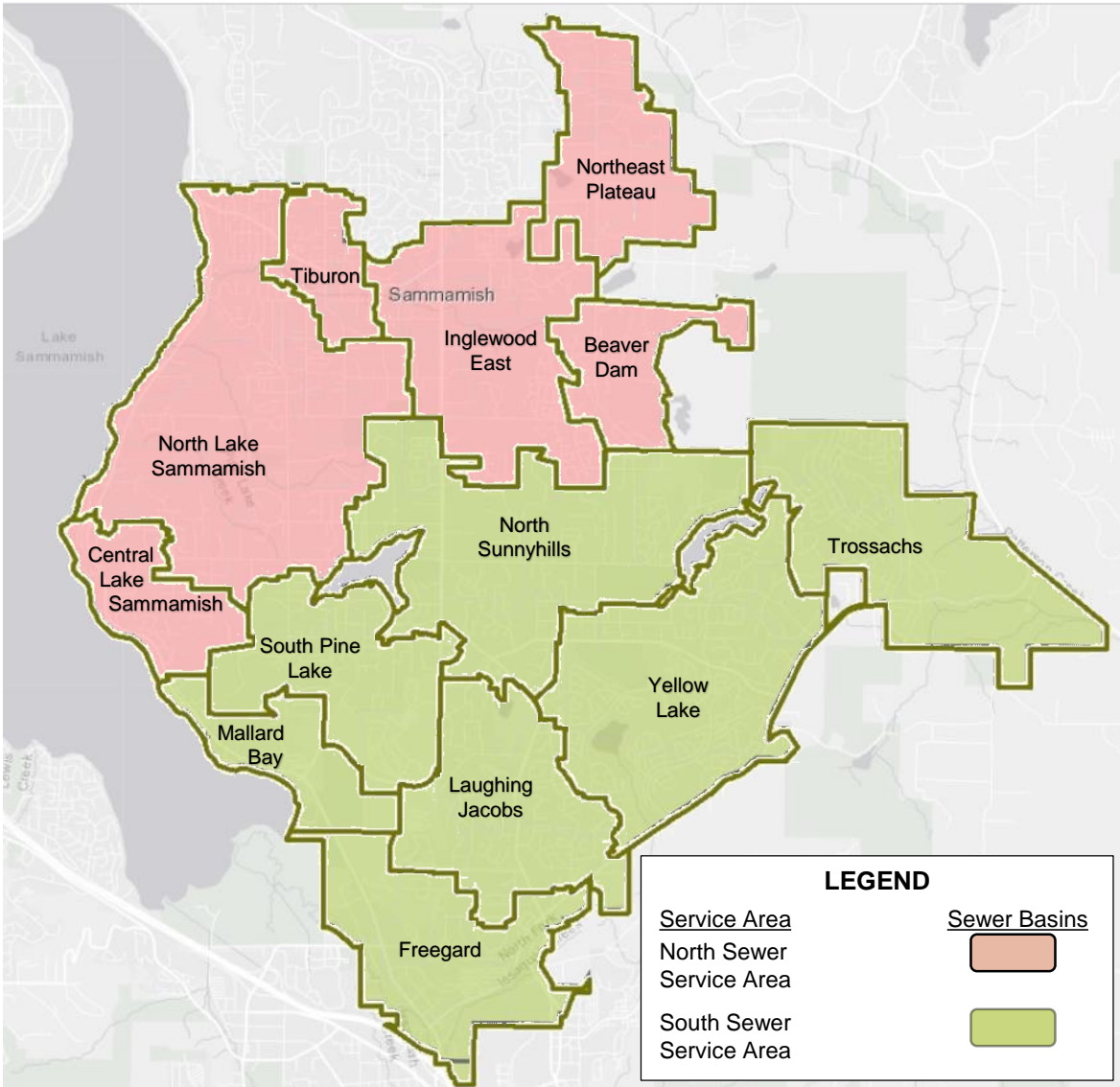
