UAB Meeting

Utility Update

Brian McGuire
Dr. Chad Gubala
7/11/2024

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad

CDS Update

- Earlier this year, the Utility submitted Legislative Priorities to the Managers Office.
- The UAB submitted letters of support to the Alaska Congressional Delegation in March.
- Early this month, we received word from the Senator's office that we were not selected.
- Thanks to the UAB for your excellent support!

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad

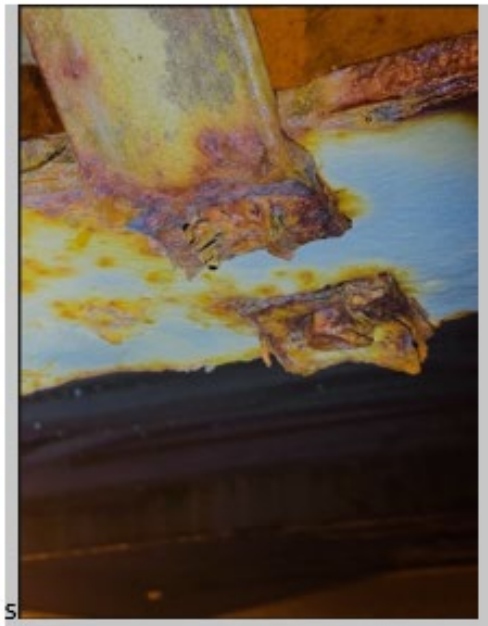
GO Bond for Utility

- On June 3rd COW approved putting a $10 million bond in front of the voters in the Fall.

- We estimate that every $10MM reduces an average rate raise by ~3% (on a rough CIP spend of $8MM/year) for WW for 5 years
  - *e.g. if the recommended wastewater increase was12% per year, it goes to 9% per year.*

- Target Project is JDTP clarifier bldg.

GO Bond for Utility

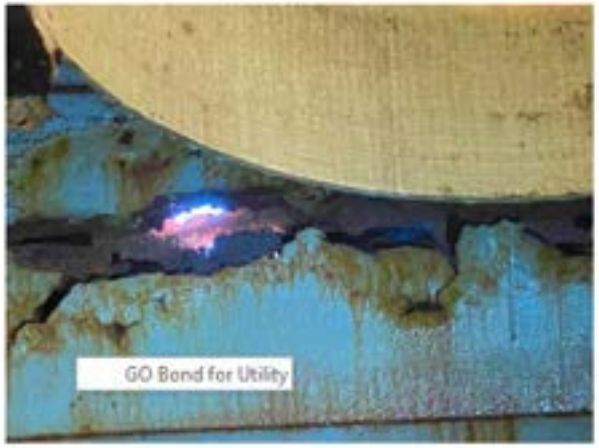


1. Corrosion of steel and kicker bracing.

2. Corrosion at primary structural I-beam. Note significant corrosion at bottom flange causing delamination of the steel.

GO Bond for Utility

3. Corrosion of the steel beam and connection at the clarifier basin.



4. Corrosion of metal framing at the roof vent exhaust opening. Note daylight showing.

5. Numerous holes and gashes in 1973 metal siding are open to the interior of the building.

6. Mortar at concrete blocks has deteriorated. Spalling due to winter freeze-thaw cycles evident.

GO Bond for Utility

7. Underside view of metal roof decking. Foam Insulation is saturated with water. Note Algae growth.

8. Low slope metal roof missing fasteners, lacks water drainage via gutters and downspouts.

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad

Utility Rate Study

- As part of our effort to assess the current Utility rates, we hired a consultant to assist.
- The RFP finished up early in 2024 and we hired Dowl and FCS who bid as a team.
- They have since requested financial data, CIP and infrastructure information and have done site visits.

Utility Rate Study

– Public Process Update:

- They will present to the Assembly during the summer and fall. The first one is August PWFC .
- The second one will be the Sept Finance Committee.

