



Calgary



Off-site Levy Review Water Resources – Greenfield

November 25, 2021



1. Introduction & recap of last session re: Linear Water and Wastewater Capacity Methodology
2. Data disclaimer
3. Project selection
4. Benefit allocation determination
5. Infrastructure list questions
6. Next session – Linear Water and Wastewater Capacity Methodology consultation



Recap of November 4 session

- Current methodology challenges and opportunities
- Introduction of Theoretical Linear Water and Wastewater Capacity Methodology
 - Numerator
 - Denominator
- Variable and fixed inputs
- Transitioning between models



Data Disclaimer

- Data provided (estimate projections) is a snapshot of information available now
- Some data shared is a placeholder (close approximation) until updated data is available
- Projections will be updated to the most recent/relevant data available
- Design and method of construction selected can change costs significantly (e.g. Alignment may change, tunneling vs. open-cut, etc.)
- Any rates within this presentation are hypothetical and are intended for the sole purpose of helping to explain a concept, relationship or trend



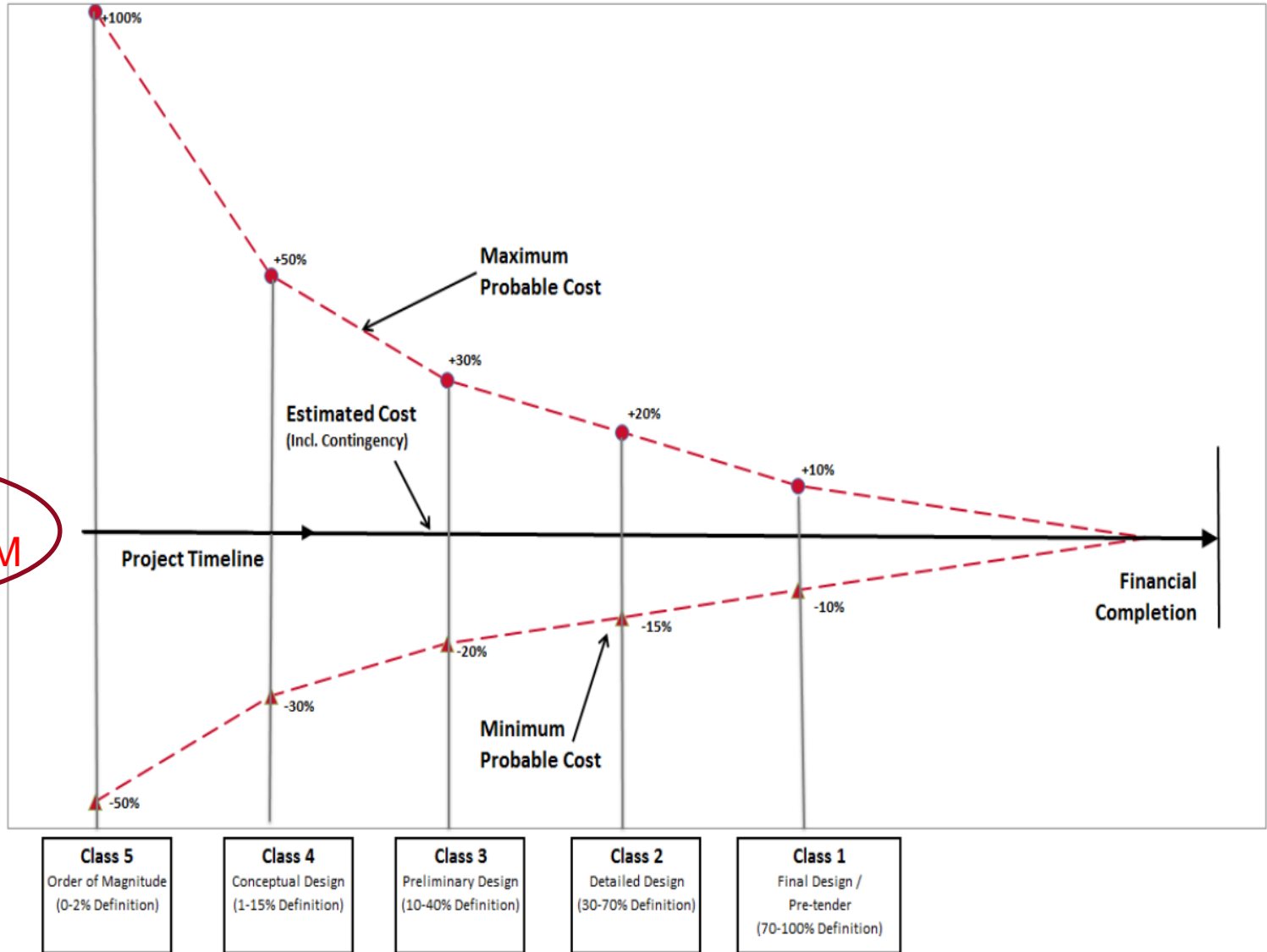
What number do we use to set the rate?