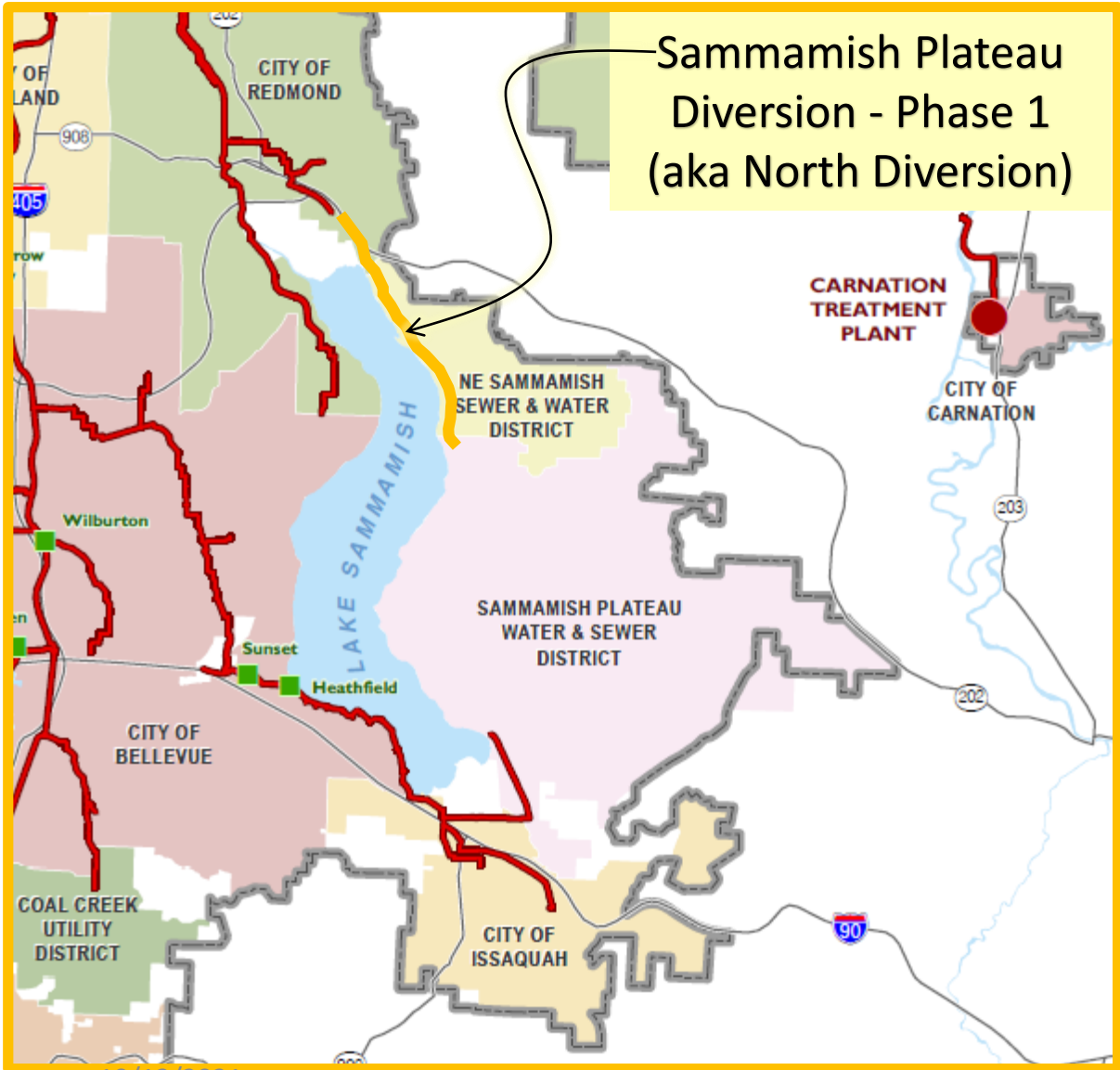