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad

CBJ WW Plant Capacity

- Part of our analysis on expected Utility needs, arises from covering anticipated growth or shrinkage of demand.

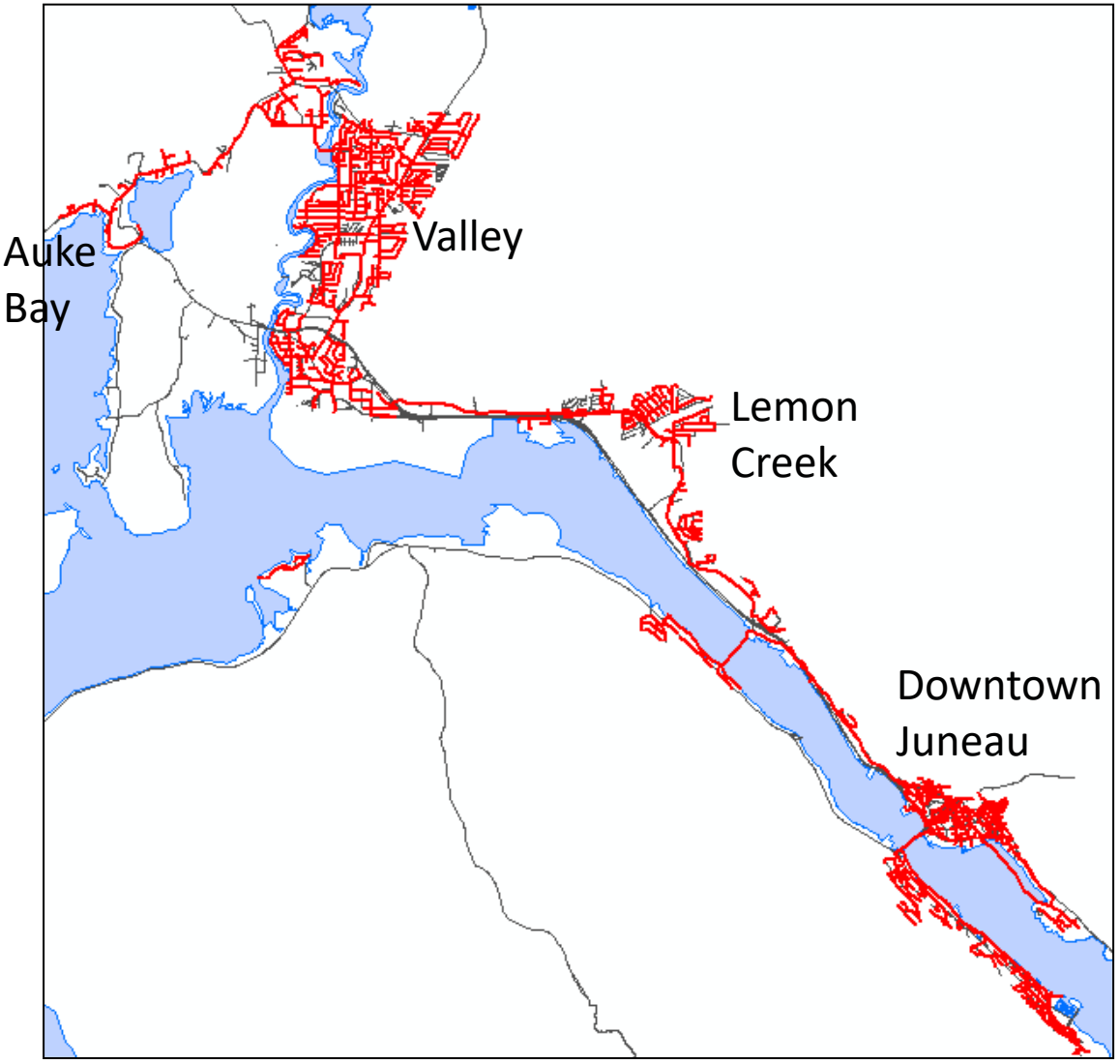
- This change in demand could require a shifting of capacity.