Project could cost as much as \$4M

Estimate used for levy rate calculation

CLASS 5 ESTIMATE = \$2M

Project could cost as little as \$1M





Criteria for project selection:

Criteria	* Examples
New projects required to open an approved growth area (14NC 27ADC)	<ul style="list-style-type: none">• Rangeview Ogden Feedermain• North Calgary Water Servicing Strategy
New and existing projects required to support growth in approved growth area (14NC and 27ADC)	<ul style="list-style-type: none">• Upgrades like Inglewood Sanitary

** Note: only the proportionate benefit attributed to the greenfield area in these examples would be considered in the levy*



Water & Wastewater Linear Upgrades and Extensions as they relate to new growth

Upgrades:

Any change to the existing system in the form of upgrading (diameter) an existing pipe, increasing a pump size, installing new pumps in an existing station etc.

Extensions:

Any pipe length increase needed to extend the system. This includes extensions installed in existing communities required to maintain or improve redundancy required for new community expansion.

Benefitting Area:

Area serviced by capacity the infrastructure provides

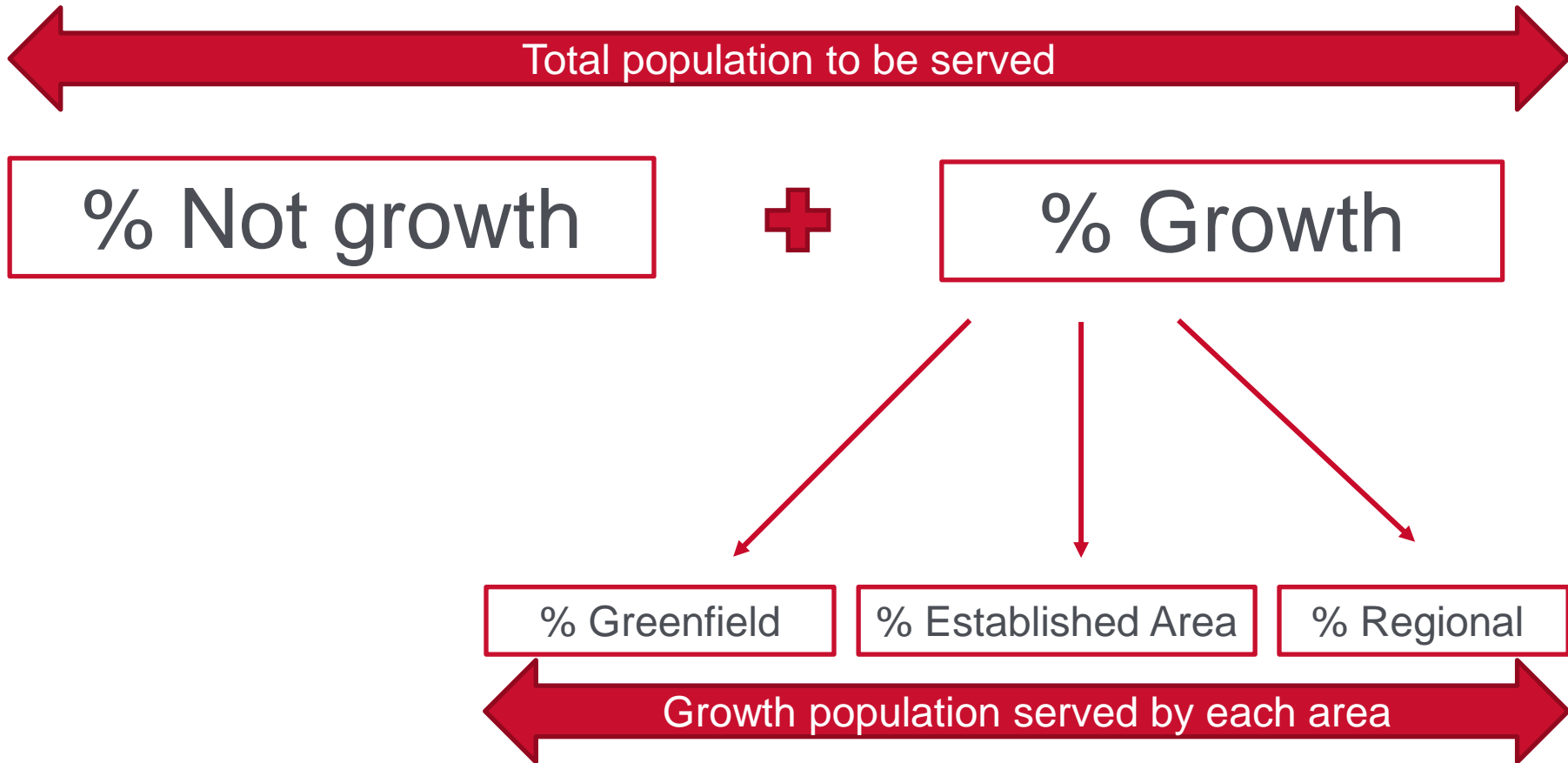


Why do we need to calculate Benefit Allocation?

- Different infrastructure types provide benefit to different areas, and in most cases a single piece of infrastructure will provide benefit to multiple areas
- These areas are classified as greenfield, established and regional based on their location and the users within those locations
- The methodology needs to consider what areas will benefit and allocated the costs accordingly (typically as a %)