# **North Sewer Service Area Status Update City of Sammamish**

## **Update from April 6, 2021 City Council Meeting**

# Sammamish Plateau Water – Impacted Sewer Basins



## District Initiatives/Actions Since April 6, 2021 Meeting

### Engaged Consulting Engineer (April 1, 2021) :

- Evaluated Potential Immediate Improvements (July 20, 2021)
- Initiated Design of Interim/Permanent Improvements (April 1, 2021)
- Evaluated Infiltration & Inflow Sources and Abatement (October 4, 2021)

Moratorium Expired on August 24, 2021

# District Conveyance System **Interim Improvements**

## North Lake Lift Station

- February, 2023

## Central Lake Force Main

- September, 2022

Phase 1: Capacity Increase  
1,388 ERUs

## North Lake Force Main

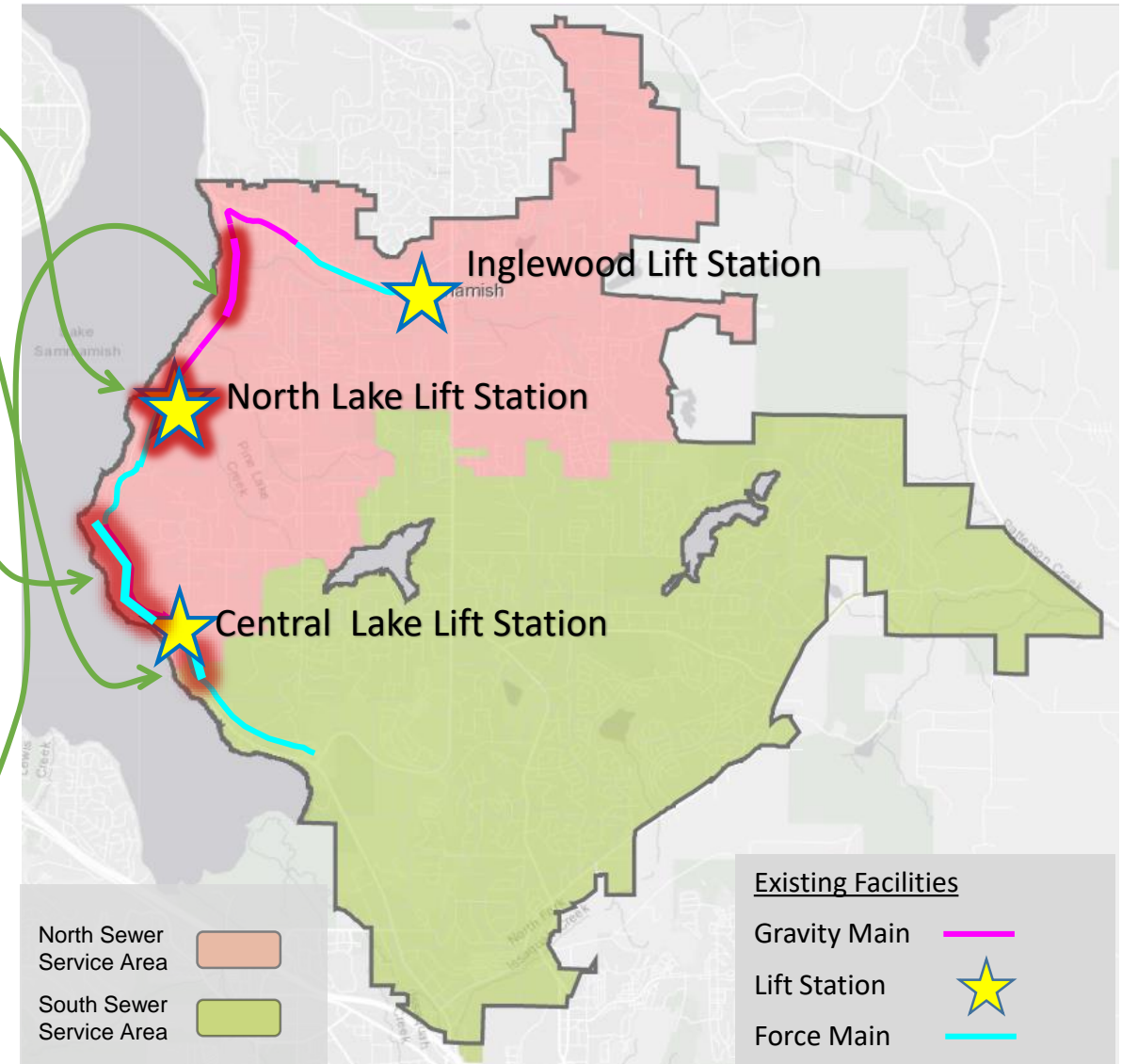
- June, 2023

Phase 2: Capacity Increase  
694 ERUs

## North Lake Gravity Main

- 2023-2025

Phase 3: Capacity TBD  
Based on Monitoring



# District Conveyance System Immediate Improvements

## Inglewood Lift Station

- November, 2021

Operational Flow Reduction  
Add Temporary Storage

## North Lake Lift Station

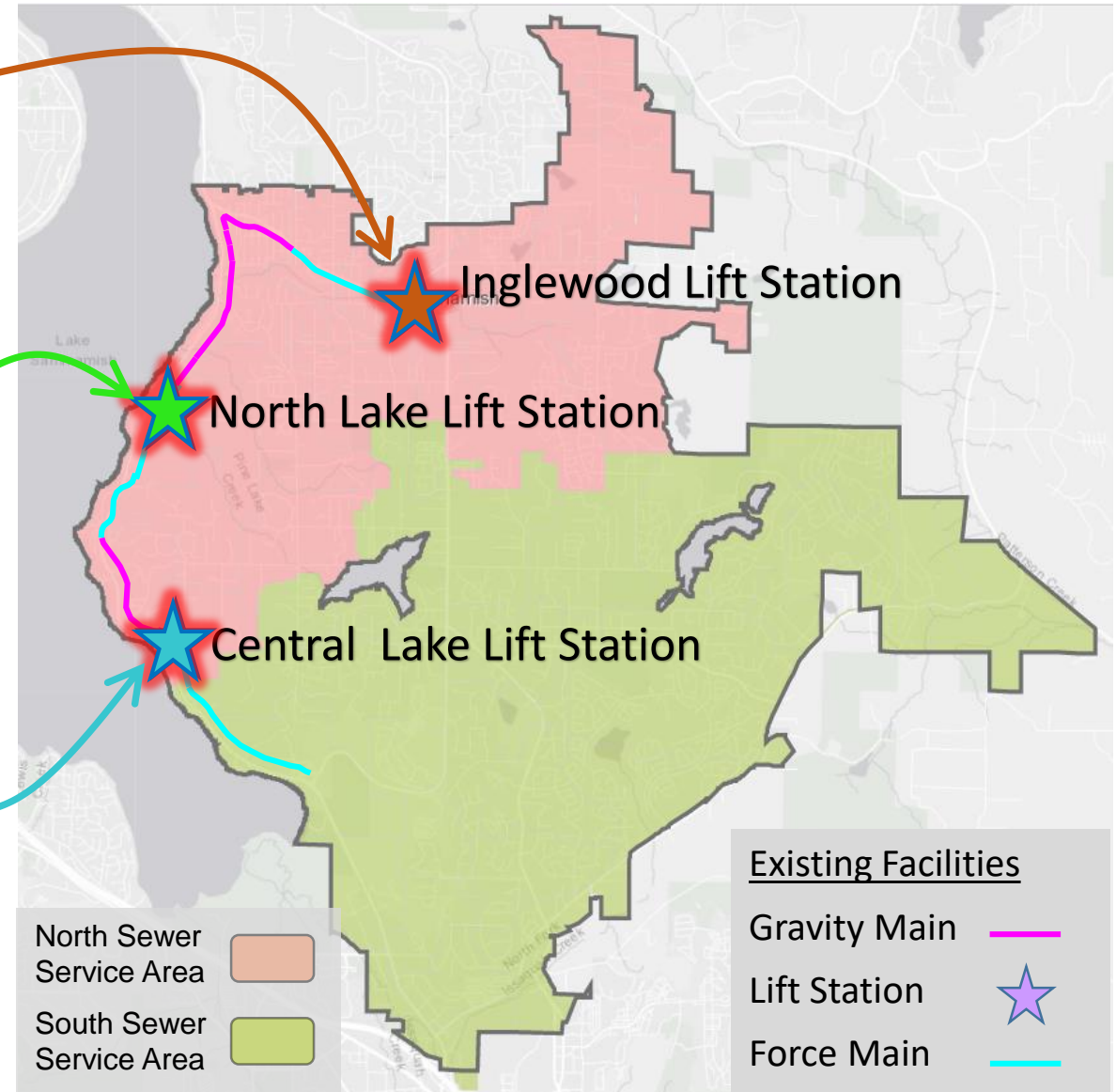