  ↑ - Tweak or Additional assets?

  ↓ - Modulation?

CBJ WW Plant Capacity

CBJ WW Plant Capacity



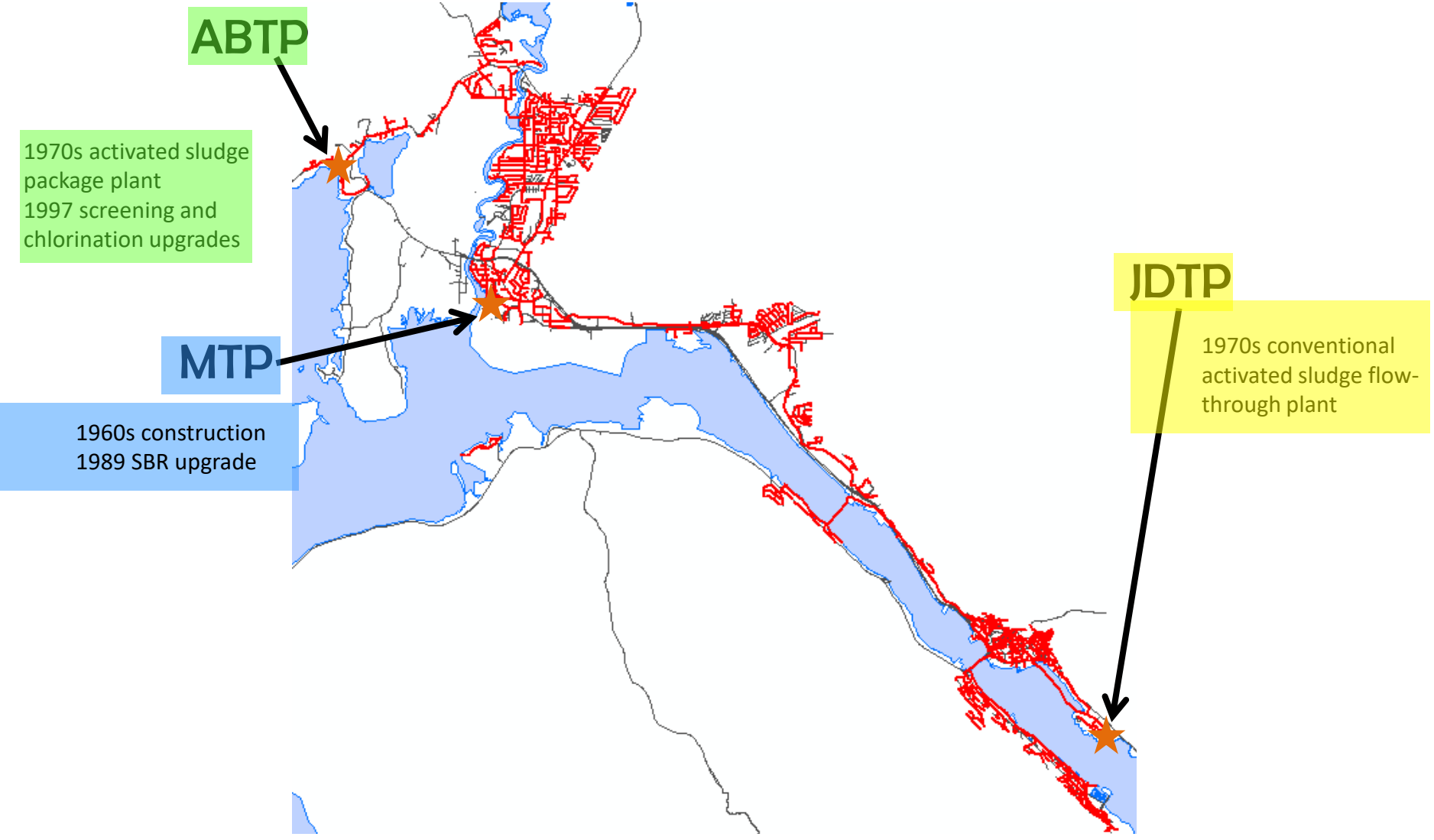
CBJ WW Plant Capacity

ABTP

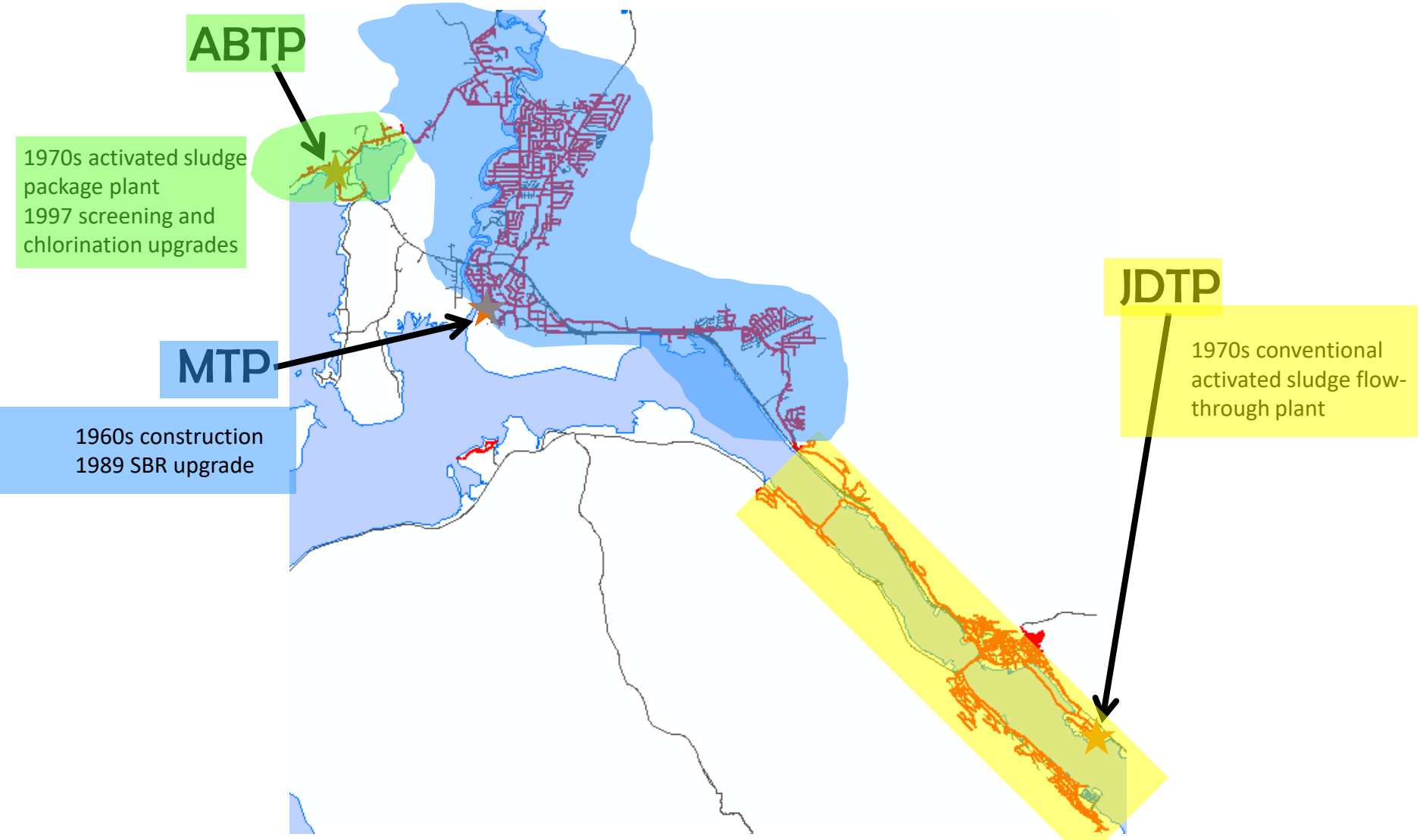
MTP

JDTP

CBJ WW Plant Capacity



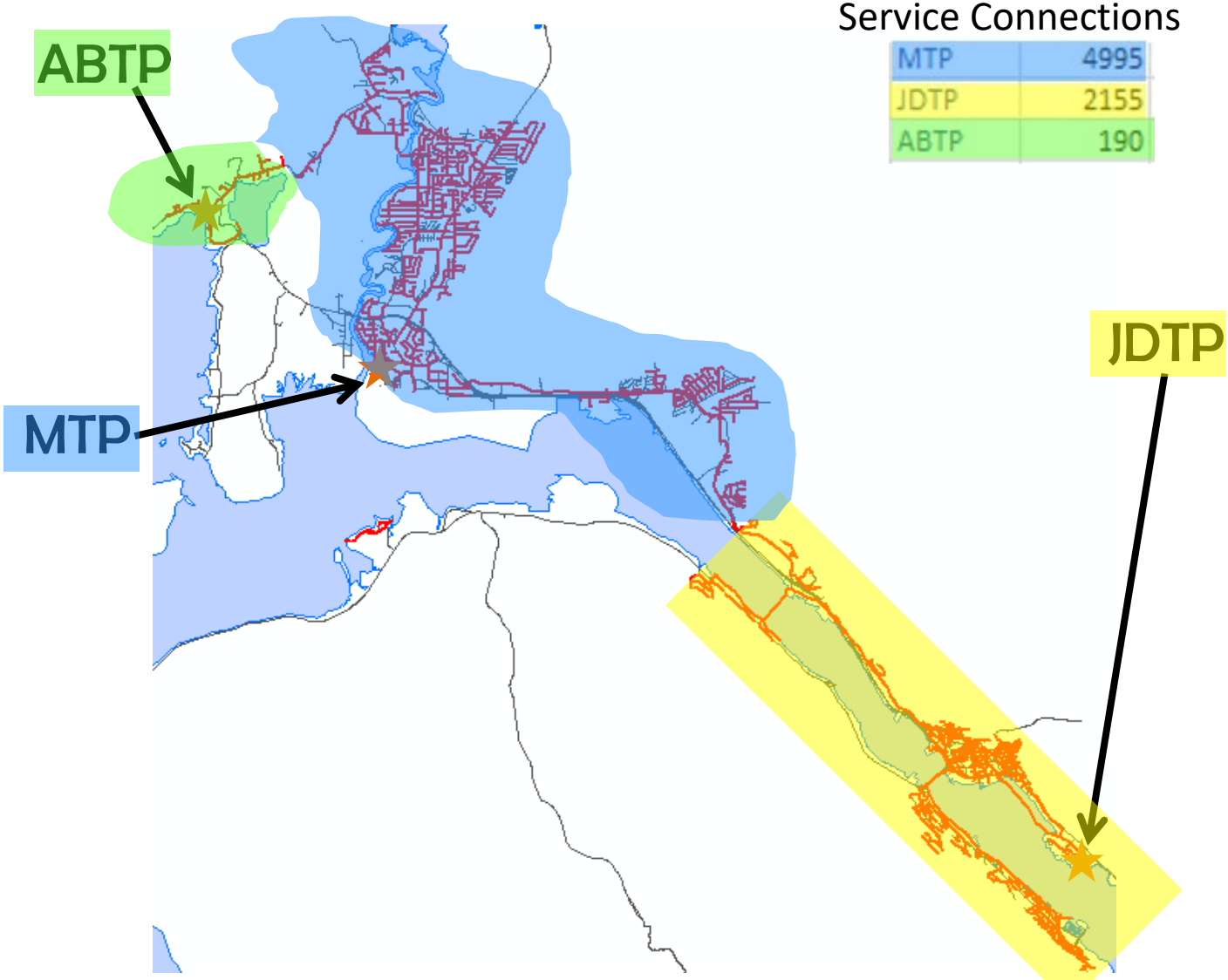
CBJ WW Plant Capacity



CBJ WW Plant Capacity

Service Connections

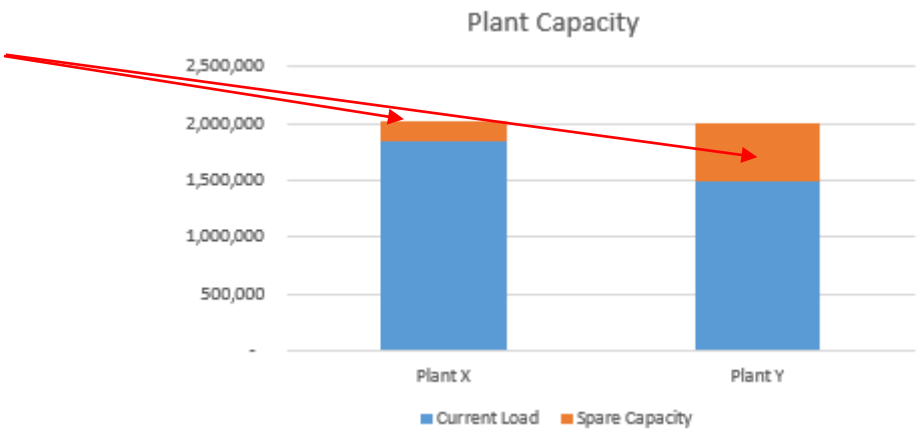
MTP	4995
JDTP	2155
