PROVIDING MORE

EPCOR Performance Based Regulation

Water Services • Wastewater Treatment • Drainage Services

Consolidated Phase 1-3 Report, January 2020

Stone – Olafson

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Contents

Engagement Purpose

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EPCOR Water Services Inc. is regulated by City Council in accordance with their Performance Based Regulation (PBR) plan. The purpose of this type of regulatory framework is to create incentives for operators to improve their efficiency, and to focus on both price (rates) and quality of service in areas that are important to stakeholders. As EPCOR prepares for PBR renewal with Water Services, Wastewater Treatment, and the first PBR plan for Drainage Services, they would like learn how important their current areas of performance are to stakeholders. In addition, they want to hear unbiased and top-of-mind opinions from stakeholders in terms of any new or unknown concerns or priorities that should be part of the plan. To support this, Stone-Olafson was asked to conduct a broad stakeholder consultation for EPCOR with the following objectives:

- **Have public and stakeholder input to inform policy choices, priority-setting for operations and capital programs**, performance measurement and rate design;
- **Provide stakeholders with opportunities to ask questions, express concerns and raise issues with respect to the PBR renewal** and their utility services;
- **Maintain positive and productive relationships with the key decision makers and stakeholders** on the PBR development and implementation;
- **Report back to stakeholders** as the PBR renewal process **progresses on how their feedback was used by EPCOR.**
- **Help inform communications and campaigns** to educate customers on their water & wastewater utilities.

There is also a need to clearly define decisions on which the public can provide input, and EPCOR's ability to act on the input. EPCOR is seeking input on four key areas;

- **Values**
- **Performance Priorities**
- **Cost and Risk Sharing**
- **Rates**

3

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Topics for Public Engagement

Values. Understanding the values held by stakeholders, and using these to guide the evolution of the utilities including the performance measures in the PBR.	**Performance Priorities**. Understanding the types of performance most valued by stakeholders, and the level of performance they are seeking, to guide the prioritization capital and operating programs.	**Cost and Risk Sharing**. Understand stakeholder views on how costs and risks should be shared between ratepayers, service recipients, and the utilities, and use these views as input to guide rate design and future communications;	**Rates**. Understanding stakeholder views on the cost and benefit tradeoffs from different levels of investment in their utility services, and their preferences for future rates.
• Current satisfaction with EPCOR services • Rating of service within the context of their community • Top mind (unprompted) concerns about Water Services, Wastewater Treatment, and Drainage Services (voice of customer) • Specific (prompted) impacts of potential decisions to determine values (e.g., environmental impact, potential sewer back-up, etc.)	• Test EPCOR's current performance areas in more detail and determine weight of importance to customers; ❑ Quality, ❑ Customer Service, ❑ System Reliability & Optimization, ❑ Environment, and ❑ Safety	• Explore the appetite for investment on a continuum from lower performance and higher risk with *lower levels of investment,* to a 'maintain status quo' strategy for *moderate investment*, and finally a *higher level of investment* with the potential to improve performance and reduce risk. • Explore appetite for payment timing (absorb or defer) and discuss rate structure concerns with key stakeholders.	• Explore current perceptions of; • Cost of service • Fairness of current cost (rates), and • Tolerance for increasing rates.

A multi-phased approach was used, going from broad to specific.

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1 Gather broad public opinion on values, issues, priorities.

Visioning & Framing
Dimensions of Performance & Values with EPOR's customers

- Identify overarching and most sensitive areas of performance that matter from customer perspective (their top-of-mind concerns, thoughts).
- Gather feedback on existing or proposed broad areas of performance with the Edmonton public (residential customers), and business customers where possible.

Methodology: 8/10/2020 – 09/03/2020

1. **Residential Customers**; Online survey with option for phone if preferred (n=1,238)
2. **Commercial Customers**; Online survey (n=134)
3. **Multi-residential Customers;** Online survey (n=21)
4. **Open Public Forum** EPCOR Website

2 Talk to key stakeholders with specific needs and sensitivity to PBR outcomes

Detailed consultation
Detailed exploration with a variety of stakeholder groups with strong interest

- Conduct qualitative research with customer groups that could not be reached through the quantitative survey, and/or require more time for discussion of specific areas of concern
- Explore performance area concerns, key context, and confirm performance areas

Methodology: 09/23/2020 – 11/20//2020

- Large volume/industrial customers (6)
- Multi-residential users (8)
- Metis Nation, Confederacy of Treaty Six Nations(10)
- Gold Bar Community Liaison Committee (7)
- Community Advisory Panel (8)
- Homeward Trust (4)
- Water Quality Technical Advisory Committee (5)
- Infill Development in Edmonton Association (6)
- Edmonton Federation of Community Leagues (25)
- Canadian Homebuilders Association (9)
- Urban Development Institute (declined)

Combination of virtual focus groups, in-depth interviews, and custom surveys targeted to specific stakeholders.

3 Validate priorities, investment intentions and rate sensitivity.

Validation
Confirm PBR values, priorities, and validate investment intentions/ rate sensitivity.

- Final confirmation of preferences and recommendations
- Validation of investment appetite/intentions, and testing of rate sensitivity

Methodology: 11/23/2020 – 11/30//2020

Edmonton Public; Online survey (complete, n=500) with follow up public forum (launching January)

Due to Covid restrictions, most of the engagements did not have a single approach used. Throughout the process, we would fast-adapt with a combination of methods in order to capture as many participants as possible.

5

What we learned:

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Values. Stakeholder values to guide the evolution of the utilities including PBR Measures	**Performance Priorities.** Performance valued most by Stakeholders, and the level of performance they are seeking	**Cost and Risk Sharing.** Understand stakeholder views on costs, risks and sharing.	**Rates.** Understanding stakeholder views on the cost and benefit tradeoffs and preferences for future rates.
• Customers are satisfied with EPCOR services, and show a pattern of improved opinion over time. Reliability, water quality, and delivering on expectations drive this. • In terms of top-of-mind concerns, *protecting communities from flooding,* followed by *cost,* and *maintaining the integrity/ quality of tap water* are the strongest themes. • Note that stakeholder groups elevated the desire/need for more formal plans that show alignment to the city, but with a broader time horizon. They also elevated environmental protection (more informed opinion).	EPCOR's performance areas are right and exhaustive, with priorities indicated as follows: #1 Quality #2 System Reliability & Optimization #3 Safety #4 *Tie between* Environment, *and* Customer Service When asked if anything could be added, customers would like EPCOR to ensure costs are kept in line and provide more information/education wherever possible. Stakeholder groups elevated *environment, more rigorous planning*, and EPCOR *using their expertise to provide leadership in setting standards*.	Both public and stakeholders lean toward investing slightly more than status quo (between 6.3 and 6.7 on a 10-point scale) to improve efficiencies and reduce risks and environmental impact. All three phases indicate support for this approach. Note that the second wave of research was conducted during the most severe Covid restrictions, and during this time, investment tolerance softened slightly (0.4%). It remained within the same range, i.e., slightly more than status quo. In terms of the timing of investment and rate structure, overall participants leaned toward paying now rather than waiting, and had little concern/feedback on the existing rate structure itself.	Between 15% and 20% of participants had a hard time recalling current costs, and of those who did, one third indicated it is difficult to judge if the cost is fair or not (unsure how to judge). Of those who had an opinion, most feel rates are fair even though they over-estimate the bill they currently pay by roughly 50%. Using price modelling, the acceptable monthly rate increase is $6.63 to $10.51, with the optimal price point being $7.82. There is some variance by quadrant. Note that this is within the range EPCOR has planned to put forward. The only groups that will be challenged include low-income residents and multi-residential owners/managers.

What we learned:

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	Quality	Customer Service	System Reliability	Environment	Safety
Water	25% (↑ slightly)	20% (↓ *exception information)*	25% (=)	15% (=)	15% (=)
	#1 Priority	Tertiary	#2 Priority	Tertiary	Tertiary
Wastewater treatment	55% (↓)	15% (↓)	15% (↑)	0% (↑)	15% (↑)
	#1 Priority *(Reduce contaminants, reduce odour)*	Tertiary *(continue with improved communication)*	#2 Priority *(manage treatment volumes)*	Tertiary *(Protect river valley in planning is higher, efficiency is tertiary)*	#2 Priority *(Public/employee safety)*

	Customer Service	System Reliability	Environment	Safety
Drainage	20% (=)	40% (↑)	30% (↓)	10% (=)
	#2 Priority *(quick response time for blocked sewers, all other tertiary)*	#1 Priority	#1 Priority *(Reduce contaminants entering river specifically)*	Tertiary

Environment: Not less important with drainage, but if system reliability improves, environmental impact will also.

About safety: Viewed as table stakes (hence lower). Safety is license to do business.

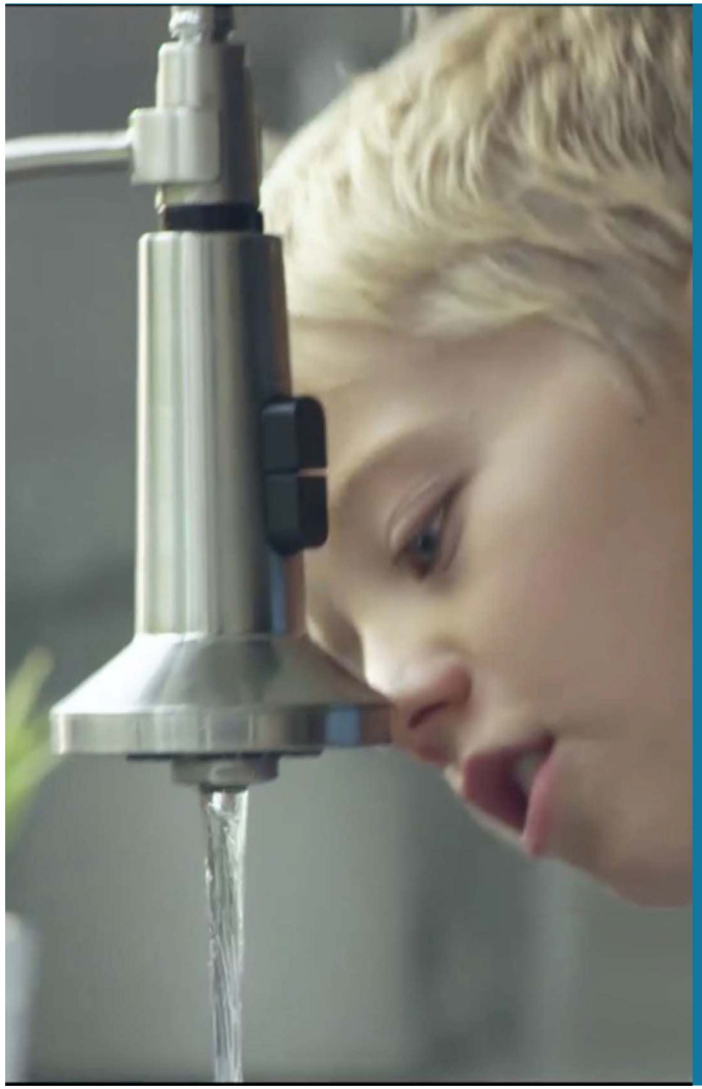
SUMMARY IDEA

Use Success to Lead
Water is critical. Invest to keep standards and protect. Reduce risk. Share knowledge and expertise.

Continue Collaboration
Location is greatest concern. Continue collaboration and communication. Desire for coordination with planning to protect river valley through city growth (protect asset).

Invest, Evolve, Plan
Drainage is a higher concern for both public and stakeholder groups, but **significantly** more for stakeholders. Desires are to: modernize business practices, standards, align plans to city strategy and beyond, and (overall) simply advance system upgrade.

7



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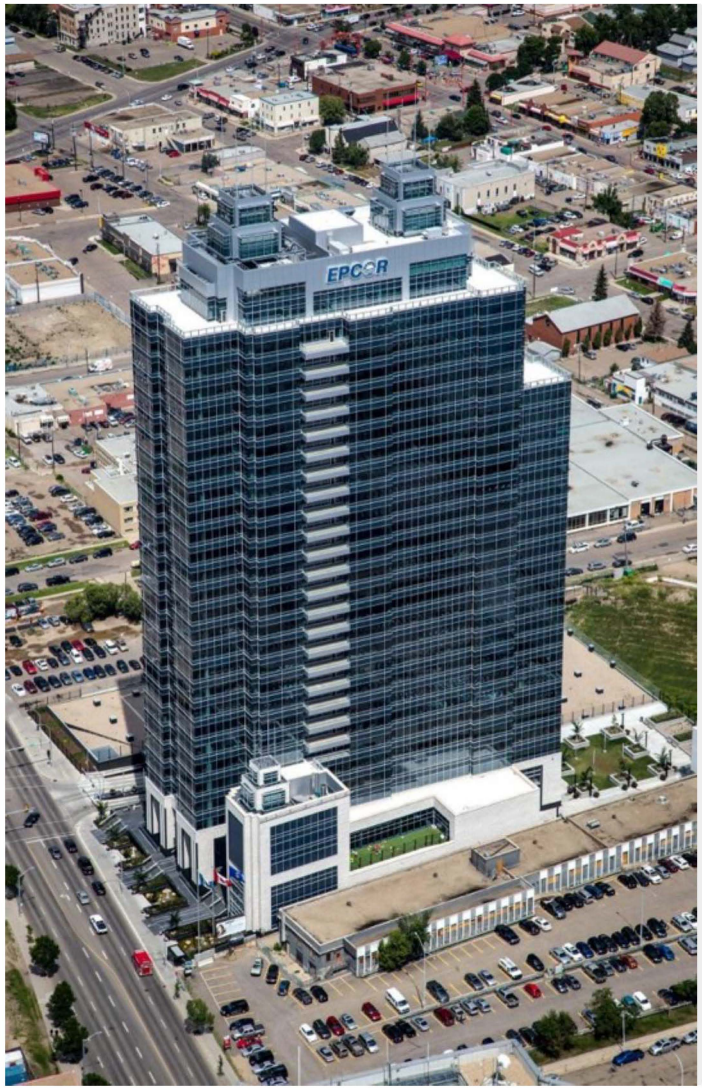
DETAILED RESULTS

THE CONTEXT



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TOPLINE
Current Satisfaction Levels

- Edmontonians indicate they are satisfied with EPCOR Water Services, and demonstrate a history of gradual improvement over the past five years of tracking
- Reasons for satisfaction are a lack of problems, good/reliable service, and the high quality of their drinking water
- Within a set of community characteristics that influence whether they enjoy their community, Edmontonians rate 'reliable utilities' in their community the highest.

The Details >

THE CONTEXT

Edmontonians (both residential & commercial) are satisfied with EPCOR Water Services, with two-thirds very satisfied.

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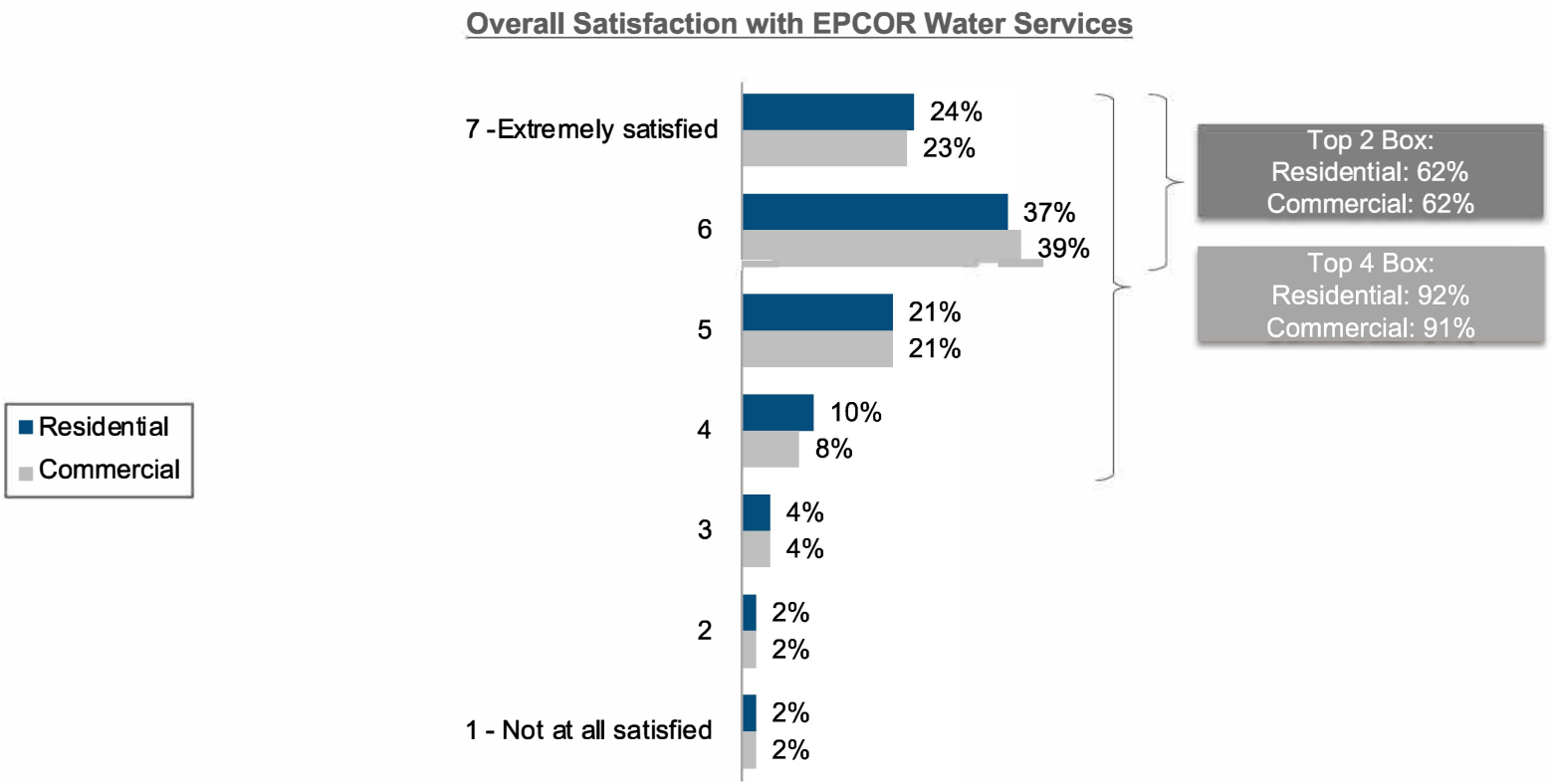

Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q7. How would you rate your OVERALL satisfaction with your water services, wastewater treatment, and sewer services?