- November, 2021

Bypass Pump: Capacity Increase  
694 ERUs

## Central Lake Lift Station

- November, 2021

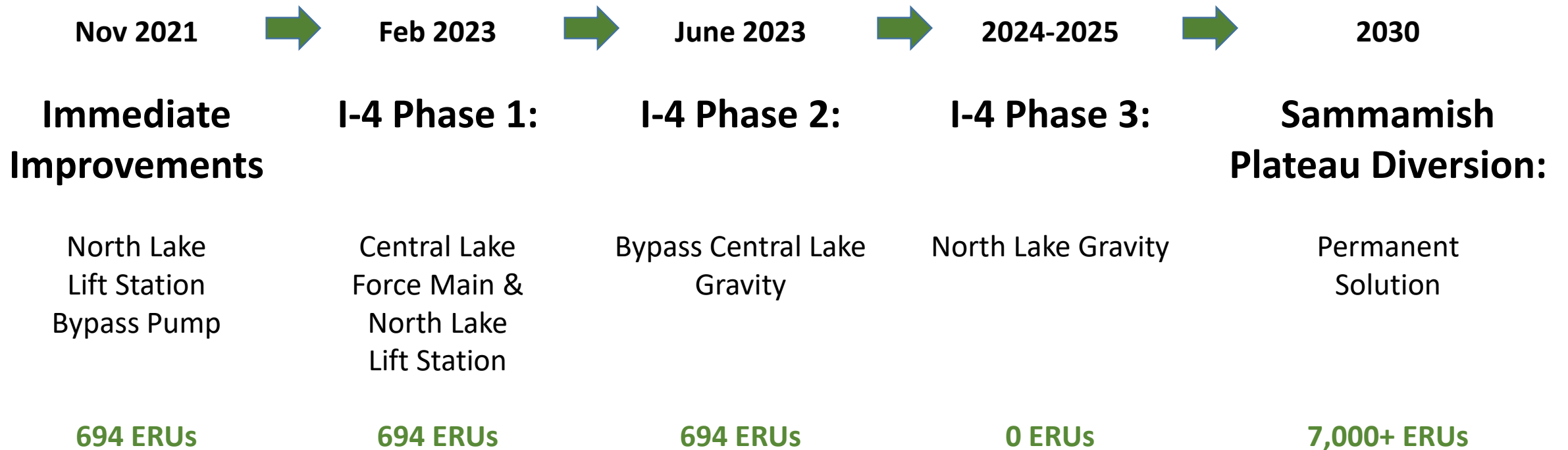
Add Temporary Storage





# Interim Phasing and Estimated ERU Capacity

## Immediate and I-4 Interim Improvements



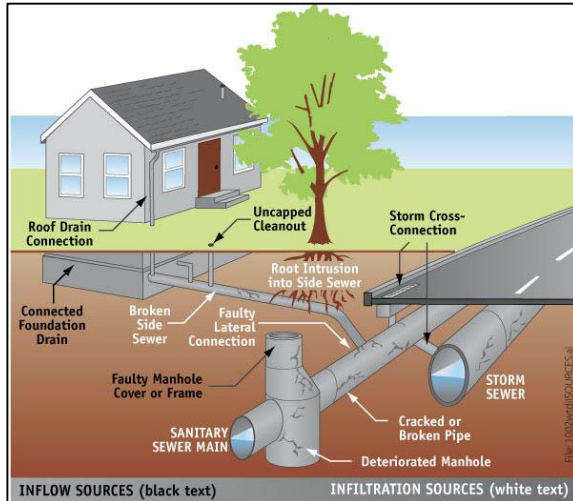
## ERUs in the Certificate/DEA Pipeline

Estimated ERUs In the NSSA	Non-DEA Certificate (2021)	Complete (2021)	Construction Phase (2022)	Design Phase (2023)	Planning Phase (2024-2025)	Total Pipeline ERUs
Pipeline	22.0	17.0	82.0	22.0	245.0	<b>388.0</b>