ABTP	190



CBJ WW Plant Capacity

- What is capacity?
  - Simply the WWTP's ability to process waste loads.
- How do we measure capacity?
  - Organic loading
    - » BOD & TSS (lbs/time – typically per day or year)
  - Hydraulic capacity
    - » Wastewater flow (Volume/time).

Space for Growth!



CBJ WW Plant Capacity

- How do we communicate Spare Capacity?
  - "Household equivalents"
- Wha

d by a

:hese

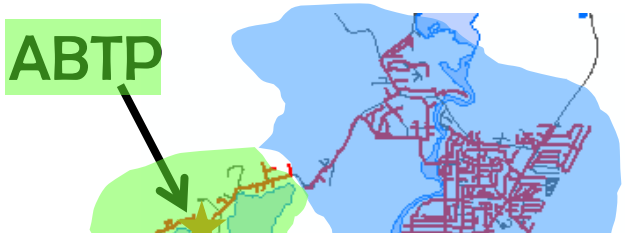
:

TABLE 4-11
Quantity of waste discharged by individuals on a dry weight basis*

Constituent (1)	Value, lb/capita-d Range (2)	Typical without ground up kitchen waste (3)	Typical with ground up kitchen waste (4)	Value, g/capita-d Range (5)	Typical without ground up kitchen waste (6)	Typical with ground up kitchen waste (7)
BOD_5	0.11–0.26	0.180	0.220	50–120	80	100
COD	0.30–0.65	0.420	0.480	110–295	190	220
TSS	0.13–0.33	0.200	0.250	60–150	90	110
NH_3 as N	0.011–0.026	0.017	0.019	5–12	7.6	8.4
Org. N as N	0.009–0.022	0.012	0.013	4–10	5.4	5.9
TKN† as N	0.020–0.048	0.029	0.032	9–21.7	13	14.3
Org. P as P	0.002–0.004	0.0026	0.0028	0.9–1.8	1.2	1.3
Inorg. P as P	0.004–0.006	0.0044	0.0048	1.8–2.7	2.0	2.2
Total P as P	0.006–0.010	0.0070	0.0076	2.7–4.5	3.2	3.5
Oil and grease	0.022–0.088	0.0661	0.075	10–40	30	34