Calculating benefit allocation

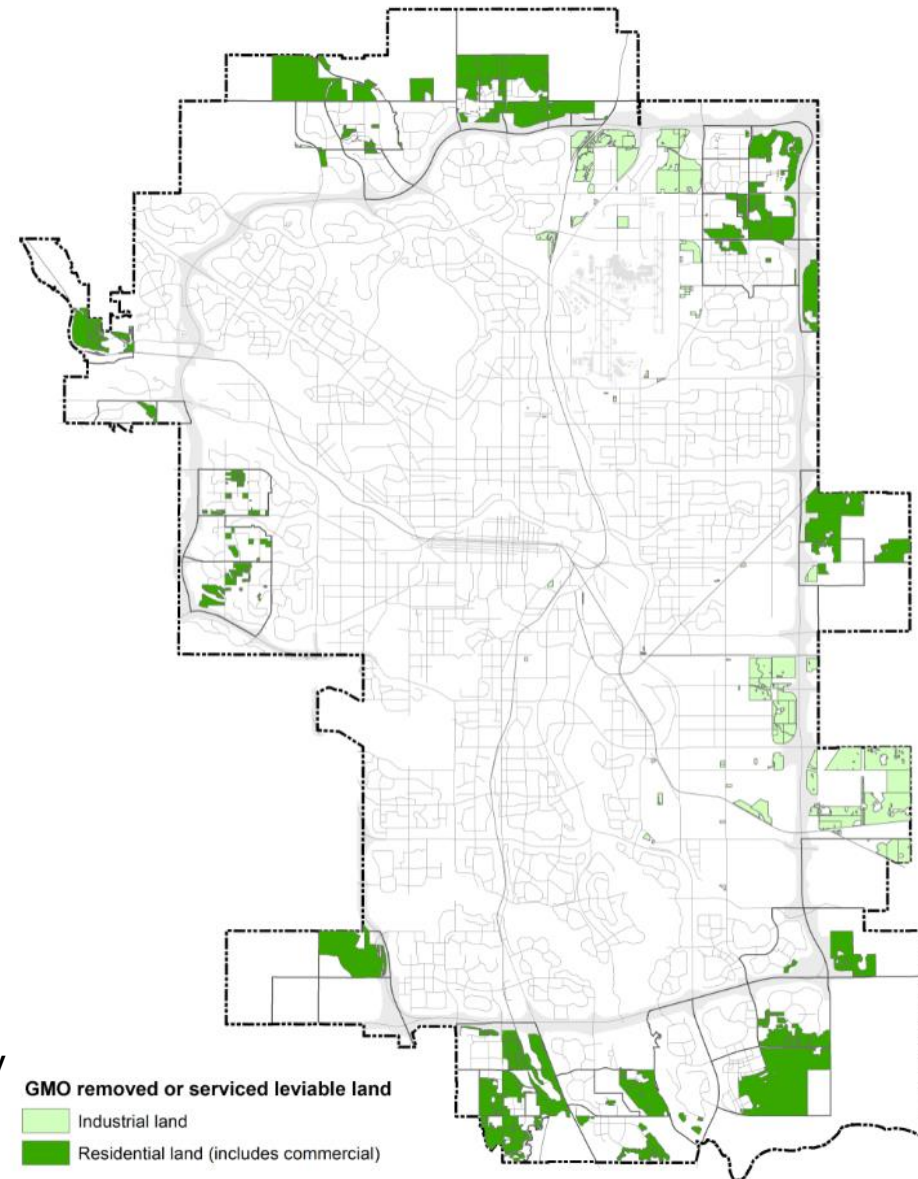




- % Not Growth - Portion attributed to existing users
- % Growth - Portion attributed to new users
 - % Greenfield - New growth in the Greenfield area
 - % Established Area - New growth in the Established area
 - % Regional - New growth in the Region