Pipeline Customer Type	Non-DEA Certificate (2021)	Complete (2021)	Construction Phase (2022)	Design Phase (2023)	Planning Phase (2024-2025)	Total Pipeline ERUs
Single-Family	22.0	17.0	82.0	22.0	181.0	<b>324.0</b>
Multi-Family	0.0	0.0	0.0	0.0	32.0	<b>32.0</b>
Non-Residential	0.0	0.0	0.0	0.0	32.0	<b>32.0</b>
<b>Total</b>	<b>22.0</b>	<b>17.0</b>	<b>82.0</b>	<b>22.0</b>	<b>245.0</b>	<b>388.0</b>

As of 12/31/2020

# Infiltration & Inflow (I&I) – Where Does It Come From?



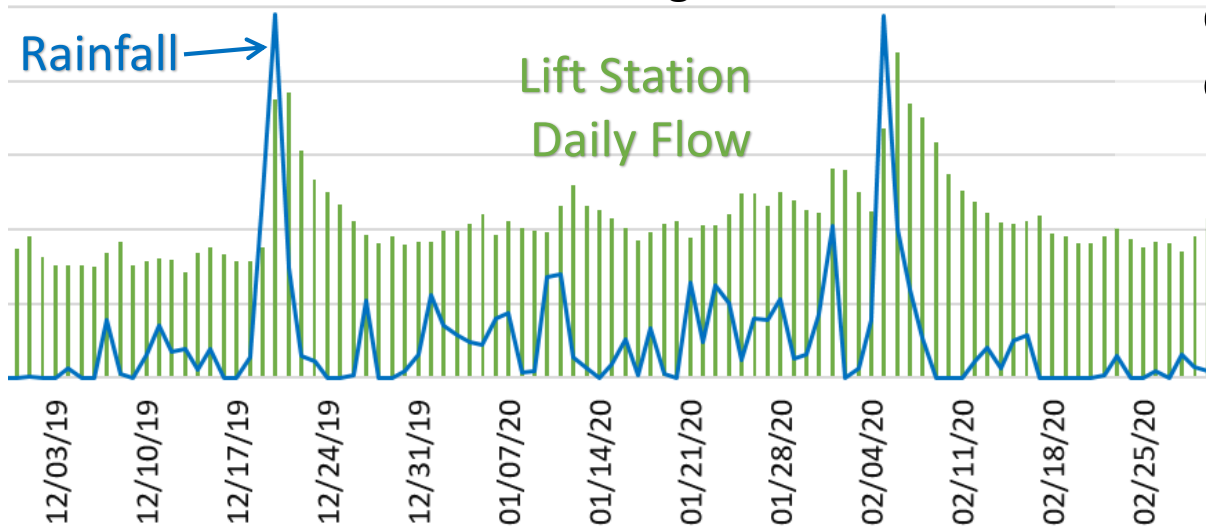
## Infiltration

- Groundwater seeps into sewer pipes through holes, cracks, joint failures, and faulty connections.

## Inflow

- Stormwater flows into sewers via roof drain downspouts, foundation drains, storm drain connections, and holes in manhole covers.

Lift Station Flow During Storm Events



**The District's capacity constraints occur during wet weather events.**



# Sammamish Plateau Water – Smoke Testing Internal I&I Investigation

- 89 Potential Sources of I&I
  - 16 Significant Contributors to Inflow
- Following up with remaining 73 I&I Locations
  - 19 District owned
  - 39 Privately owned facilities
  - 12 Other field observations to research
- Repair of the 16 locations could equate to 174 ERUs