THE CONTEXT

Satisfaction with EPCOR water, wastewater treatment, and drainage services is consistent with 2016 and shows a history of improvement over time.

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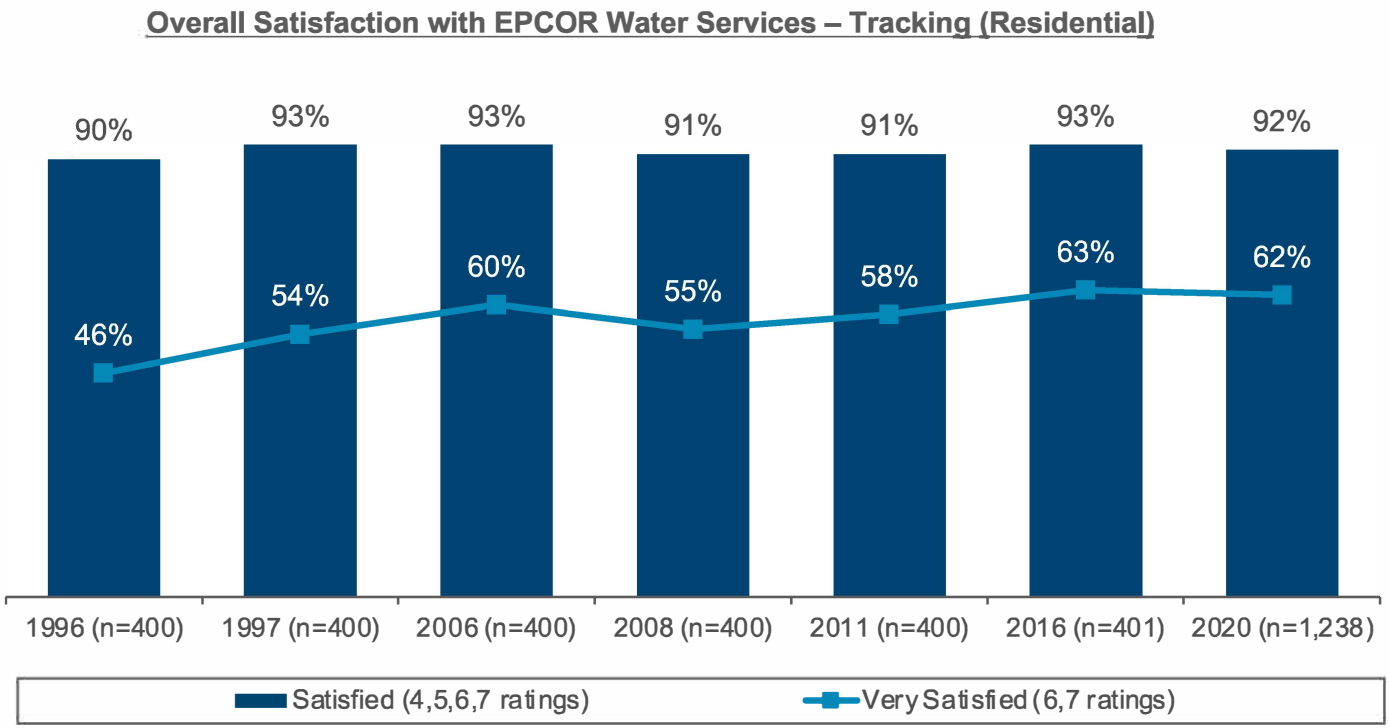

Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q7. How would you rate your OVERALL satisfaction with your water services, wastewater treatment, and sewer services?

THE CONTEXT

Top of mind reasons respondents are satisfied with EPCOR is because they have not experienced problems, followed by good service and high-quality water.

Negative satisfaction is driven by odour, calcium build-up, taste, dirty water, and poor quality.

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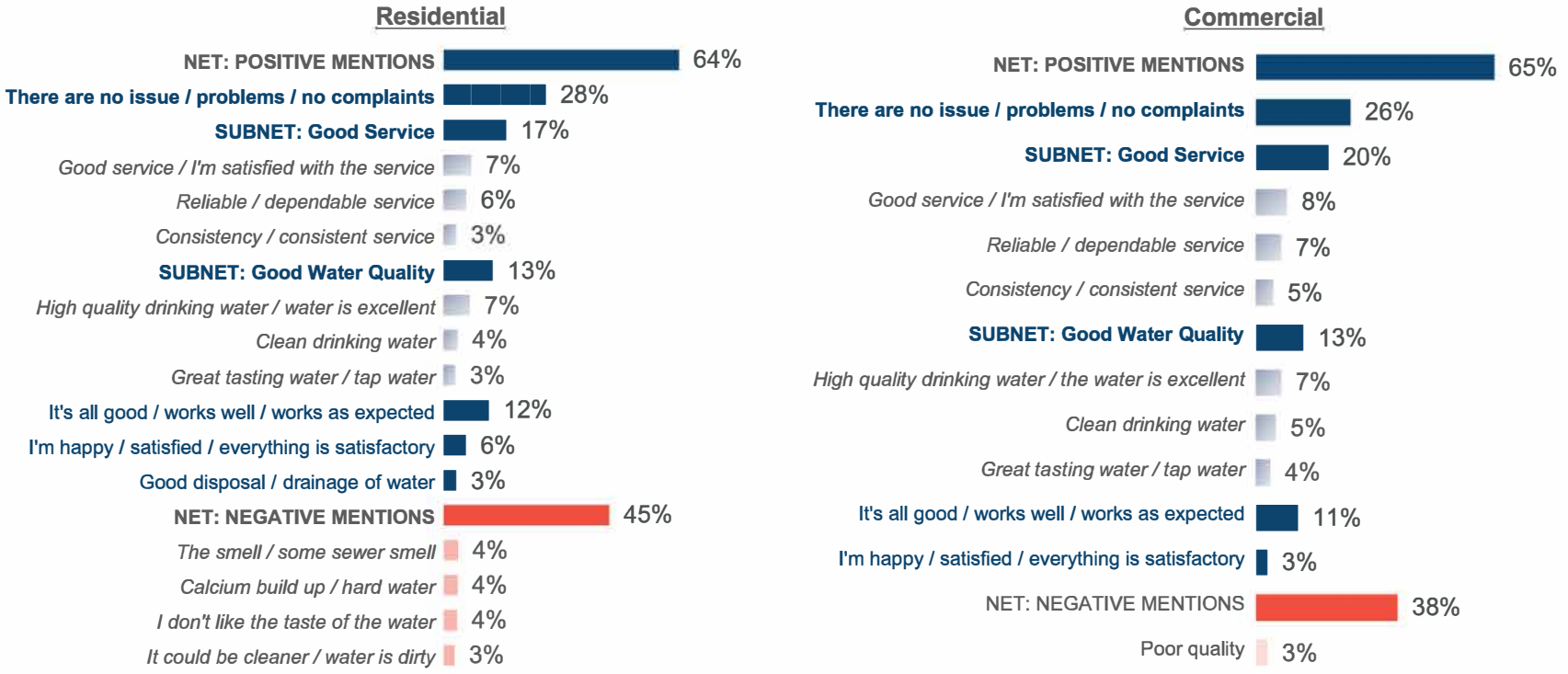
Reason Behind Satisfaction Rating – Open End



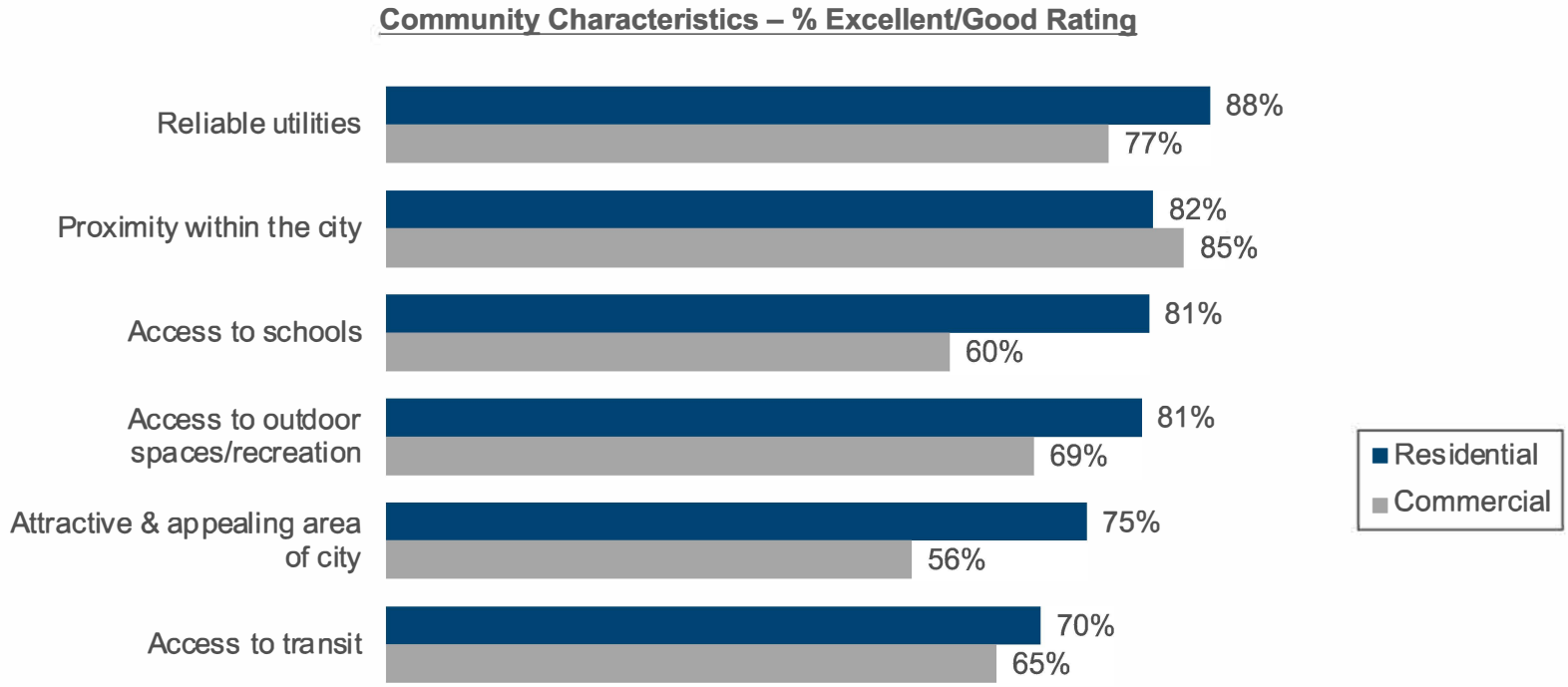
Base: All respondents: Residential (n=1,208); Commercial (n=134)
Q8. What is the main reason that you gave this rating?

**Only responses greater than 2% shown in charts.*

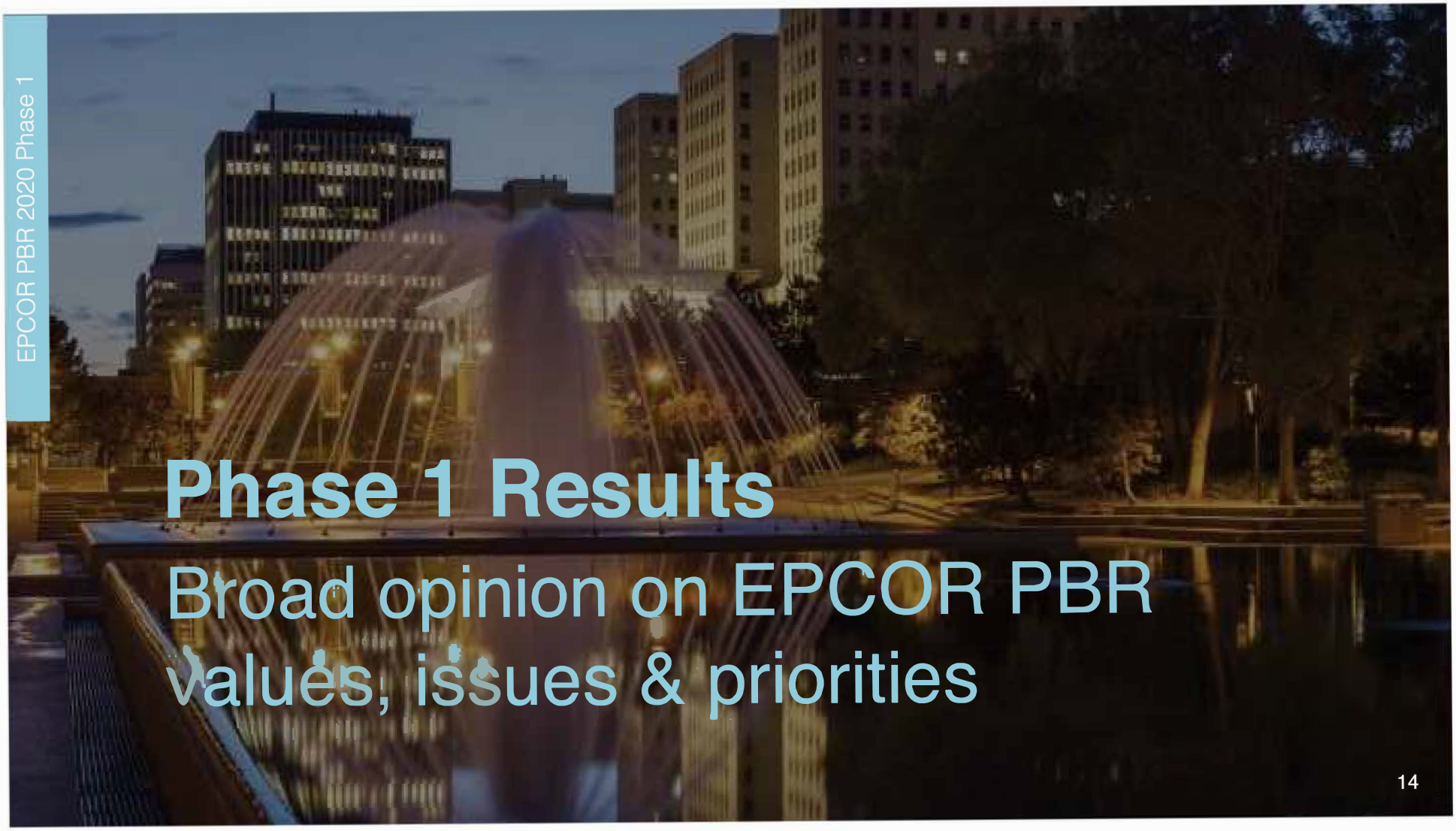
THE CONTEXT

Residential respondents are positive about their communities, and rank reliability of utilities the highest among a set of community attributes.

Commercial respondents appreciate their proximity within the city the most, reliability of utilities second, and are more critical of remaining communal aspects.



Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q4. Thinking about the community you live in, please rate how well your community does on each of the below characteristics.


EPCOR PBR 2020 Phase 1
Phase 1 Results
Broad opinion on EPCOR PBR values, issues & priorities
14

EPCOR PBR 2020 Phase 1

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TOPLINE
Values, Concerns, & PBR:

- Top-of-mind concerns indicate a high value placed on protecting communities from flooding (recent flooding in Edmonton likely elevated the issue). Flood protection was followed by *cost* and *maintaining the integrity/quality* of tap water.
- EPCOR's current PBR areas are relatively exhaustive, with solid alignment to customer values and priorities.
- Thurstone modelling indicates that some slight weighting adjustments could be made to increase emphasis on; protecting quality (water), increasing system reliability (wastewater treatment), and giving priority weighting to system reliability for drainage.
- Commercial customers do have slightly different priorities than residential, particularly with wastewater treatment (managing volumes and contaminants), and with drainage (maintaining infrastructure/performance).
- The only other areas suggested to expand on are cost/rates and education. Customers highly value information and rationale for decision making.

The Details >

EPCOR PBR 2020 Phase 1

CURRENT PBR Summary: Performance Categories & Weighting

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PERFORMANCE CATEGORIES & WEIGHTING					
	Quality	Customer Service	System Reliability & Optimization	Environment	Safety
Water Services	25%	20%	25%	15%	15%
Wastewater Treatment Services	55%	15%	15%	n/a	15%
Drainage Services	TBD				

Both Water Services and Wastewater Treatment Services have been through a Performance Based Regulation (PBR) engagement and plan, and therefore have an existing PBR framework that identified five performance areas (above) based on customer and stakeholder values. The weighting of each performance area to measure is based on customer and stakeholder priorities. Specific *metrics* for each performance area are indicated on the next page.

Drainage Services (Stormwater and Sewer drainage) is a newer business unit for EPCOR, and therefore this PBR Engagement is the first time the work has been done on behalf of Drainage Services. As such, the team put forward *proposed* performance areas to test and validate. Weighting for each performance area is the product of this work.