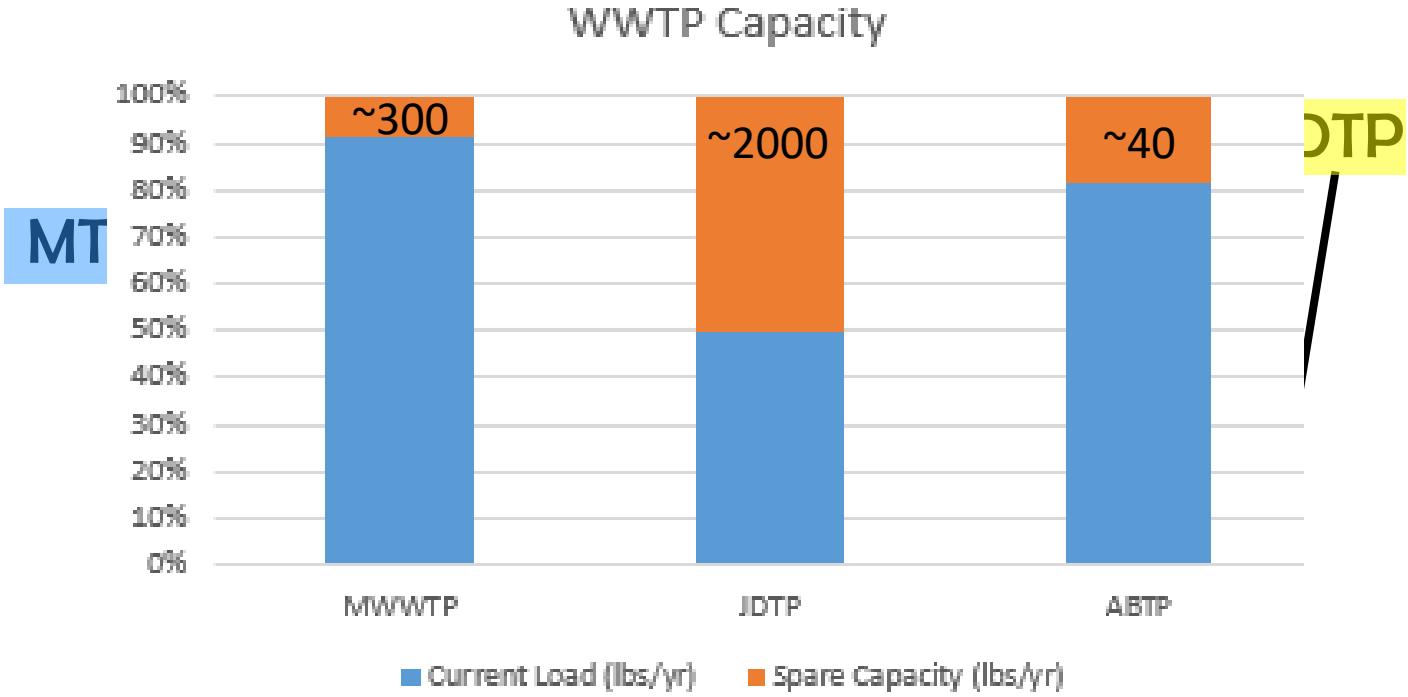
*Developed from numerous sources. Data on the number of microorganisms present in septic tank effluent and untreated wastewater may be found in Table 2-21 in Chap. 2.
†TKN is total Kjeldahl nitrogen.