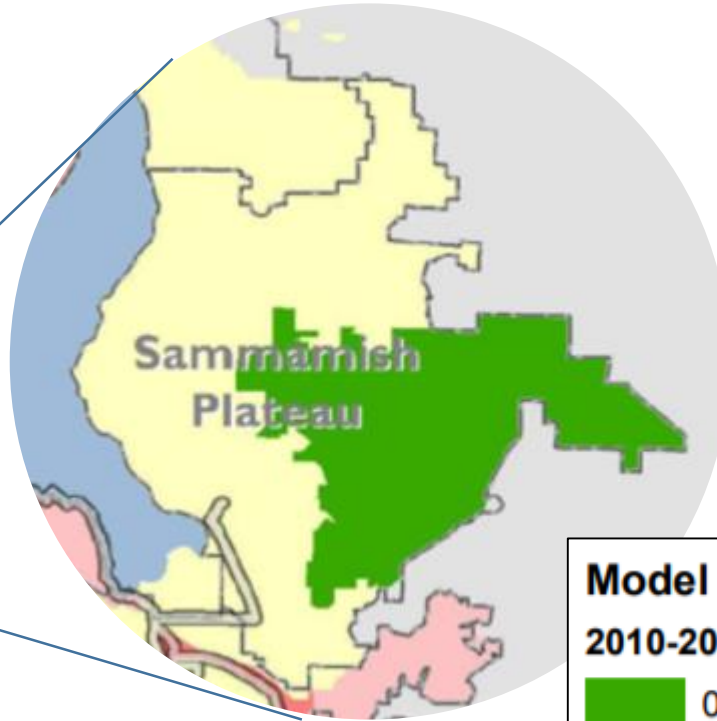
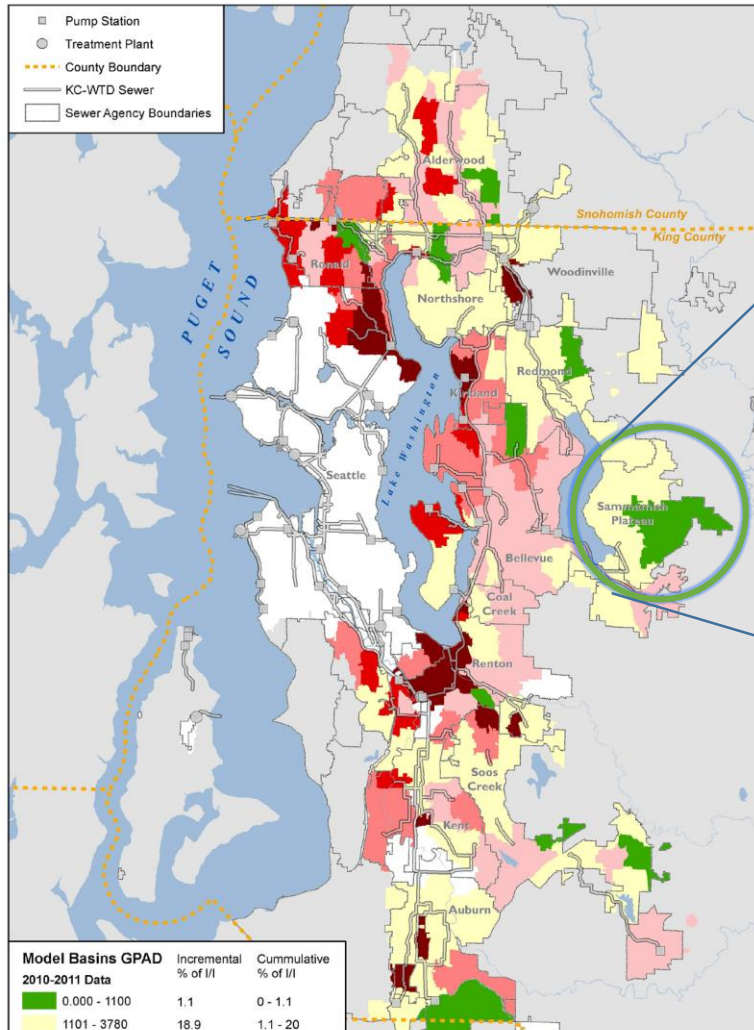