EPCOR PBR 2020 Phase 1

CURRENT PBR Summary: Performance Categories, Weighting & Detailed Metrics

Stone—Olafson

PERFORMANCE CATEGORIES & WEIGHTING					
	Quality	**Customer Service**	**System Reliability & Optimization**	**Environment**	**Safety**
Water	25%	20%	25%	15%	15%
	• % of tests non-suspicious 99.7% (~60K tests)	• Post service audit (% completely/very satisfied with EWSI emergency group) • Home water sniffing % satisfaction • Ave # min from main-break alert ot dispatch break < 25 • % planned construction events compliant with notification prcdr	• Water main break factor (# in reporting period less than 419) • Water main break repair duration (% within 24 hours) 93.7% • Water loss factor; index quantifying distro management for real water loss (< 2) • System energy efficiency; kWh/annual water production < 309	• Water conservation factor; 10 year monthly rolling ave. consumption/HH <17.2 • Environmental incident factor; # reportable/preventable env. Incidents < 6 • Solids residual mgmt. factor; Ave # days plants operating in direct filtration mode > 120	• # near miss reports > 550 • Work site inspections/observation factor; # completed ea. Year > 1,032 • Loss time frequency factor < .57 • Injury frequency < 1.54
Wastewater Treatment	55% (includes environment)	15%	15%	n/a	15%
	• Wastewater effluent limit performance value (aggregate % discharge for 5 parameters) > 28% • Environmental incident factor; # of incidents both reportable/preventable < 10	• 1 hr H2S exceedance factor (# of exceedances of 1-hour limit registered @ air quality stations) < 6 • 24 hr H2S; " " < 2 • Scrubber uptime factor (% time online) > 90%	• Enhanced primary treatment factor (% performance during wet weather events) > 80% • Biogas utilization factor (biogas – flare / total vol) > 60% • Energy efficiency factor; kWh/vol treated < 514	→ Could also be classified as environment.	• Near miss reported in ESS system >220 • Worksite inspections/ year > 919 • Loss time frequency <.75 • All injury frequency < 1.5
Drainage	TBD (includes environment)				
	• Edmonton watershed contaminant reduction index score > 6.9 • Total load, suspended solids (kg/d) to river from sewers & treatment plants < 50,000	• Emergencies responded to within 2 hours > 87% • # of blocked mainline sewers per 100 km of pipe < 2.1 • % of neighbourhoods protected against 100-year flood out of 157 identified as 'at risk' > 16% • # of odour complaints < 647	• Sanitary, Storm, and combined sewer pipe capacity rating; % of linear infrastructure with hydraulic condition rating of B or better, 96%, 50%, and 80% respectively • % of infrastructure at or above minimum condition rating 90% • Capital reinvested vs. total system replacement replacement value .81%	→ Could also be classified as environment.	• Employee engagement level 70% • Employee turnover (excl. retirement) vis. headcount 6% • Loss time frequency factor; # of lost time hours from injury vs. Total hrs .5

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To validate PBR performance areas and weighting, we asked participants questions in three different ways (below).

Recommendations based on our findings are shown on the next page followed by the detailed results

1. Top of mind (unaided or unprompted) concerns.

This allowed us to explore customer's own language and any issues they felt were important about their water, wastewater treatment, and drainage services that may not have been identified in the existing PBR.

2. Importance of possible (prompted) concerns and performance areas for each line of business

A list of potential impact areas (concerns) as well as performance areas were identified through past research, customer listening tools, and secondary sources. The lists were then tailored for each line of business and presented for customers to rate importance (i.e., prompted ratings).

3. A sorting task of PBR performance areas and Thurstone analysis to identify *degree* of importance

Finally, customers were asked to conduct a ranking of potential future areas of performance for each line of business in terms of what mattered to them most.

This was followed up by a direct question asking if there are any other areas EPCOR should be considering.

EPCOR PBR 2020 Phase 1

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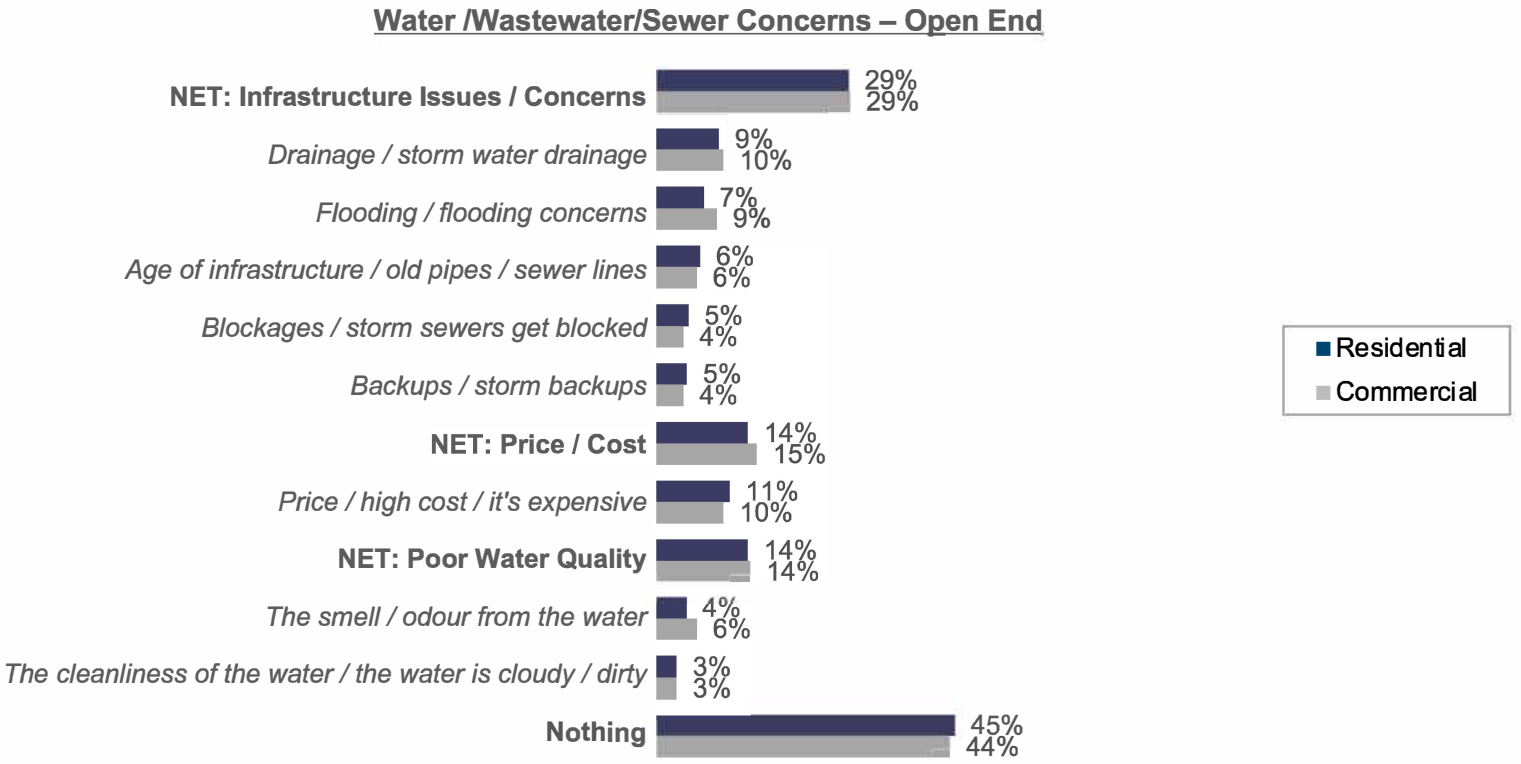
Unaided concerns about water services are mainly *infrastructure* in nature (i.e., drainage and flooding), *high cost*, and *water quality* (odour/cleanliness).

Although, nearly half of all customers have no concerns.



Base: All respondents: Residential (n=1,165); Commercial (n=125)
Q10. What concerns, if any, do you have about water, wastewater treatment, and/or drainage storm or sewer in your neighbourhood?

EPCOR PBR 2020 Phase 1

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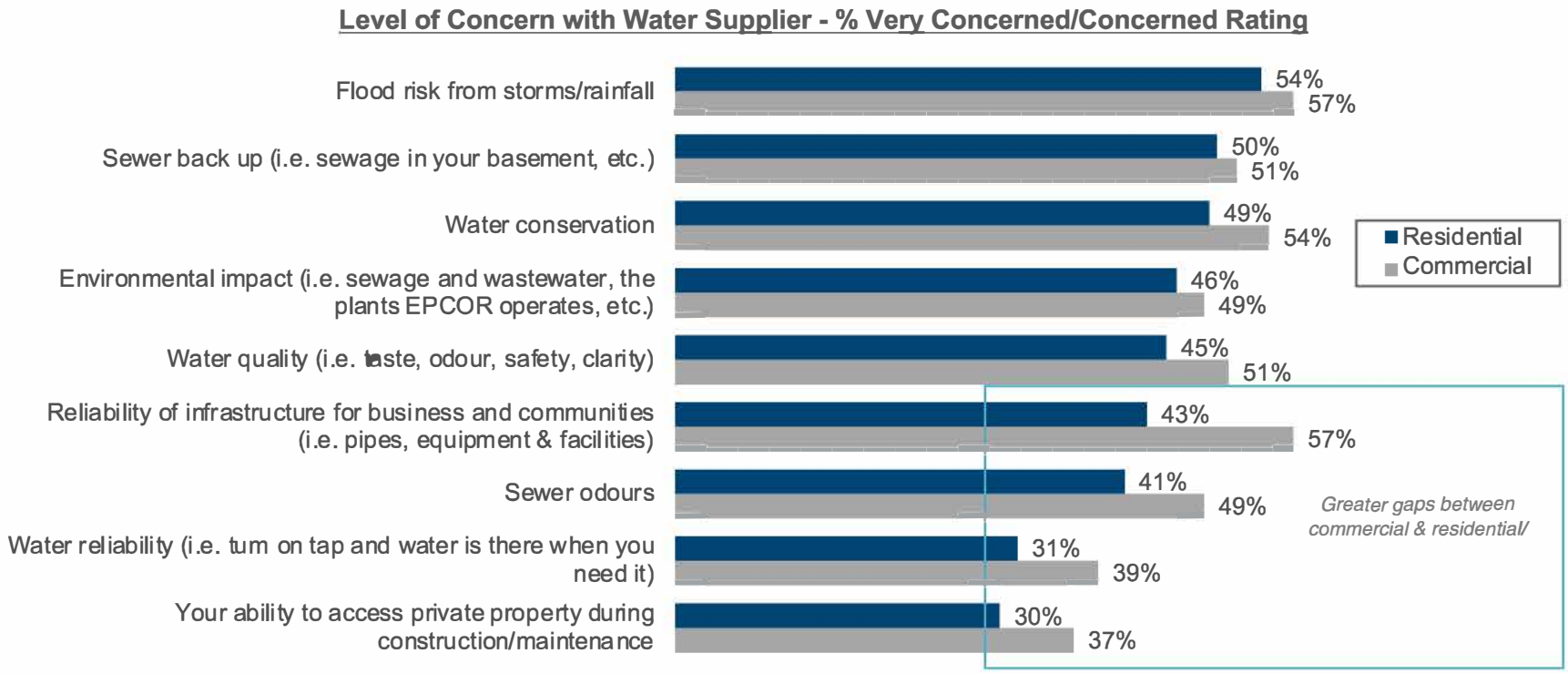
When pressed for concerns, commercial customers are slightly more concerned than residential on specific issues

Particularly infrastructure reliability, water reliability, odour, and access to property during maintenance.



Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q11. How concerned are you with the following in your neighbourhood?

EPCOR PBR 2020 Phase 1

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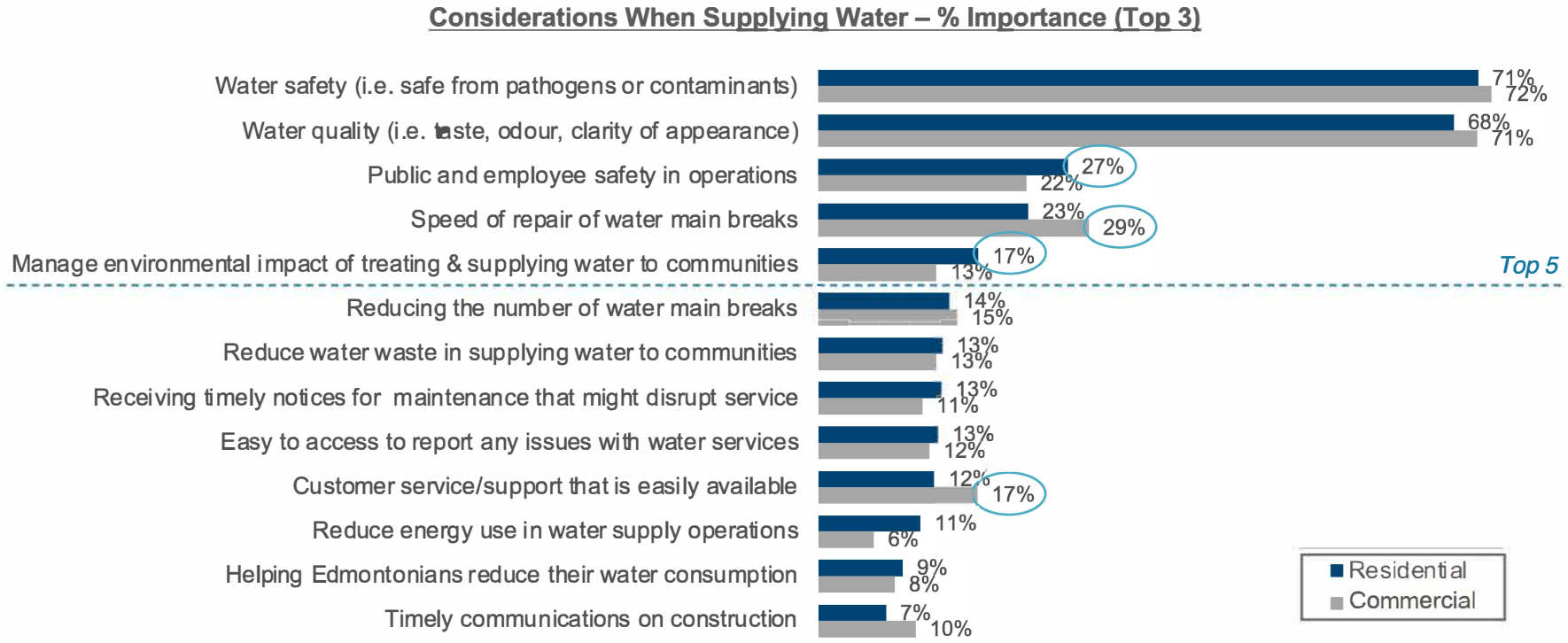
Ranked importance starts to reveal values and top performance areas, with water safety & water quality by far the most important to both types of customers.



Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q12A. We would like you to rank how important each one is to you personally, where 1 is most important to you, followed by 2, 3, etc.

EPCOR PBR 2020 Phase 1

Reducing wastewater contaminants, safety in operations, and treatment volumes (especially amongst commercial customers) are the most important performance areas for wastewater treatment.

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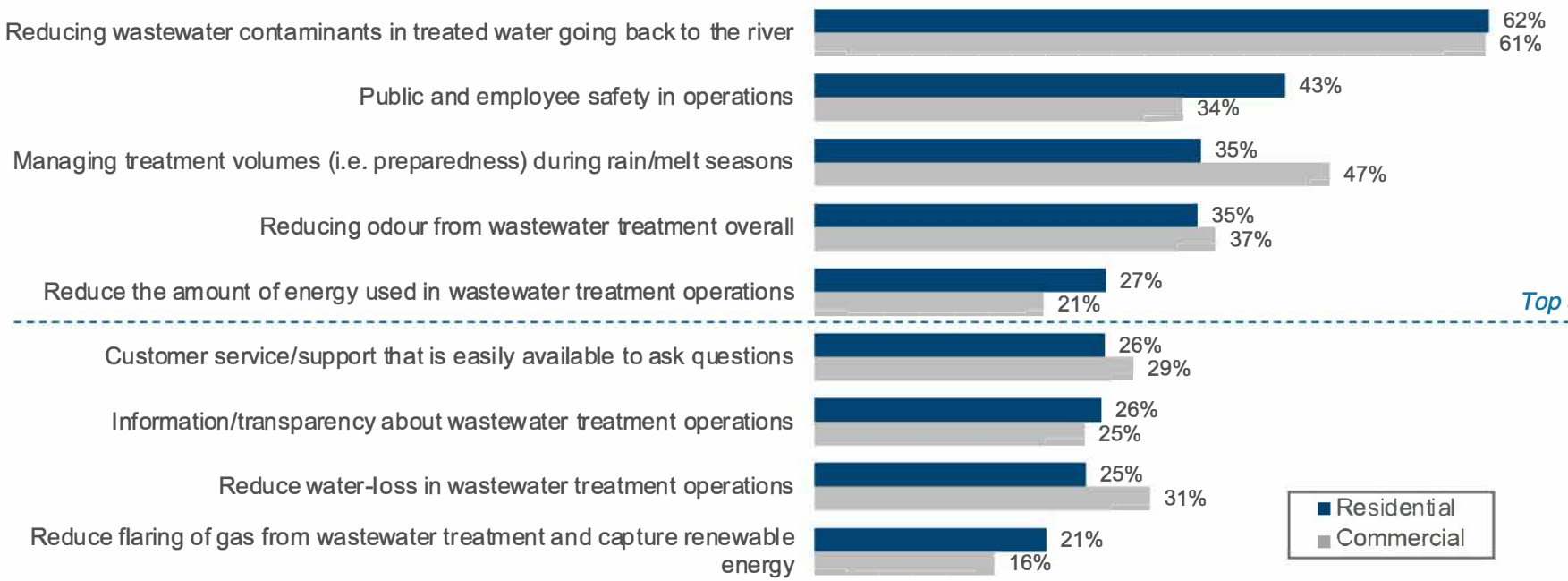
Considerations When Treating Wastewater – % Importance (Top 3)



Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q12B. We would like you to rank how important each one is to you personally, where 1 is most important to you, followed by 2, 3, etc.