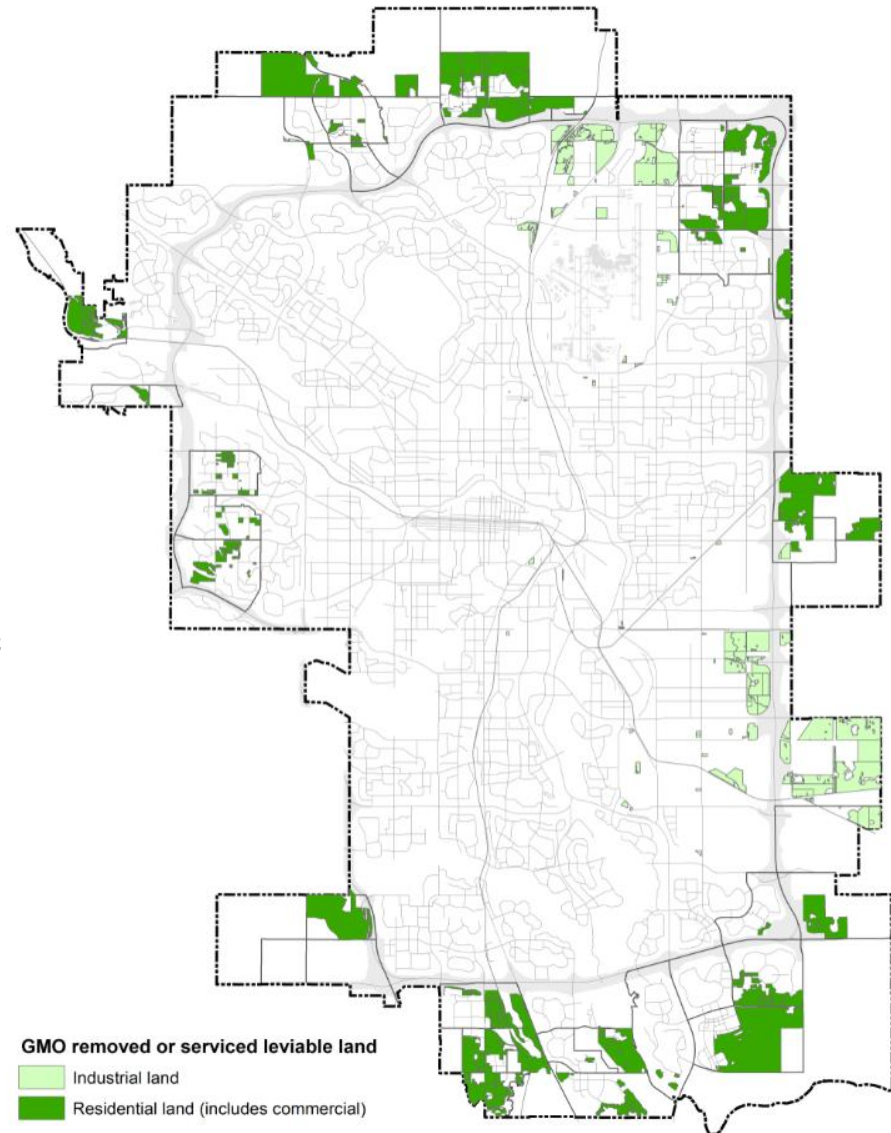
Attributing costs to approved growth

- Entire debt is taken out on the project as it is completed (25 year amortization begins)
- Largest portion of rate is made up of completed project debt NOT new project debt
- Timing for future growth is not known (nothing is guaranteed)
- Want calculation to be manageable (simple and relatively easy to administer)
- City-wide rate calculation
- Future areas will often trigger future extensions, upgrades, etc. which are **not currently known** (analysis required based on proposed development) and would not be included in the current infrastructure list
- Upsize costs to service more land are relatively insignificant, most of the cost of new infrastructure is construction