Yard & Footing Drains

Roof & Gutter Connections



# King County Regional Infiltration & Inflow (I&I)



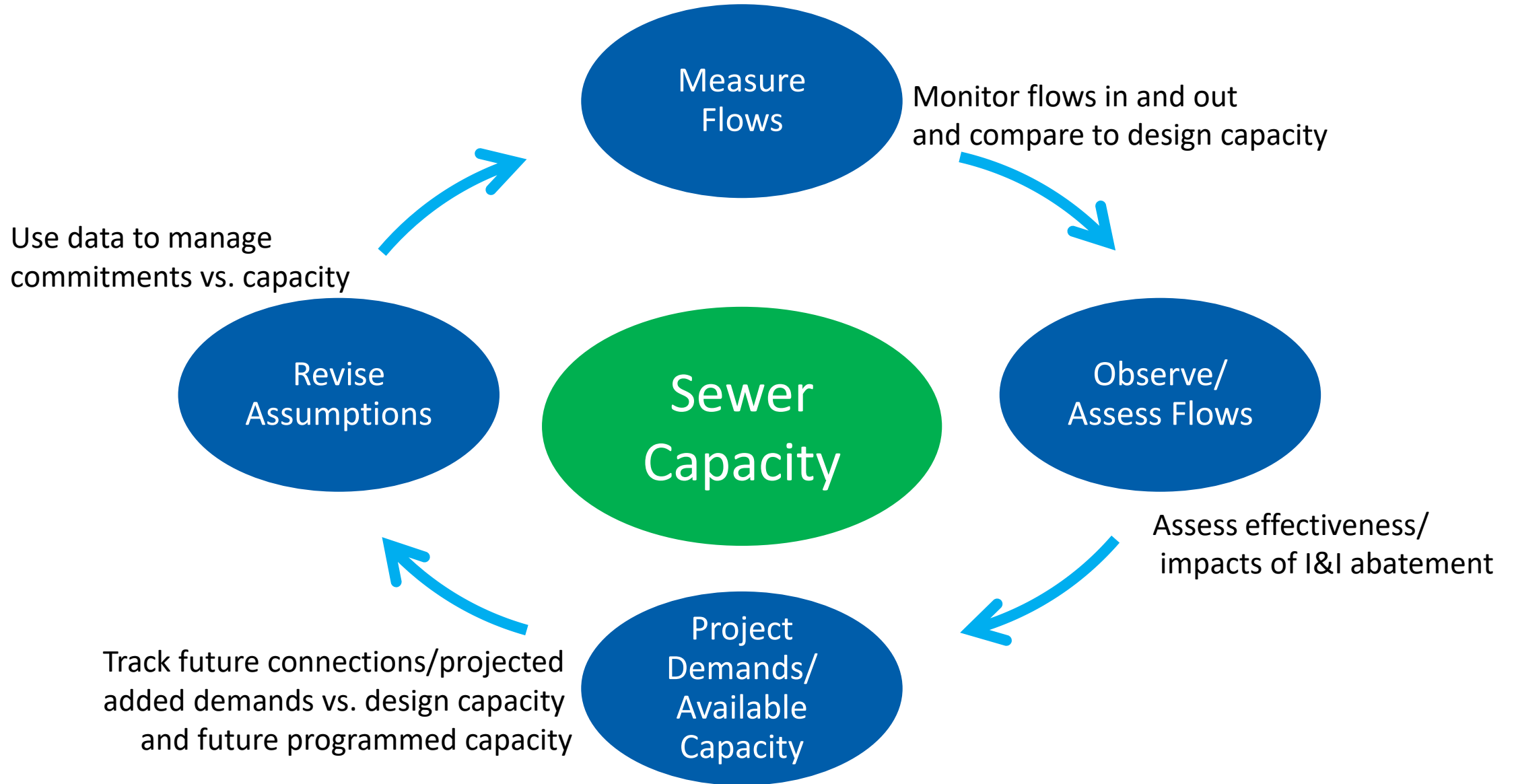
When compared with the region,  
the District's amounts of  
Infiltration & Inflow are **low**.

Model Basins GPAD	Incremental % of I/I	Cummulative % of I/I
<b>2010-2011 Data</b>		
0.000 - 1100	1.1	0 - 1.1
1101 - 3780	18.9	1.1 - 20
3781 - 4850	20	20 - 40
4851 - 6700	20	40 - 60
6701 - 8600	20	60 - 80
8601 - 28000	20	80 - 100

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GPAD = Gallons per acre per day.

# SEWER METRICS





# District Initiatives/Actions – Capacity Additions

## District North Sewer Service Area

Immediate Improvements = 694 ERUs

Interim Improvements = 1,388 ERUs

Infiltration & Inflow Abatement = 174 ERUs

**TOTAL = 2,256 ERUs**

Citywide Growth Target: ??? Housing Units

King County Programmed  
Sammamish Plateau Diversion – Phase 1  
Capacity Improvements by 2030