EPCOR PBR 2020 Phase 1

The main priorities for sewer drainage include quick response times, reducing contaminants, and maintain sewer drainage performance.

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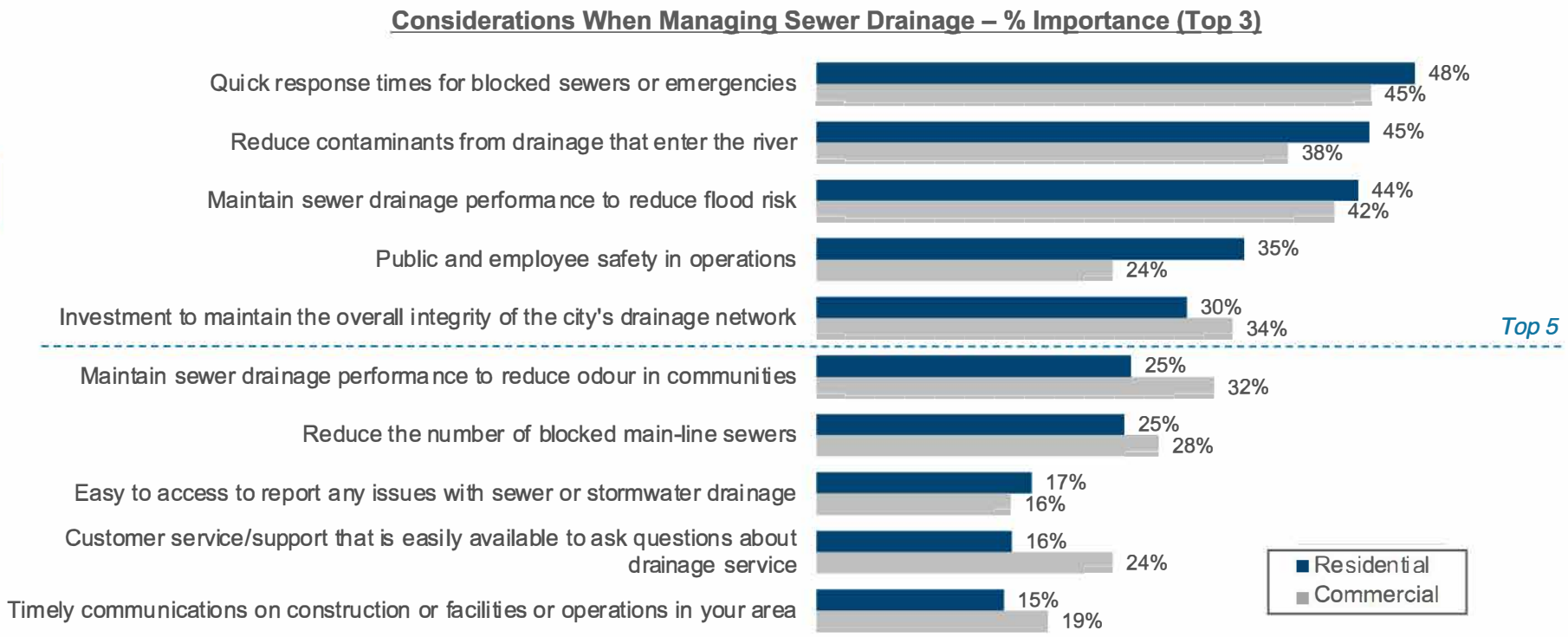

Base: All respondents: Residential (n=1,238); Commercial (n=134)
Q12C. We would like you to rank how important each one is to you personally, where 1 is most important to you, followed by 2, 3, etc.

EPCOR PBR 2020 Phase 1

To help determine the *weight of importance* of PBR areas, customers were asked to rank them. We then conducted Thurstone Analysis to identify the magnitude of importance to determine weighting.

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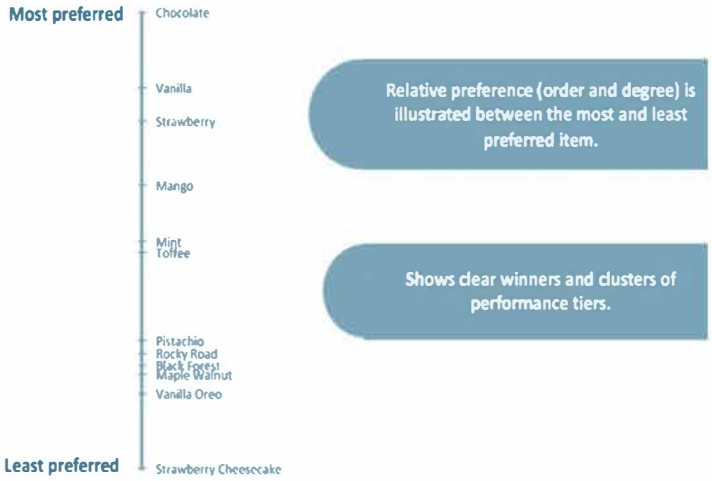
What is a Thurstone Analysis?

Example: Sorting preferred ice cream flavours



As part of the survey, customers were asked to rank performance areas in terms of what is most important to them.

While sorting and ranking preferences is helpful, it is limiting in that it doesn't allow us to understand the degree of preference within options.

A **Thurstone Case V Scaling** analysis is a simple analytic tool that takes a ranking question from beyond order of preference to showing *how much more* each item is preferred, relative to the other choices. This technique eliminates any "ties" that occur in preference ratings.

24

EPCOR PBR 2020 Phase 1

Water Supply Results: safety and quality are most important for all customers.

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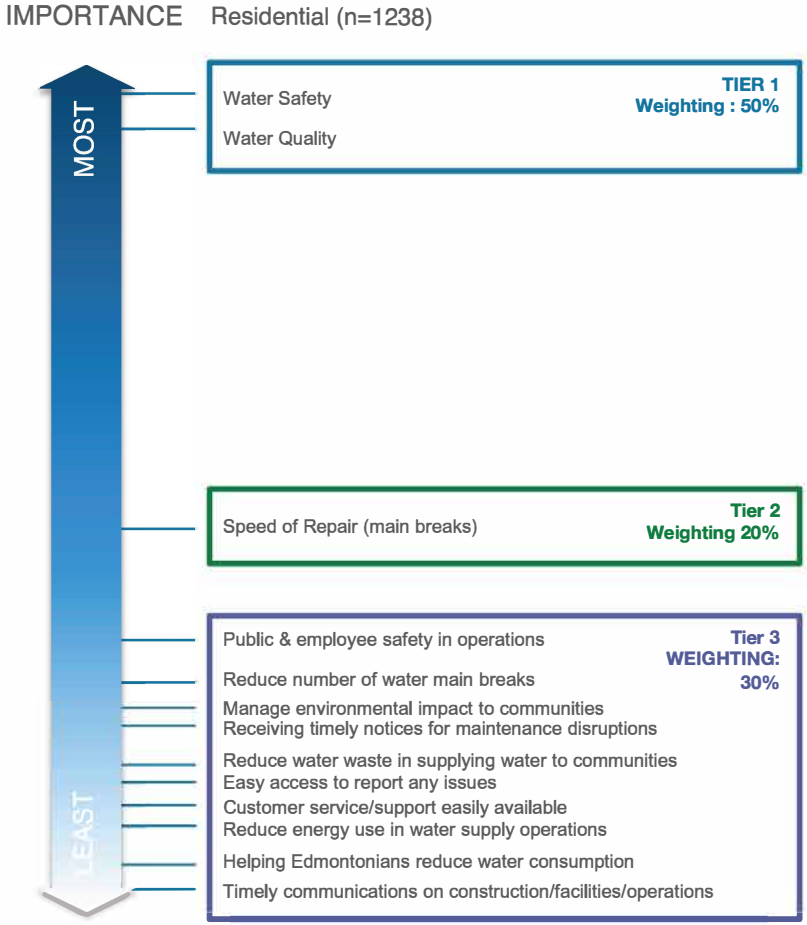

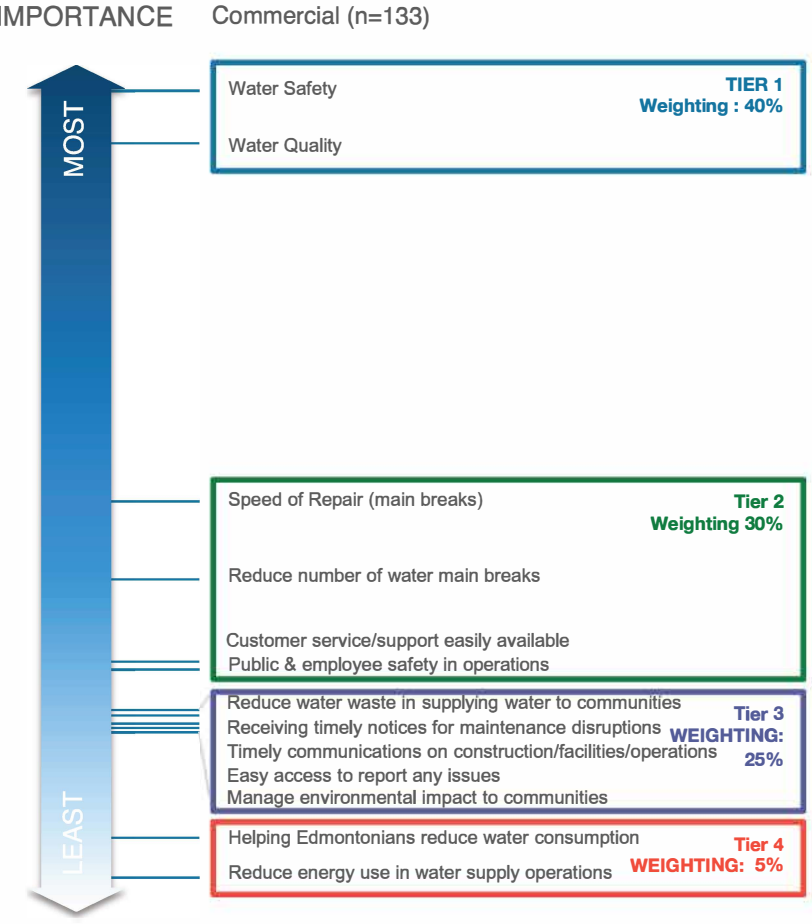

EPCOR PBR 2020 Phase 1

Wastewater Treatment: After reducing contaminants, treatment priorities vary slightly with residential focused on protecting public and employee safety, and commercial focused on managing volumes/odour

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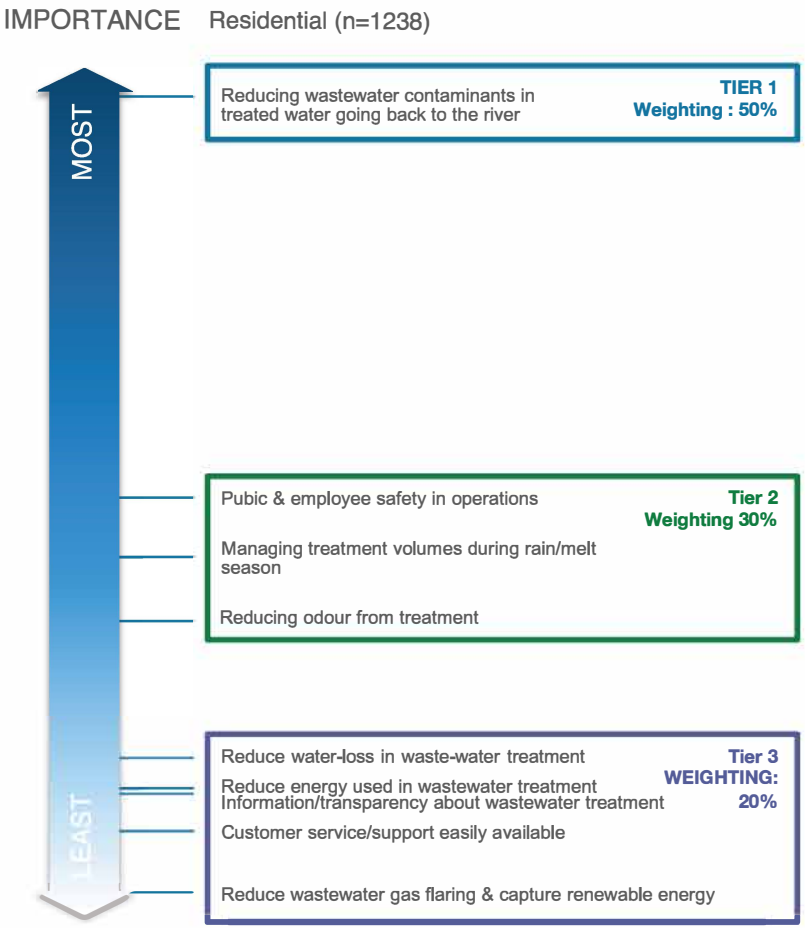

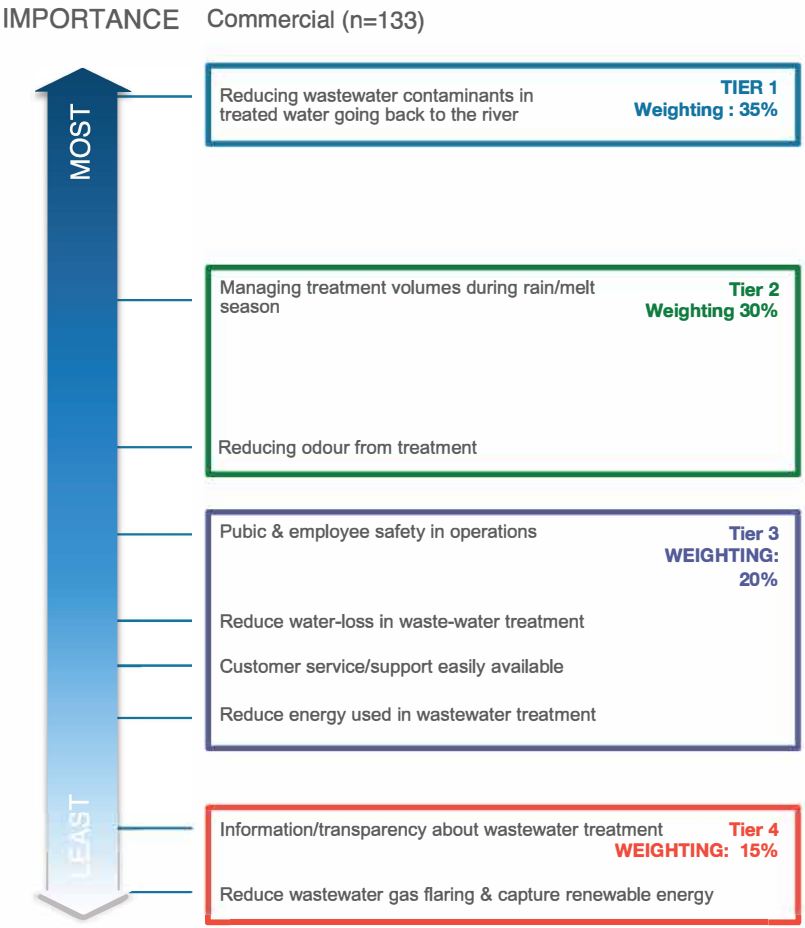

EPCOR PBR 2020 Phase 1

Drainage: for both residential & commercial customers, drainage performance areas are clustered into three tiers.