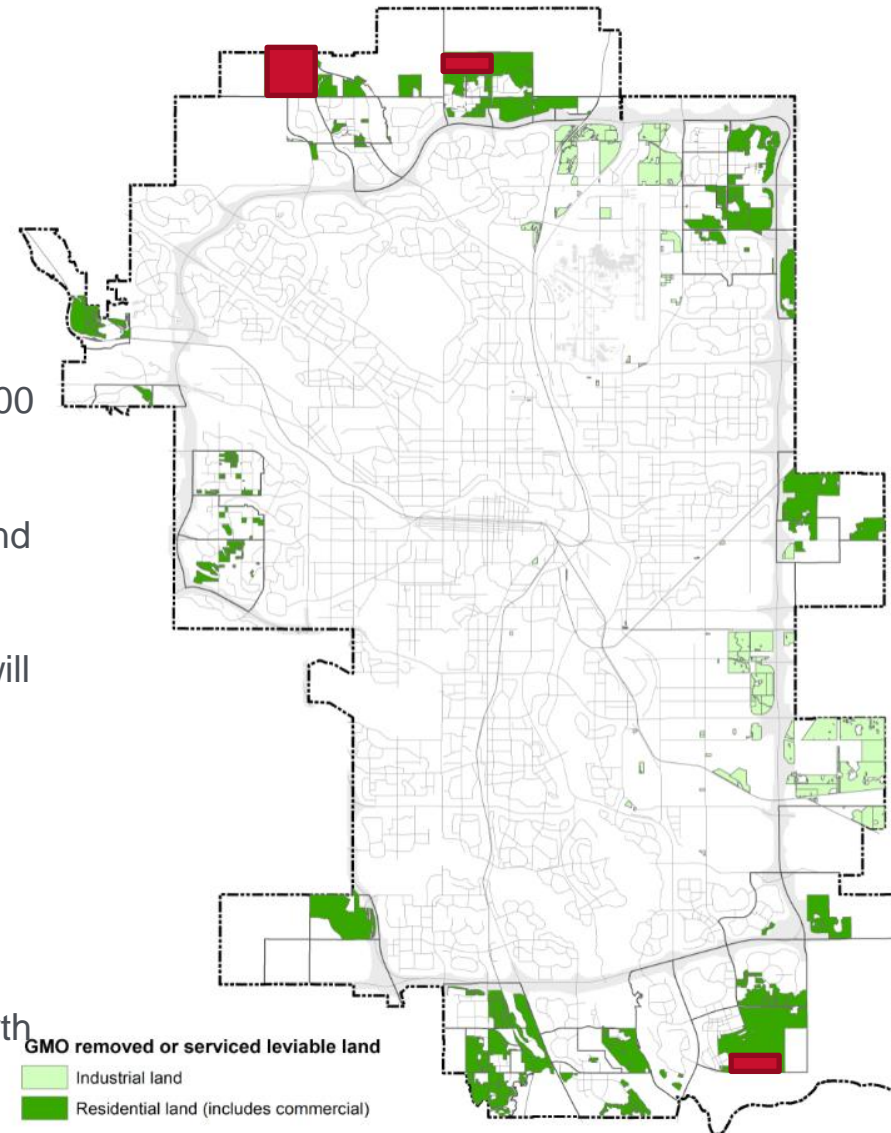
Rangeview infrastructure example

- Infrastructure will service Rangeview
- Has capacity to service future Ricardo Ranch area
- Set rate with 100% of Growth and Greenfield portion cost to the City-wide Greenfield land.
- 2 years (or more pass), the approved growth Greenfield Area (Rangeview, Belvedere, Providence, etc.) will pay for a **small** portion of this new infrastructure but most of the rate is completed projects
- Future – Ricardo Ranch GMO is removed
- City wide rate consideration is critical



Benefit allocation - hypothetical example

- **Hypothetical** existing rate: $\$600\text{M}/4500\text{Ha} = \$133,333/\text{Ha}$
- New infrastructure to service Rangeview is added
 - Costs – $\$66.5\text{M}$
 - Serviced capacity (Ha) - 800 new Ha
- New **City-wide** rate: $\$666.5\text{M}/5300\text{Ha} = \$125,754/\text{ha}$
- 4 years pass, 800Ha City-wide have DAs signed for (200 of which were Rangeview development)
- Add Ricardo Ranch serviced capacity = 400 new Ha and no new infrastructure costs = **$\$115,489/\text{Ha}$**
- Remaining serviced capacity in Rangeview = 600Ha, will pay updated rate now that Ricardo Ranch has added serviced capacity
- **This approach will:**
 - help support business cases that are an efficient use of existing or planned infrastructure
 - be the most accurate (cost certainty)
 - link the portion of the levy rate paid with the growth benefitting from it (keeping in mind City-wide)





Water and Wastewater Infrastructure lists review

List	What will you likely see
Existing Off-site Levy water and wastewater project lists	Updated cost projections, updated actuals, adjustments to project names and in some cases scope (e.g. alignment)
Net new water and wastewater project lists	New projects identified by Water Long Range plan, extensions and upgrades not previously identified due to timing constraint (2024), and any new projects identified to support greenfield growth that align with new Off-site Levy strategy.



Next meeting – December 9, 2021 (*tentative*)

Continued Methodology consultation:

1. Review data inputs – Debt term, interest rate, discount rate, escalation rate
2. Introduce Cost of **Serviced Land Capacity** (Ha) Model

THANK YOU!