CBJ WW Plant Capacity



Service Connections

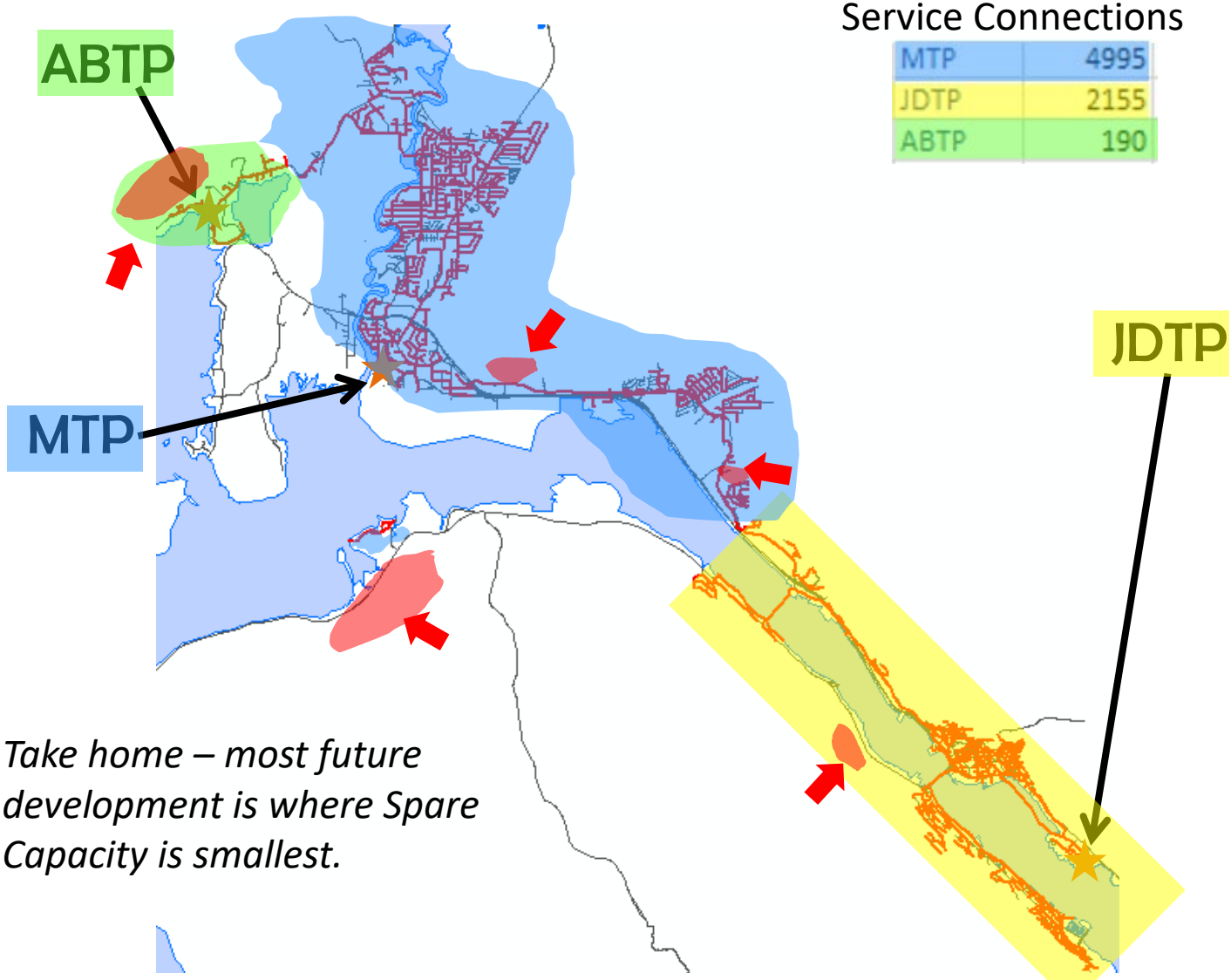
MTP	4995
JDTP	2155
ABTP	190



CBJ WW Plant Capacity

Service Connections

MTP	4995
JDTP	2155
ABTP	190



Take home – most future development is where Spare Capacity is smallest.

Agenda

- Utility Updates for UAB

1.	CDS Update	Brian
2.	$10 MM Bond for Utility goes to voters	Brian
3.	Rate Study Update	Brian
4.	Wastewater Plant Capacity Calcs	Brian
5.	CCR Update	Chad
6.	LSLI Update	Chad
7.	Salmon Creek Penstock Construction Update	Chad
8.	May EPA Visit	Chad
9.	Upcoming EPA visit	Chad
10.	PFAS/Microplastics Regulatory Updates	Chad