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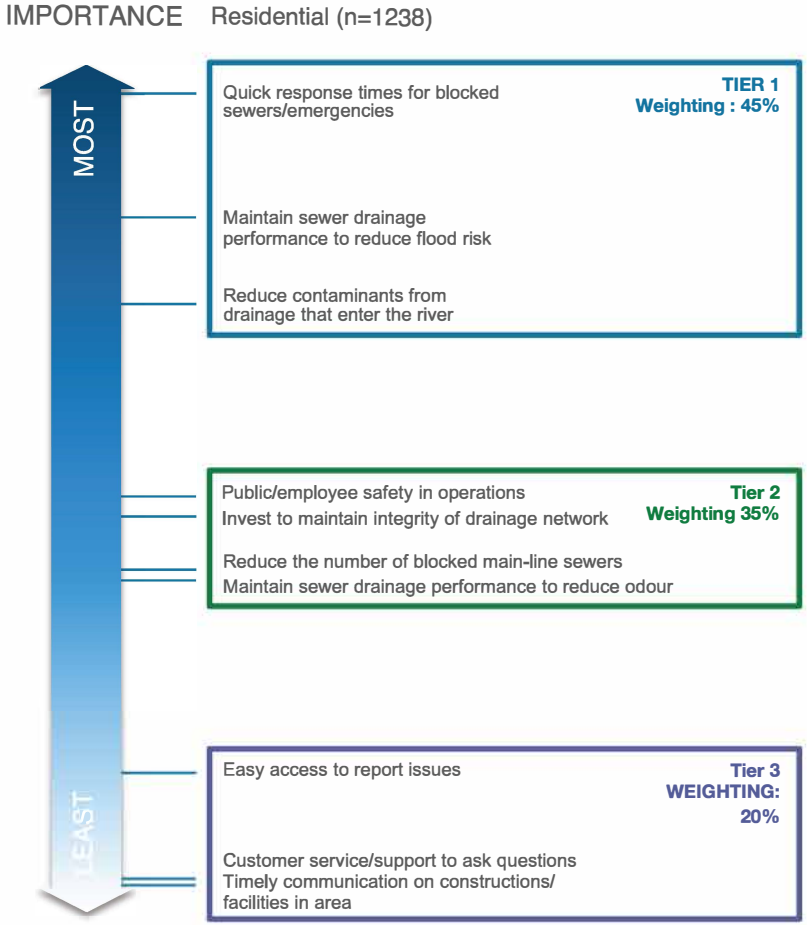

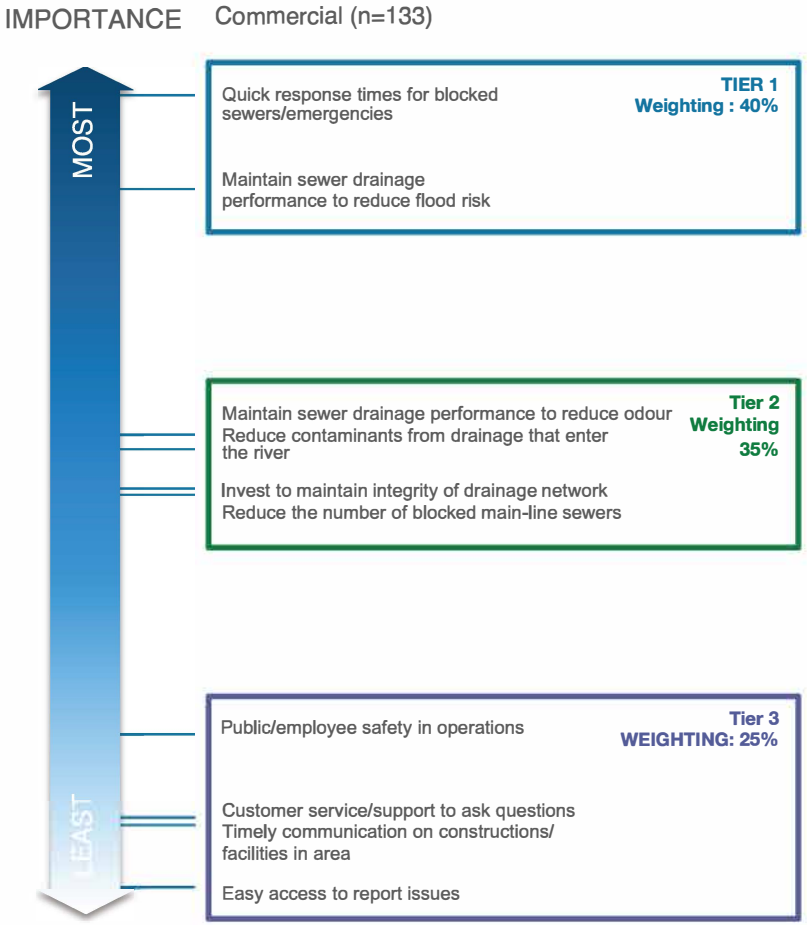

EPCOR PBR 2020 Phase 1

Applying the results of Thurstone Analysis to our original PBR framework

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PERFORMANCE CATEGORIES & WEIGHTING					
	Quality	**Customer Service**	**System Reliability & Optimization**	**Environment**	**Safety**
Water	25%	20%	25%	15%	15%
	• % of tests non-suspicious 99.7% (~60K tests)	• Post service audit (% completely/very satisfied with EWSI emergency group) • Home water sniffing % satisfaction • Ave # min from main-break alert ot dispatch break < 25 • % planned construction events compliant with notification prodr	• Water main break factor (# in reporting period less than 419) • Water main break repair duration (% within 24 hours) 93.7% • Water loss factor; index quantifying distro management for real water loss (< 2) • System energy efficiency; kWh/annual water production < 309	• Water conservation factor; 10 year monthly rolling ave. consumption/HH <17.2 • Environmental incident factor; # reportable/preventable env. Incidents < 6 • Solids residual mgmt. factor; Ave # days plants operating in direct filtration mode > 120	• # near miss reports > 550 • Work site inspections/observation factor; # completed ea. Year > 1,032 • Loss time frequency factor < .57 • Injury frequency < 1.54
Wastewater Treatment	55% (includes environment)	15%	15%	n/a	15%
	• Wastewater effluent limit performance value (aggregate % discharge for 5 parameters) > 28% • Environmental incident factor; # of incidents both reportable/preventable < 10	• 1 hr H2S exceedance factor (# of exceedances of 1-hour limit registered @ air quality stations) < 6 • 24 hr H2S; " " < 2 • Scrubber uptime factor (% time online) > 90%	• Enhanced primary treatment factor (% performance during wet weather events) > 80% • Biogas utilization factor (biogas – flare / total vol) > 60% • Energy efficiency factor; kWh/vol treated < 514	Could also be classified as environment.	• Near miss reported in ESS system >220 • Worksite inspections/ year > 919 • Loss time frequency <.75 • All injury frequency < 1.5
Drainage	TBD (includes environment)				
	• Edmonton watershed contaminant reduction index score > 6.9 • Total load, suspended solids (kg/d) to river from sewers & treatment plants < 50,000	• Emergencies responded to within 2 hours > 87% • # of blocked mainline sewers per 100 km of pipe < 2.1 • % of neighbourhoods protected against 100-year flood out of 157 identified as 'at risk' > 16% • # of odour complaints < 647	• Sanitary, Storm, and combined sewer pipe capacity rating; % of linear infrastructure with hydraulic condition rating of B or better, 96%, 50%, and 80% respectively • % of infrastructure at or above minimum condition rating 90% • Capital reinvested vs. total system replacement replacement value .81%	Could also be classified as environment.	• Employee engagement level 70% • Employee turnover (excl. retirement) vis. headcount 6% • Loss time frequency factor; # of lost time hours from injury vs. Total hrs .5

Results in the following recommended adjustments (next page) >

(to be validated in phase 2)

EPCOR PBR 2020 Phase 1

RESULTS: #1 Priority = attributes that customers rated as most important, #2 = second most important, Tertiary = all other

PERFORMANCE CATEGORIES & WEIGHTING					
High level recommendation for each business line	**QUALITY**	**CUSTOMER SERVICE**	**SYSTEM RELIABILITY & OPTIMIZATION**	**ENVIRONMENT**	**SAFETY**
WATER	25% **#1 PRIORITY**	20% **Tertiary**	25% **2nd Priority**	15% **Tertiary**	15% **Tertiary****
Results indicate increasing weighting of quality (See Thurstone section starting slide 22)	• Water quality (i.e. taste, odour, clarity of appearance) • Water safety (i.e. safe from pathogens or contaminants)	• Easy to access to report any issues with water services • Customer service/support that is easily available to ask questions • Receiving timely notices for maintenance that might disrupt your service	• Reducing the number of water main breaks** • Speed of repair of water main breaks • ***More important for commercial customers*	• Helping Edmontonians reduce their water consumption • Reduce water waste in supplying water to communities • Reduce energy use in water supply operations • Overall mitigation of the environmental impact in supplying water to communities	• Public and employee safety in operations • ***More important for residential*
WASTEWATER TREATMENT	55% **#1 PRIORITY/2nd Priority**	15% **Tertiary**	15% **2nd Priority/Tertiary**	n/a (included in quality) **Tertiary**	15% **2nd Priority**
Results indicate increasing weighting of System Reliability (managing treatment volumes), & safety in operations.	• Reducing wastewater contaminants in treated water going back to the river • Reducing odour from wastewater treatment overall	• Customer service/support that is easily available to ask questions • Information/transparency about wastewater treatment operations	• Reducing the number of air-quality flare-ups in wastewater treatment • Managing treatment volumes (i.e. preparedness) during rain/melt seasons	• Reduce water-loss in waste-water treatment operations • Reduce the amount of energy used in wastewater treatment operations	• Public and employee safety in operations • ***More important for residential*
DRAINAGE	TBD **#1 PRIORITY**	**#1 PRIORITY/Tertiary**	**#1 PRIORITY/2nd Priority**	n/a (included in quality)	**2nd Priority**
Results indicate higher weighting for System Reliability (40%-45%), followed by quality (30%), then customer service (20%) and finally safety.	• Reduce contaminants from drainage that enter the river *Note: For drainage only, #1 priorities fall under three different areas. It would make sense to re-organize them to align weighting more easily.*	• Quick response to blocked sewers or emergencies • Easy to access to report any issues with sewer or stormwater drainage • Customer service/support that is easily available to ask questions about drainage service • Timely communications on construction or facilities or operations in your area	• Reduce the number of blocked main-line sewers • Maintain sewer drainage performance to reduce flood risk • Maintain sewer drainage performance to reduce odour in communities • Investment to maintain the overall integrity of the cities drainage network		• Public and employee safety in operations • ***More important for residential*

EPCOR PBR 2020 Phase 1

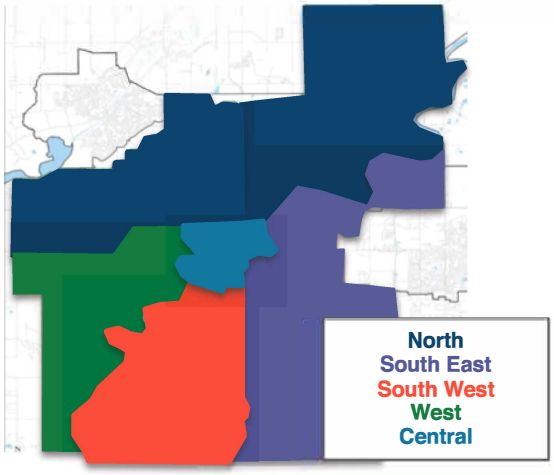
While the order of priorities were similar, we compared index scores to determine if priorities were higher or lower by quadrant.

Stone—Olafson

Southwest	
Satisfaction % Top 2 box	67%
Invest to Improve % Top 4	56%

More Concerned with?
- **Reducing odour** from wastewater treatment
- **Quick response time** for blocked sewers/emergencies
- **Reduce number of blocked** main-line sewers

Less Concerned with?
- Easy access to report issues
- Reducing number of water main breaks
- Reduce flaring of gas from wastewater treatment and capture renewable energy



North	
Satisfaction % Top 2	57%
Invest to Improve % Top 4	50%

More Concerned with?
- **Environmental issues** (Helping Edmontonians conserve water, reducing energy in supplying water)
- **Customer Service** (CS that's easy to access, timely notices, ease/quick to report issues)
- **Reducing water main breaks**

Less Concerned with?
- Speed of main-break repair
- Maintaining sewer/drainage performance

West	
Satisfaction % Top 2 box	64%
Invest to Improve % Top 4	55%

More Concerned with?
- **Reduce flaring of gas** from wastewater treatment and capture renewable energy
- **Speed of repair of water main** breaks
- Reduce energy use in water supply
- **Customer service/support** easily available

Less Concerned with?
- Reduce number of blocked sewers
- Reduce odour from wastewater treatment

Southeast	
Satisfaction Top 2 box	67%
Invest to Improve % Top 4	53%

More Concerned with?
- **Timely communication** of construction/ operations in their neighbourhood
- **Invest to maintain** integrity of drainage network

Less Concerned with?
- Reducing water loss in treatment operations
- Customer service that is easy to access

Central/Inner city	
Satisfaction % Top 2 box	57%
Invest to Improve % Top 4	63%

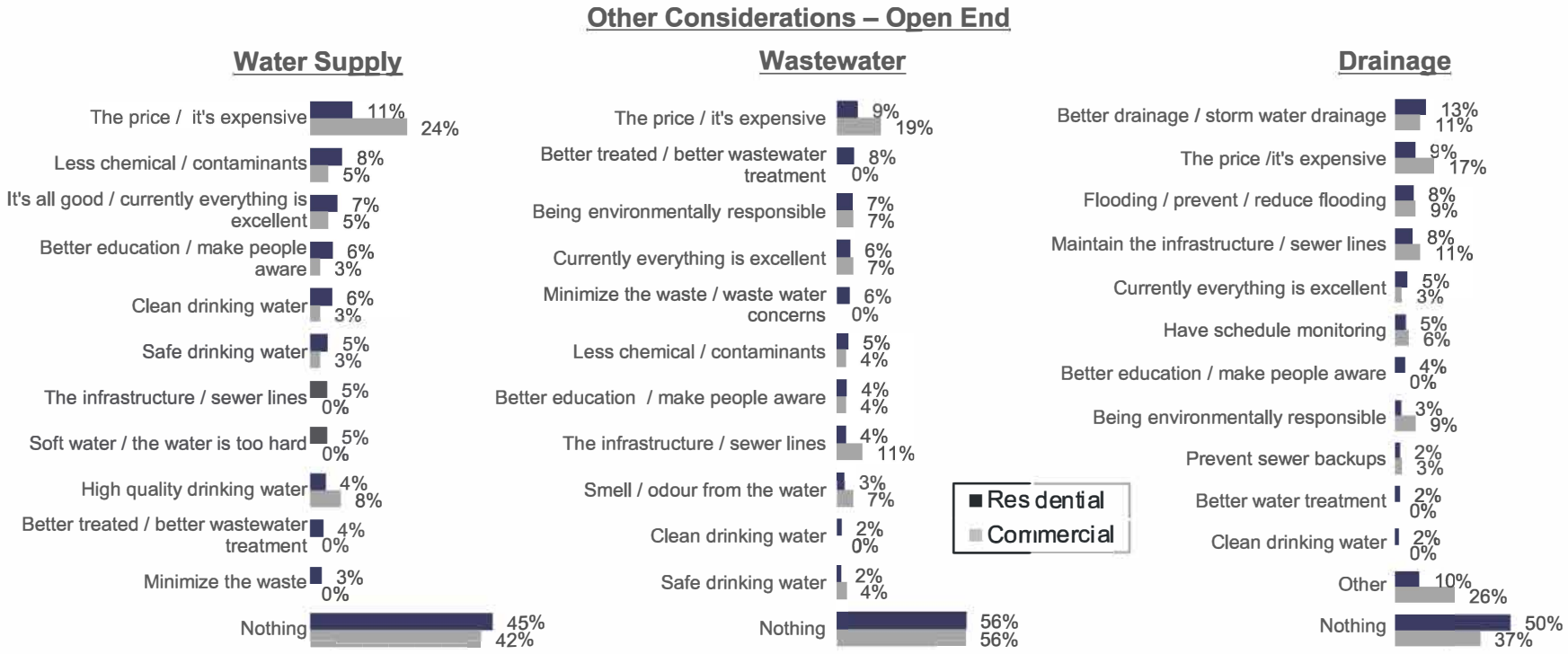
More Concerned with?
- **Environmental impact** (Reduce energy use and water loss in treatment)
- **Public & employee safety in operations**
- Reduce number of blocked main-line sewers

Less Concerned with?
- **Timely communication** of construction/ operations in their neighbourhood
- **Reducing odour** from wastewater treatment

EPCOR PBR 2020 Phase 1

Stone—Olafson

We asked a final question to confirm if PBR areas covered all concerns. For half, performance areas tested are exhaustive. Additional recommendations are *lower price* and *better education* **(especially amongst commercial customers)**



Base: Provided other considerations
Q13. Now that you have had a chance to think about your water services, wastewater treatment, and stormwater/sewer drainage utilities, we would like to know what else (if anything) is important to you in how these services are managed that was not already mentioned. Do you have any other considerations you would like to suggest?

EPCOR PBR 2020 Phase 1

Stone—Olafson

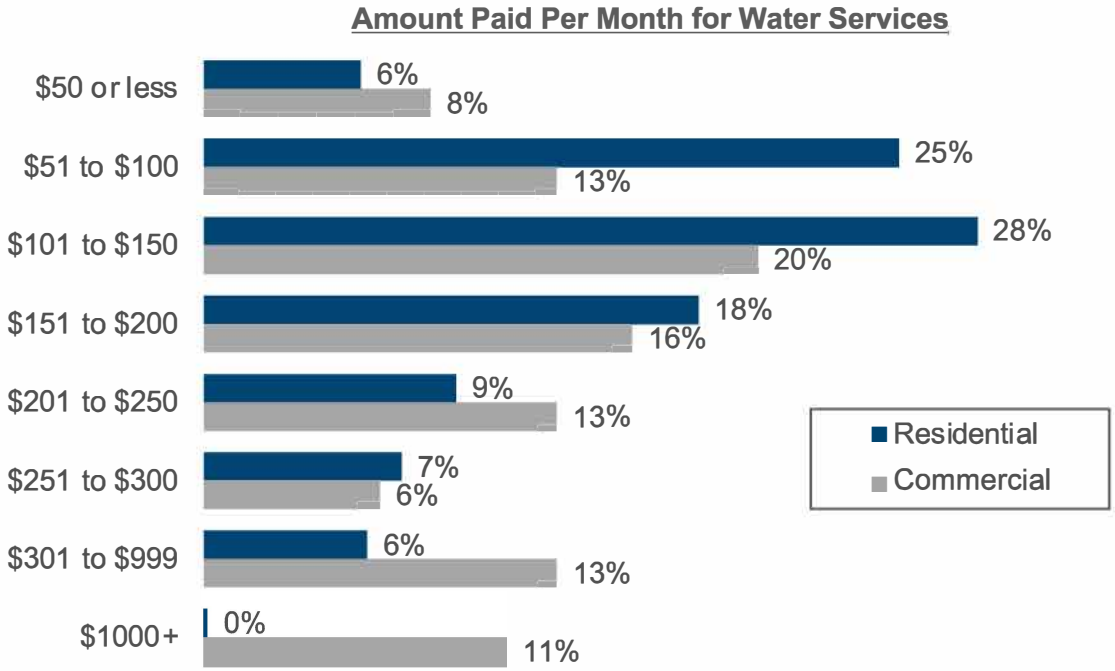
Support for Investment & Rate Sensitivity

- In terms of context, nearly one fifth (19%) of commercial customers are unaware of their cost of their services, while 14% of residential customers are unsure.
- Of those who are aware of the cost of service, both residential and Commercial customers tend to over-estimate their cost of service today; residential customers on average indicate their monthly cost is $173, Commercial $1,013. While less than half believe their prices are fair, commercial are more likely to indicate so. The more satisfied with service, the more likely to perceive value.
- While cost sensitivities are prominent throughout the open ends and other areas of reporting, overall Edmontonians agree to 'slightly more investment' to improve efficiencies rather than simply remain status quo. An investment sensitivity scale indicates a mean score of 6.6 out of 10, though higher income and education customers are more likely to give a higher rating. Having said that, very few believe decreasing investment to (at minimum) maintain current standards and quality should be considered.

EPCOR PBR 2020 Phase 1

Stone — Olafson

On average, residential customers report their water services are $173.60 monthly (this is 50% more than the *actual average* residential customer who pays $88.03 for all three services combined). Commercial customers pay more monthly: on average $1,013.30.



Average:
Residential: $173.60
Commercial: $1,013.30

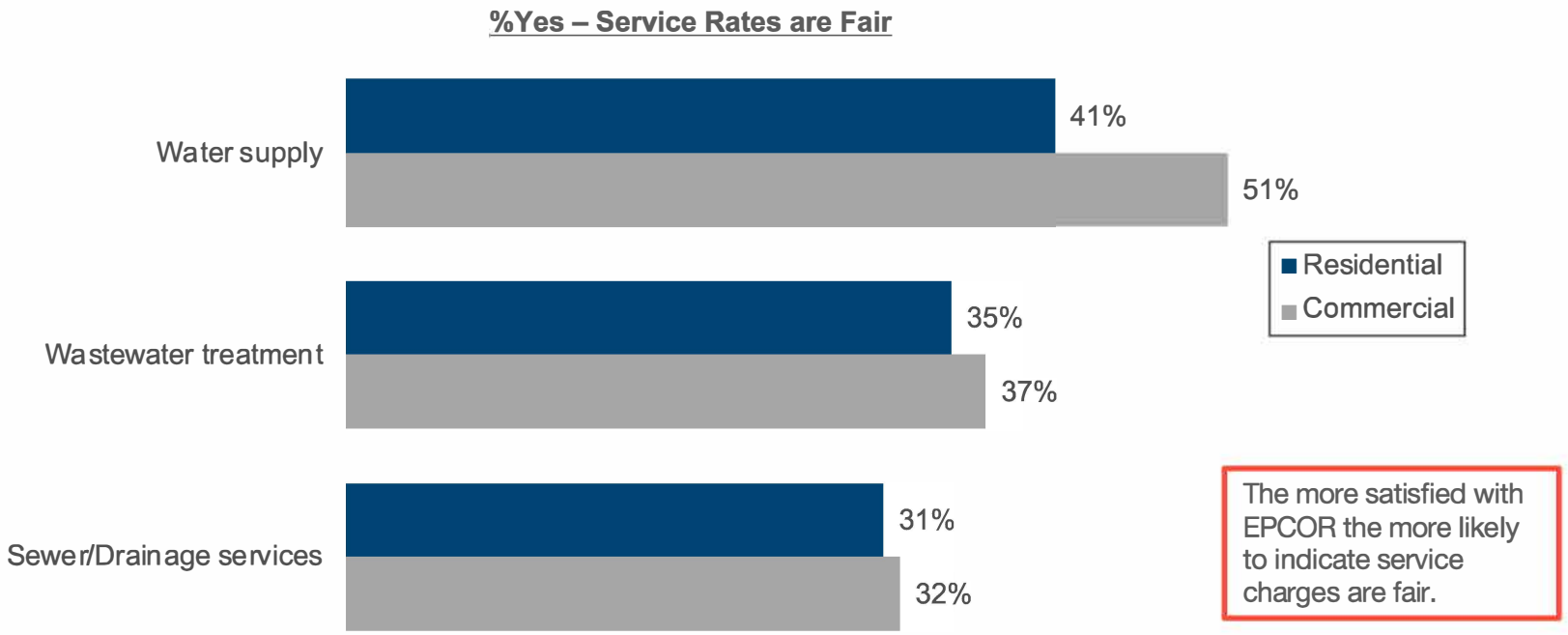
Unsure:
Residential: 14%
Commercial: 19%

Base: Answered question, outliers removed: Residential (n=1,061); Commercial (n=109)
PS1. The monthly rates charged for water supply, wastewater treatment, and sewer/drainage services are determined through bylaw principles and used to both operate and maintain/improve the system. Approximately how much do you pay per month for these services for your household?

EPCOR PBR 2020 Phase 1

Stone — Olafson

Commercial customers are more likely than residential customers to believe their water service charges are fair, especially in terms of water supply & wastewater treatment.



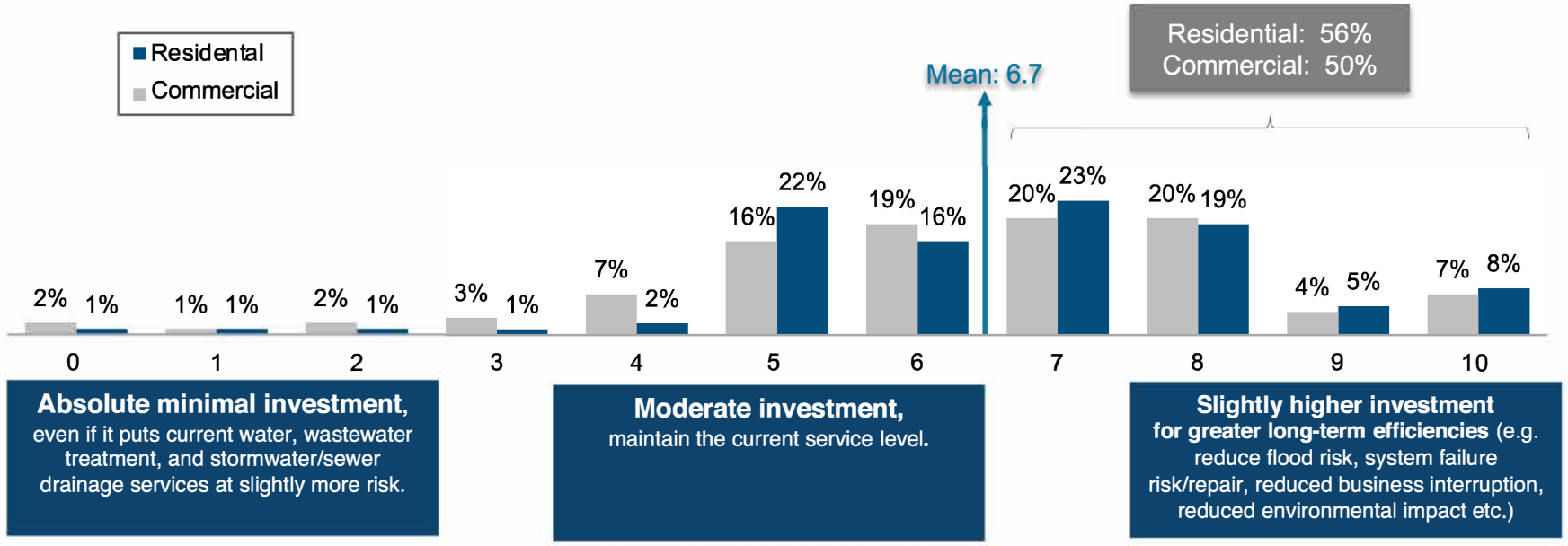
Base: All respondents: Residential (n=1,238); Commercial (n=134)
PS2. The monthly rates charged for water supply, wastewater treatment, and sewer/drainage services are determined through bylaw principles and used to both operate and maintain/improve the system. In your opinion, is the rate you pay for these services today fair?

Stone — Olafson

To avoid risk, Edmontonians (both commercial & residential) are willing to invest more in these services to allow for longer-term benefits and efficiencies, with very few calling for minimal investments.

Those most likely to be willing to invest are: highly educated, have a household income of over $100,000/annually, have not been impacted by COVID-19, believe current rates are fair, and are satisfied with EPCOR services.

Personal Position on Investment Scale



Base: All respondents: Residential (n=1,238); Commercial (n=134)
PS3. Looking ahead to the next several years, in principal, where would you position yourself on the following investment scale?


Phase 2 Results
Stakeholder groups with specific needs & sensitivity to PBR outcomes
36

EPCOR PBR 2020 Phase 2

Stone—Olafson

Who we talked to:

Stakeholder Group / Methodology Used	# of Participants
1. Large Water Users* (Combination Online Focus Group + In-Depth Interviews, or IDIs)	6
2. Multi Residential Users* (Combination Online Focus Group + IDIs)	8
3. Metis Nation & Confederacy of Treaty Six Nations* (Online focus group + IDI)	10
4. Gold Bar Community Liaison Committee (In-Depth Interviews)	7
5. Edmonton Community Advisory Panel (CAP) (Two online focus groups, two IDIs)	8
6. Homeward trust (Digital focus group, note, other groups were approached by declined)	4
7. Water Quality Technical Advisory Committee (Online focus group + individual response)	5
8. IDEA (Online focus group + IDI)	6
9. Edmonton Federation of Community Leagues (custom online survey)	25
10. ADDED: Canada Home Builders Association (custom online survey)	9
UDI Infrastructure Committee	Declined
Total Participants (all stakeholder groups)	**88**

**Note: These groups also had broader representation in the Phase 1 quantitative survey.*

37

EPCOR PBR 2020 Phase 2

Stone—Olafson

Summary of Key Findings (Overarching Themes)

1. The PBR priorities identified by the public, quantitative survey align with those of key stakeholder groups in terms of the #1 Priority being water quality and safety and #2 Protecting the river from contaminants and #3 managing operations to avoid issues (though responsiveness to current issues is seen as a stop-gap).
   EPCOR is generally seen as a trusted operator that is doing a good job, so many areas such as public and employee safety were not given high priority as they feel EPCOR would never ignore this. Regardless, safe/quality water is so valued by Edmontonians it is seen as worth protecting above all else.
2. Somewhat more concerning to stakeholder groups vs. the public is the drainage system.
   Consistently drainage services rated lower in terms of performance, but with the acknowledgement that EPCOR is trying to move drainage services to a more acceptable level (i.e. inherited issues that are in the plans to address over time). While the public has less knowledge of the area, many of the stakeholder groups we connected with have technical expertise for deeper understanding of the issues, and/or connections to business issues that arise from an aging system, and/or have more exposure to city council discussions. In this regard, stakeholder groups believe drainage services need greater investment and a more aggressive plan. This point dove-tails into future PBR planning (next slide).
3. The risks EPCOR is managing are viewed to be increasing. While emergency plans were cited as a forward-thinking strategy, other areas (such as forecast models based on historical trends) are felt to be at risk. While the nature and source of risk varied by group, the overarching theme is that risks are increasing, and the cost associated with issues will in fact be greater with a negative social consequence if left unattended, than spending now to avoid it.

Edmonton

38

EPCOR PBR 2020 Phase 2

Stone — Olafson

Summary of Key Findings (Overarching Themes)

3. While the current PBR plan is felt by the public to be complete and comprehensive, stakeholder groups we consulted with identified **additional the performance areas not covered by the plan**;
   i. An overarching, forward-looking strategic plan that supports the new City of Edmonton urban growth strategy yet extends further out. While basic renewal plans are in place, these are perceived as reactionary and not in line with City of Edmonton's urban development plans. Further, they feel that the province is slightly behind on drainage standards, and the method of planning (targeting most likely to fail next) is antiquated. A more forward-looking strategic plan is desired.
   ii. For businesses (particularly small business) including developers, they would like to see a PBR area developed that speaks to collaboration, ease of doing business, and the ability to work with small to medium-sized businesses more easily (also desired by multi-residential). This encompasses things like making plans available, streamlining processes, and allowing greater flexibility for smaller builders.
4. Rates are not seen as overly sensitive today, and stakeholder groups lean toward smart investment (i.e. more than status quo) with protecting water, protecting the river, and elevating drainage renewal being top priorities for investment. This aligns with the public priorities as well.
5. Stakeholders like and appreciated PBR engagement. While groups varied in their ability to rate or comment on specific areas, they took comfort in the breadth of engagement EPCOR was willing to pursue. Nearly all indicated they would be willing to both continue participation and/or participate again. In addition, the desire for access to information was echoed by many of the stakeholder groups. Some for basic understanding (e.g. Indigenous communities wanting to have more informed opinion), and some for the sake of business planning (small to medium sized builders, multi-residential managers).

New areas are not expected in this PBR, but seen as important to develop through this phase for the next PBR.

The underlying values are prevention vs. reaction, holistic view (all systems are interconnected), and err on the side of collaboration and transparency (too much information vs. too little)

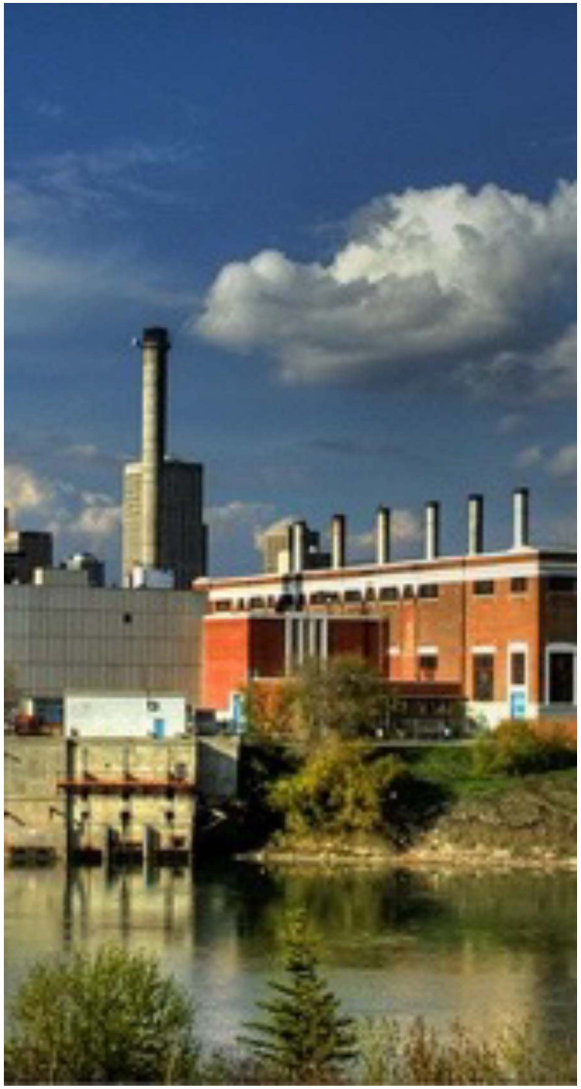
39

EPCOR PBR 2020 Phase 2

Stakeholder Summary for

Water Services

- Water Services **has the most confidence of stakeholder groups**, with high praise for water quality, confidence in operational management, and engaging scientists and knowledgeable experts to maintain that standard.
- While there are some (very minor) seasonal issues (particularly in older communities), overall **stakeholder groups feel EPCOR is managing Water Services well and agree with the current performance measures, as well as align to the public weighting of priorities**. If there are any differences at all, stakeholder groups elevate environmental concerns/ management slightly more than the public somewhat for the sake of environment, and somewhat out of deeper understanding of how environment and water quality work together.
- **Water Services is not viewed as a business service that requires remedial attention, rather, it's given highest priority to maintain the standards it has established**. Current rates are not felt to be out of line, and in-spite-of economic concerns, **stakeholder groups would rather see preventative investment rather than remedial repair to mitigate increasing risks.** The only group concerned with rates and encouraging consumer conservation is multi-residential owners/managers, and the client side of social service agencies (i.e., vulnerable and low-income populations). Their tenants are more vulnerable to costs and their usage is often blind (not individually metered) though the business cost side of residential management is more significant as a % of total business costs than other groups.
- **Suggestions for improvement with water have more to do with innovation and forward-looking practices** vs. remediation. E.g., supporting indigenous communities to improve water quality in their areas, environmental innovation, and providing more leadership to improve standards in up and down stream aspects of provincial water management.



Summary of Performance Area Ranking – Public vs. Stakeholder Groups

Stone—Olafson

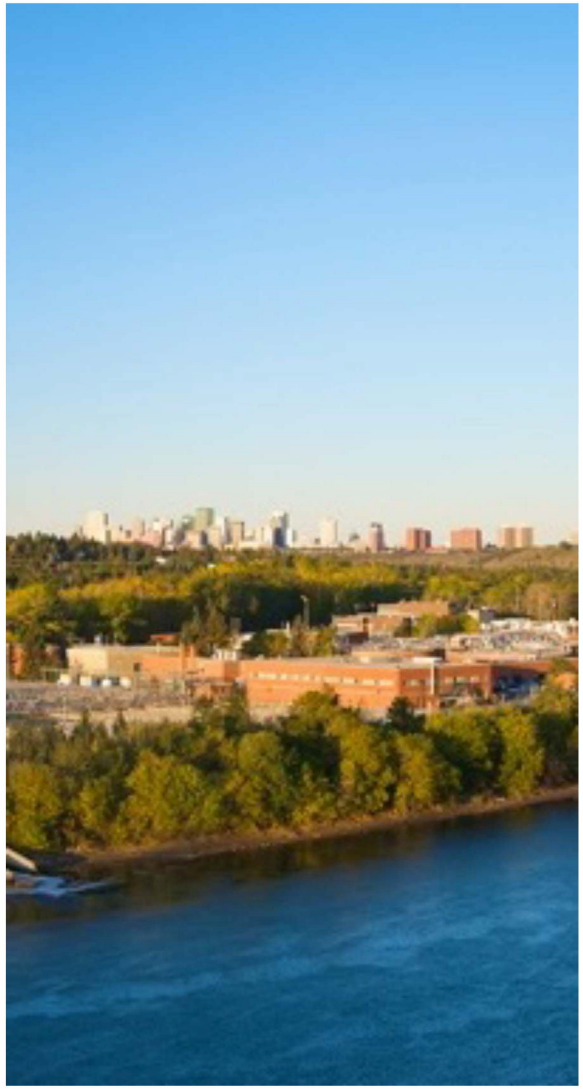
	PBR AREA	WATER SERVICES	Public Survey	STAKEHOLDER GROUPS: Multi-Res	Large Users	T6 MNA	Gold bar CLC	CAP	HW Trust	WQTAC	EFCL	IDEA	CHBA	
1st PRIORITY	1. Quality	• Water Quality (safety, clarity, taste, smell)	1	1	1	1	1	1	1	1	1		1	Quality remains the #1 priority for all.
TERTIARY	2. Customer Service	• Customer service (easy access, timely notice of disruptions)	6	6*	4	8	2	5	6	6	3 (~~timely~~ notice)		4	Community groups show greater concern for transparency of information and notices (desire consultation).
2nd PRIORITY	3. System Reliability & Optimization	• Reduce number of water main breaks	4	4	3	5	6	8	2	5	5		3	Social service agencies are more concerned with breaks (far more vulnerable to interruptions and the resulting costs to recover).
		• Speed of repair of water main breaks	2	5	2	6	5	3	4	8	2		2	
TERTIARY	4. Environment	• Reduce water waste and energy use in supplying water	7	3	7	3	4	7	5	2	7		4	Concerns about environmental impact are higher with a number of stakeholder groups than the public for a variety of reasons; some for general ecosystem protection, while others because they have the technical knowledge of 'whole system impact'.
		• Manage environmental impact to communities	5	8	6	2	3	2	3	7	6		5	
		• Help Edmontonians reduce water consumption	8	2	8	4	8	9	7	4	8		7	
	5. Safety	• Public & employee safety in operations	3	7	5	7	7	4	8	3	4		6	Stakeholder groups have a closer relationship with EPCOR and rank this lower as they see it as table-stakes (a given).

EPCOR PBR 2020 Phase 2

Stakeholder Summary for

Wastewater Treatment

- Wastewater Treatment **has the second highest confidence by stakeholder groups**, with recognition that this is an area that has improved over time and is on a path towards continuous improvement. For many, wastewater treatment is 'invisible' (which is a good thing). The most engaged group was the CLC for Gold bar, who gave full credit to EPCOR for their recent engagement work and improvements in odour management.
- Having said that, **improvements are viewed as a response to previous issues** and is a service area of concern due to the potential impact on the environment. **Greater sharing of information and continued stakeholder/public engagement is strongly desired** for wastewater treatment. Indigenous communities expressed concern about contamination of the North Saskatchewan River. Those with the WQTAC group also indicated that there is an opportunity for greater collaboration and influence with the province to improve standards as more of an integrated view of water quality and management. They feel this is an opportunity for EPCOR's leadership, as the feeling is that provincial standards today are too low.
- **The only real area of question/criticism came from the lack of alignment to city plans**. This came from two groups who felt that Gold Bar would be stressed if urban densification proceeds and feel wastewater routing should be to other locations rather than to Gold Bar.
- Finally, the PBR areas overall are generally consistent with the public priorities, though stakeholder groups raised the priority level of *managing treatment levels*, indicated modelling should be updated (they feel historical factors are less relevant), and would like to see environmental protection represented in a more significant way.



Summary of Performance Area Ranking – Public vs. Stakeholder Groups

Stone — Olafson

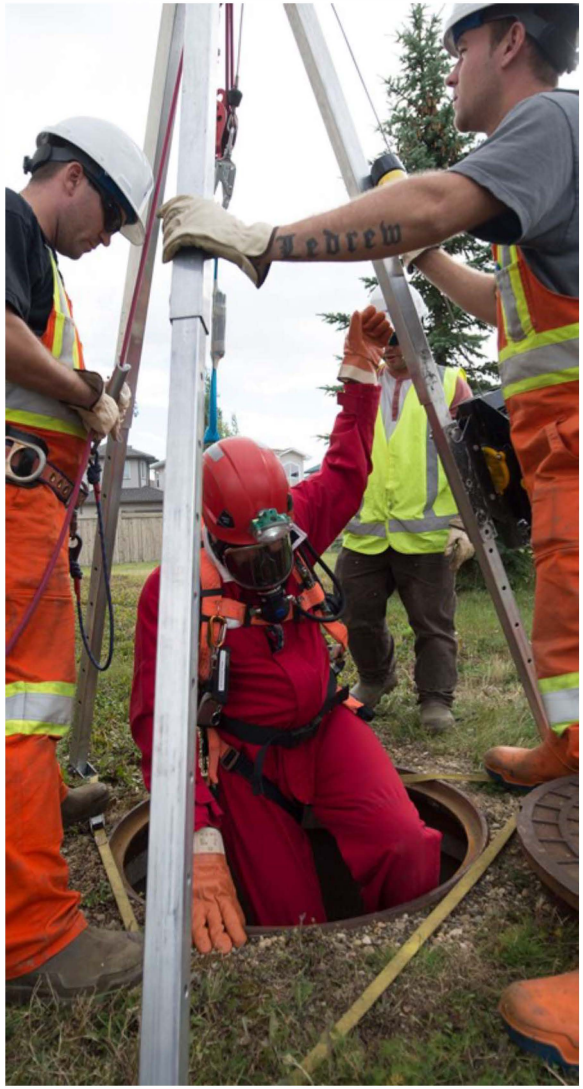
	PBR AREA	WASTEWATER TREATMENT	Public Survey	STAKEHOLDER GROUPS: Multi-Res	Large Users	T6 MNA	Gold bar CLC	CAP	H.Ward Trust	WQTAC	EFCL	IDEA	CHBA	
1st PRIORITY	1. Quality	• Reduce wastewater contaminants in treated water going back to the river	1	1	2	1	1	1	1	2	1		1	Reducing contaminants going into the river remains #1 priority for all.
TERTIARY	2. Customer Service	• Customer service (easy access, transparency in information)	6	5	6	7	4	7	4	6	5 Information, transparency		5 *Information, transparency*	The desire for greater information and transparency, including strategic plans that align to urban density strategy are desired.
2nd PRIORITY	3. System Reliability & Optimization	• Managing treatment volumes during rain/melt season	3	3	1	5	2	5	2	1	2		2	Stakeholder groups rate operational performance even higher. Those with a technical background feel more science and innovation is needed, and improved provincial standards.
		• Reducing odor from wastewater treatment	4	6	4	3	3	3	6	4	6		3	
TERTIARY	4. Environment	• Reduce wastewater gas flaring and capture renewable energy	7	7	7	2	7	5	5	7	7		6	Indigenous communities are more concerned with the environmental protection aspect of wastewater treatment. They feel that there are infractions today and more should be done.
		• Reduce water loss and energy use in wastewater treatment	5	4	5	6	5	6	3	5	4		4	
2nd PRIORITY	5. Safety	• Public & employee safety in operations	2	2	3	4	6	2	7	3	3		6	Public and employee safety rated lower with stakeholder groups. Again, not because it's viewed as unimportant, but because it is deemed 'table-stakes'.

EPCOR PBR 2020 Phase 2

Stakeholder Summary for:

Drainage Services

- **Drainage Services is cited by stakeholder groups as the business area most in need of investment for EPCOR**. Satisfaction ratings were slightly lower than other areas, though it was truly not viewed as a competency issue – rather, there is clear understanding that the age of infrastructure requires renewal and this is a costly and time-consuming process with significant interruptions.
- **Drainage services is different from other PBR areas in that the priorities don't align as neatly along the same dimensions.** Further, Drainage Services reflected the greatest variance in opinion between stakeholder groups and the public survey (residential customers). Stakeholder groups placed a higher priority on reducing contaminants going back into the river, and favoured investment to avoid future issues over responsiveness to emergencies.
- **Further, two unique performance areas for Drainage were raised**;
  a) more strategic plan that aligns with the urban densification strategy newly approved by the city of Edmonton, and
  b) a performance area that reflects ease of doing business with the size of companies required to deliver the Edmonton urban strategy (namely, small to medium sized builders). Note that these areas are seen as requiring time to prepare for and develop, thus, they would like to see them worked on in this PBR cycle and added in the next (see IDEA and CBHA).
- Overall, there is a strong push for investment in drainage. This is seen as a shared resource, a significant liability for the city (old standards, old infrastructure, old models, new risks), and an impediment to growth if more aggressive renewal is not achieved. While economic sensitivity was raised by stakeholder groups representing low income and at-risk individuals, the environmental implications and emergency costs associated with issues (particularly back-ups as insurance becomes more stringent) put investment now ahead of any inclinations to hold back. Further, EPCOR is trusted to invest in a prudent and responsible way.



Summary of Performance Area Ranking – Public vs. Stakeholder Groups

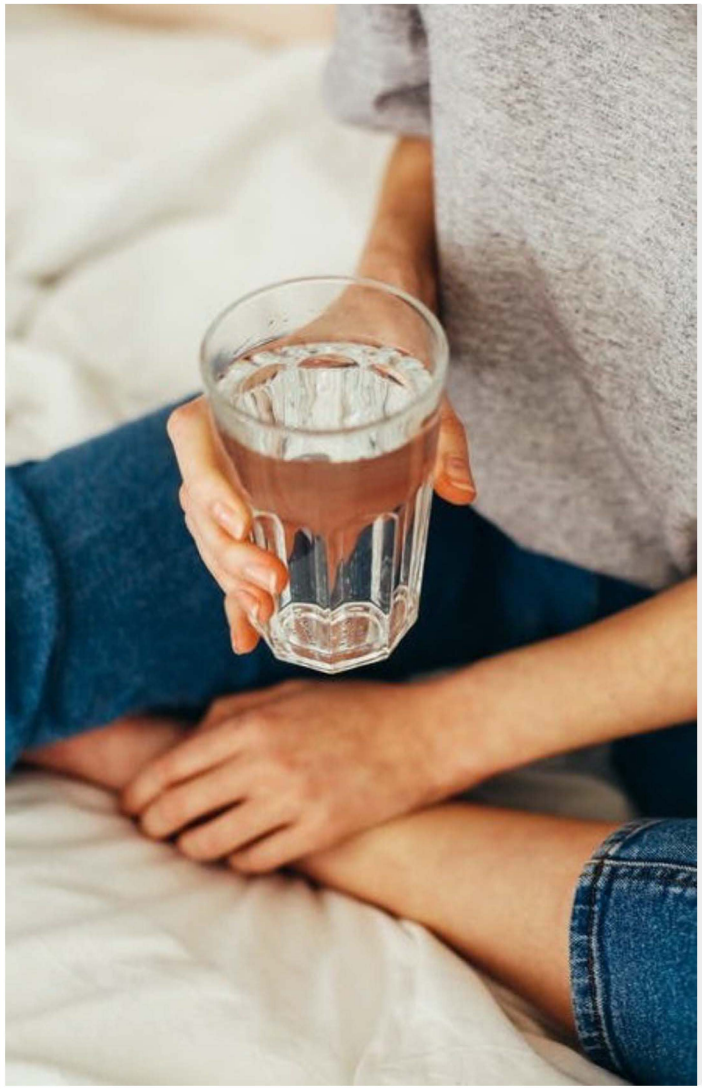
Stone — Olafson

PBR areas did not align to priorities as neatly as other busines units

	PBR Area		Public Survey	STAKEHOLDER GROUPS: Multi Res	Large Users	T6 MNA	Gold bar CLC	CAP	H.Ward Trust	W!TAC	EFCL	IDEA	CHBA	
1st PRIORITY	1. Quality/ Environment	• Reduce contaminants from sewer that enter the river	3	3	5	1	2	1	2	1	4		2	Reducing contaminants was the highest-ranking priority among stakeholder groups, though for it is secondary to flood prevention.
TERTIARY	2. Customer Service	• Customer service (easy access for reporting, questions, timely communication)	7	7	7	7	7	9	6	7	7		7	
1st PRIORITY		• Quick response time for blocked sewers/emergencies	1	1	3	4	3	3	3	4	1		1	For most, response time is priority #2, though some groups said this is not ideal as prevention is more important than response.
	3. System Reliability & Optimization	• Maintain performance to reduce flood risk	2	2	1	5	1	2	4	2	5		4	
2nd PRIORITY		• Investment to maintain integrity of drainage network/reduced blocked sewers	5	4	2	6	4	6	1	5	3		3	Stakeholder groups were decidedly more interested in expanding investment to become more aggressive with infrastructure renewal vs. maintenance alone. Further, they want to see a new strategy focusing on preparedness vs. maintenance.
TERTIARY		• Reduce water loss and energy use in wastewater treatment	6	6	6	3	5	4	5	6	6		6	
2nd PRIORITY	5. Safety	• Public & employee safety in operations	4	5	4	2	6	5	7	3	2		5	


Phase 3 Results
Validation of investment intentions and rate sensitivity.
46

EPCOR PBR 2020 Phase 3



Stone—Olafson

TOPLINE

Investment Intentions & Rate Sensitivity

- In terms of PBR performance areas, the final validation survey indicates that EPCOR has identified the main issues of importance and customers are in agreement with the priorities.
- Similar to Phase 1 results, customers tend to over-estimate their costs by 50%, yet still agree that their rates are fair. One third are unsure or don't feel they can judge if costs are appropriate.
- Edmontonians support EPCOR investing in services for longer-term benefits, efficiencies, and to reduce risk. At minimum, they want to maintain status quo. This is consistent with Phase 1 results, with only minor softening (.4%)
- Edmontonians are willing to pay an additional $7.82 per month for their water services. Although, because they expect they pay more for their services than they actually do, this number is likely closer to the maximum they can handle. There are some differences by quadrant: residents in West & Central more price sensitive, and those in the Southwest the least sensitive to price increases. Thus, EPCOR's plan of a $4/month increase should be generally accepted by Edmontonians.
- Although, as many are feeling economic hardships because of COVID-19 it will be important to communicate what residents are actually paying and how these price increases will be put to use (i.e., investing in infrastructure), the reasons for making these investment choices, and the benefits for the community.

The Details >

EPCOR PBR 2020 Phase 3

Description of priorities outlined by Phase 1 & 2 research:

EPCOR recently asked a wide range of customers about priorities for the upcoming 5-year period. We learned that top priorities of the community are:

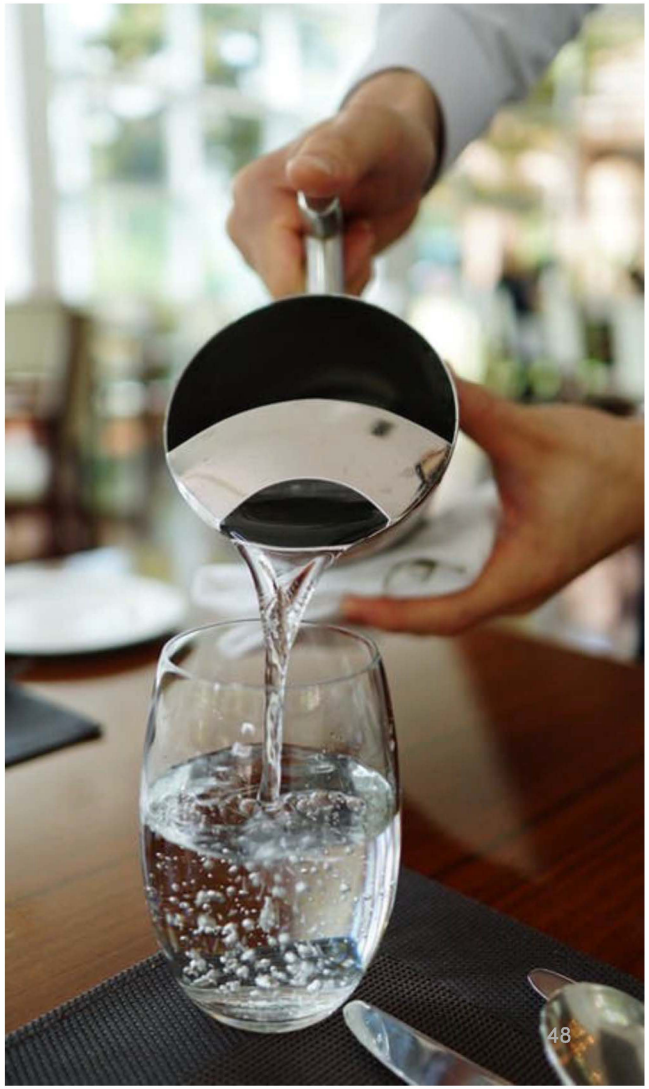
#1 Quality (i.e. water quality/ safety; reducing wastewater contaminants in treated water going back to the river, and reducing contaminants from drainage that enter the river

#2 System reliability & Optimization (i.e. reducing the number of water main breaks and speed of repairs, managing wastewater treatment volumes during rain/melt seasons, reducing number of blocked sewers)

#3 Safety (i.e. public and employee safety in operations)

#4 is a tie between:

- **Customer service** (i.e. easy access to report any issues, customer service/support that is easily available to ask questions, receiving timely notices of maintenance that may disrupt service, information transparency about wastewater treatment operations)
- **Environment** (i.e. reducing water consumption, reducing water waste, reducing energy use in water supply, overall mitigation of environmental impact in supplying water to communities)

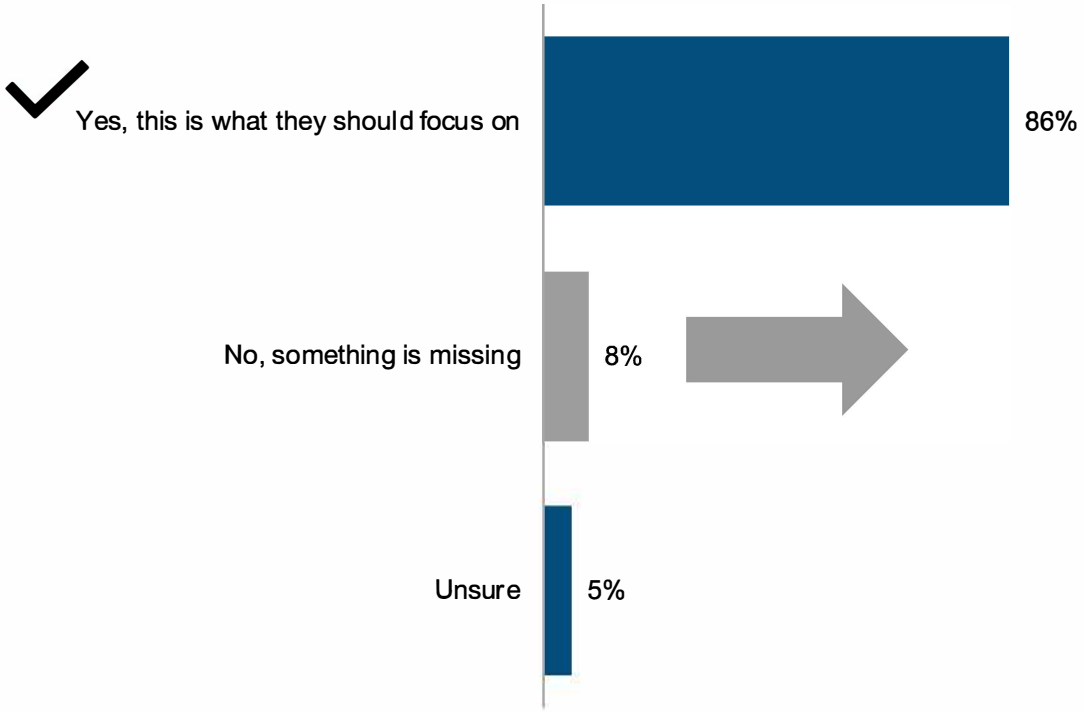


EPCOR PBR 2020 Phase 3

The vast majority of Edmontonians agree with the priorities laid out from phases 1 & 2.

Stone—Olafson

Agreement with PBR Priorities



Residents satisfied with EPCOR Water Services and believe current rates are fair are most likely to agree with PBR focus.

Missing mentions include:
- The cost/lower the price (38%)
- Safety should be number 1 (14%)
- Environment should be priority (12%)
- It should be all about quality (10%)
- Water should be softer, less hard (6%)

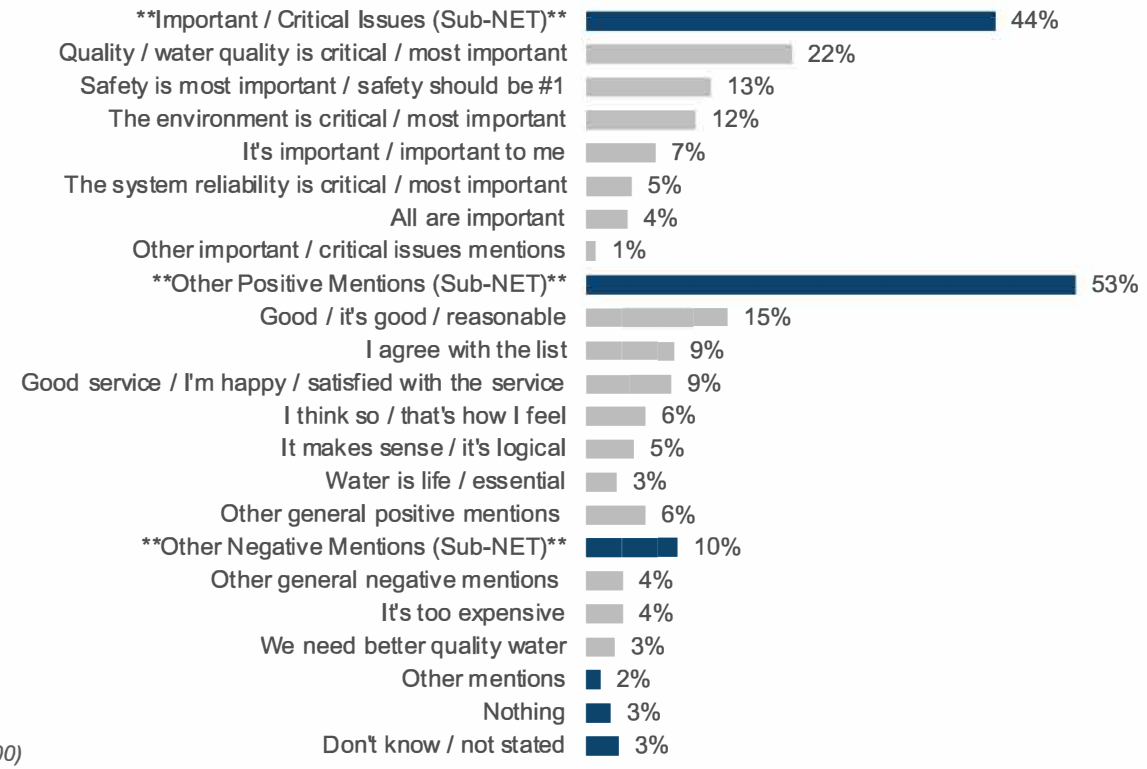
Base: All respondents: (n=500)
Q3. Do you agree with these priorities?

49

EPCOR PBR 2020 Phase 3

Stone — Olafson

In general, Edmontonians agree with the list because water quality is critical, it is good (quality), and reasonable. Although once reviewing the final list, some emphasized safety and environment are also important.



Base: All respondents: (n=500)
Q4. Why do you say that?

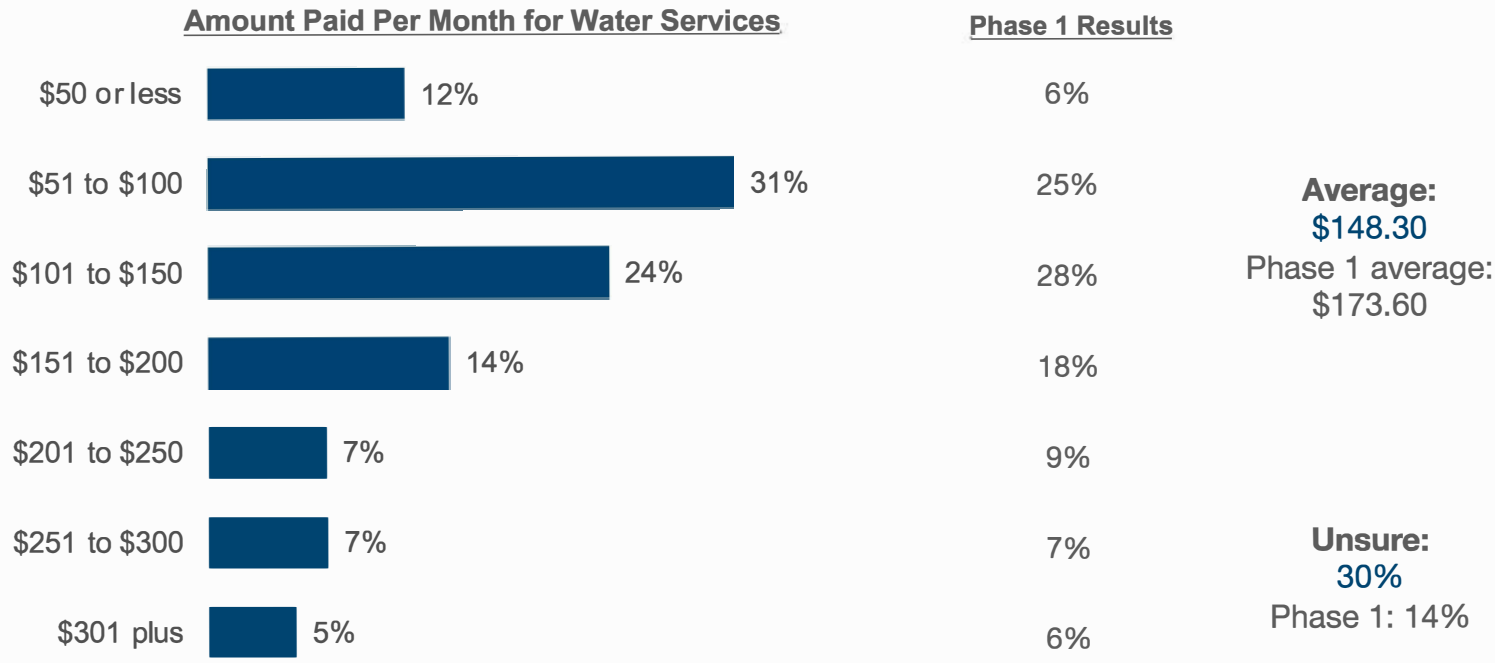
50

EPCOR PBR 2020 Phase 3

Consistent with the first phase of research, residential customers report their water services are 50% higher than actual at $148.30 monthly (actual average residential customer pays $88.03 for all three services combined).

Although nearly one-third are unsure of how much they pay for these services.

Stone — Olafson



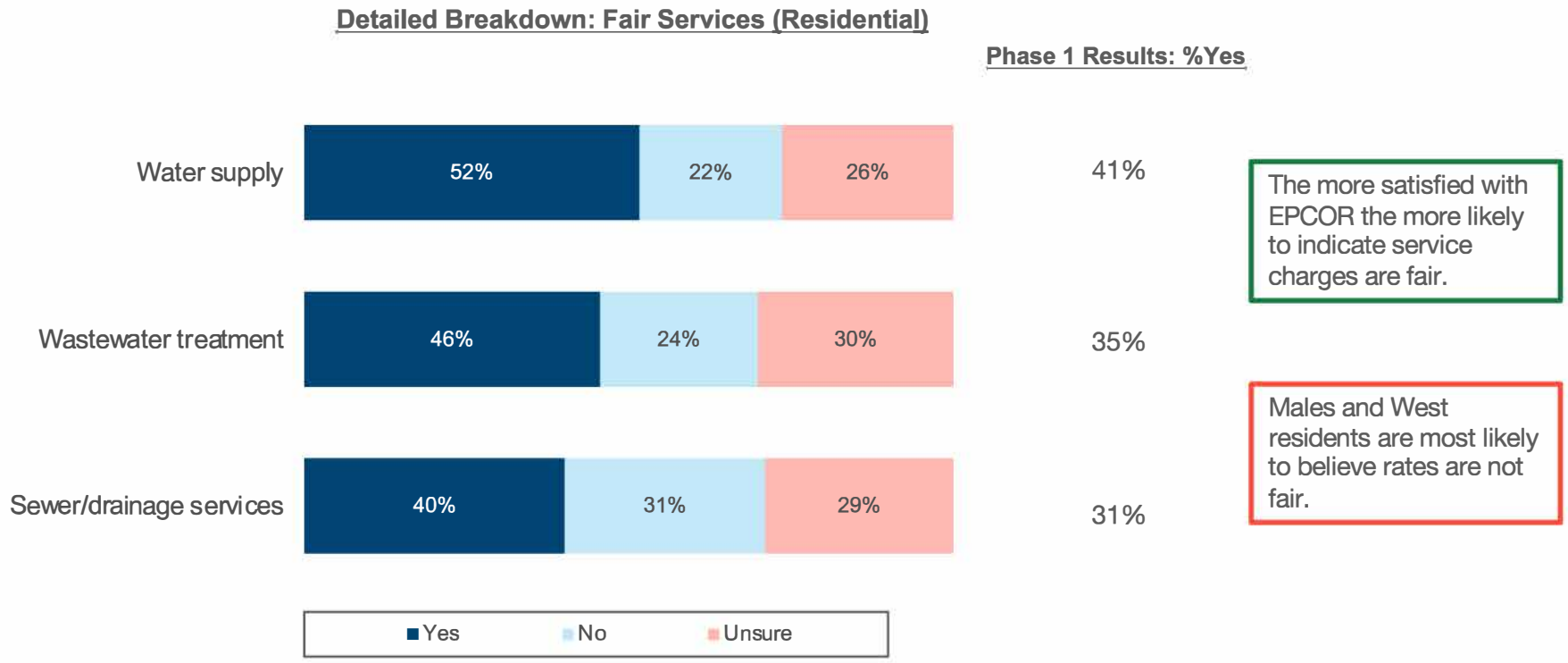
Base: All respondents: (n=500)
PS1. The monthly rates charged for water supply, wastewater treatment, and sewer/drainage services are determined through bylaw principles and used to both operate and maintain/improve the system. Approximately how much do you pay per month for these services for your household?

51

EPCOR PBR 2020 Phase 3

Stone — Olafson

Residential customers are more likely to believe their rates are fair than unfair, with one-in-four unsure.



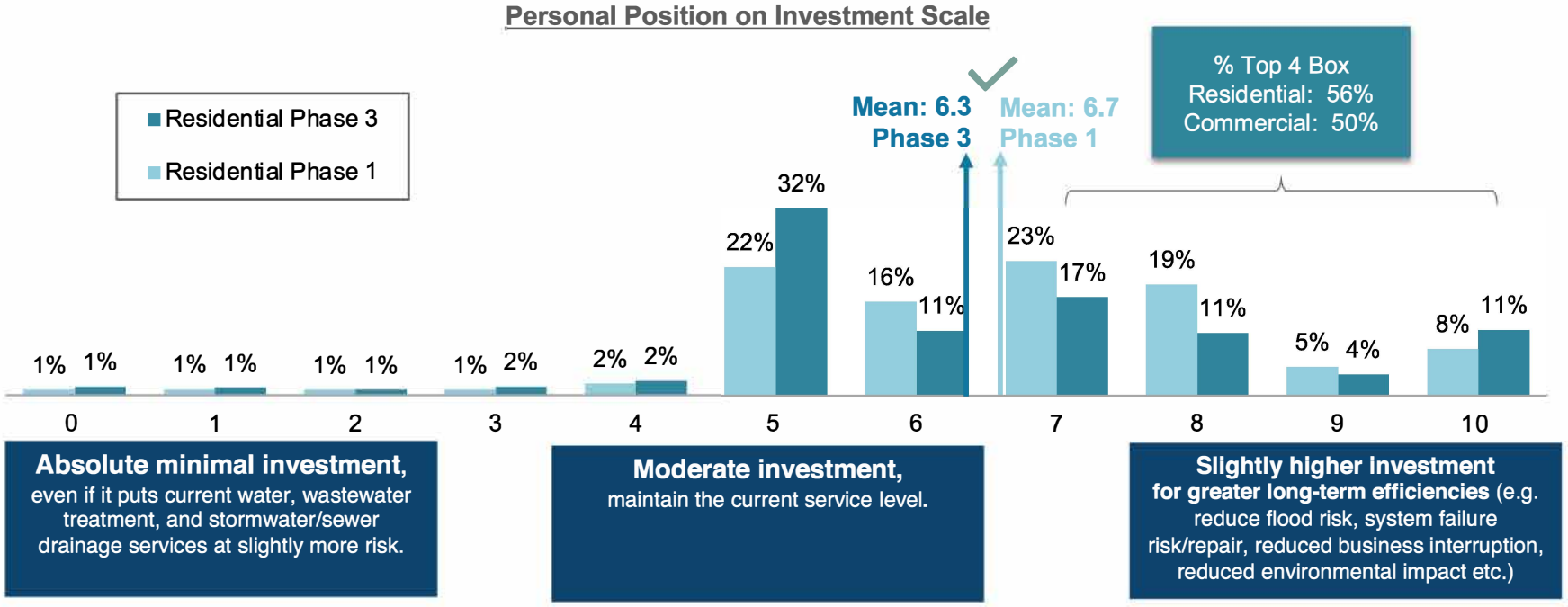
Base: All respondents: (n=500)
PS2. The monthly rates charged for water supply, wastewater treatment, and sewer/drainage services are determined through bylaw principles and used to both operate and maintain/improve the system. In your opinion, is the rate you pay for these services today fair?

52

EPCOR PBR 2020 Phase 3

Edmontonians are willing to invest more in services to avoid risk and allow for longer-term benefits and efficiencies, with very few calling for minimal investments. Comparing investment appetite between the first phase of research and second, there was a slight softening (.4 per below). It should be noted more stringent lock-down measures were put in place because of COVID-19, Edmontonians may be more sensitive to rate increases than in July.

Those most likely to be willing to invest have: a household income of over $100,000/annually, have not been impacted by COVID-19, believe current rates are fair, and are satisfied with EPCOR services.



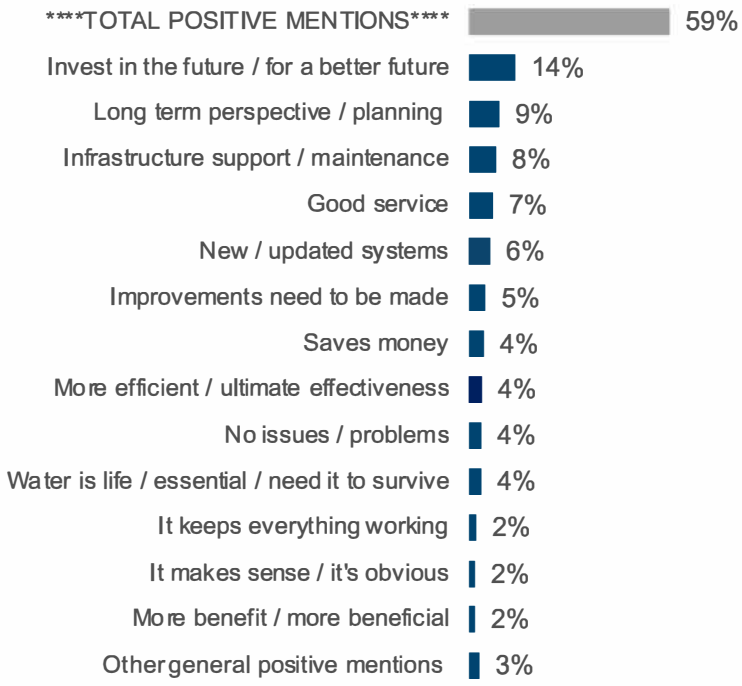
Base: All respondents: (n=500)
PS3. Looking ahead to the next several years, in principal, where would you position yourself on the following investment scale?

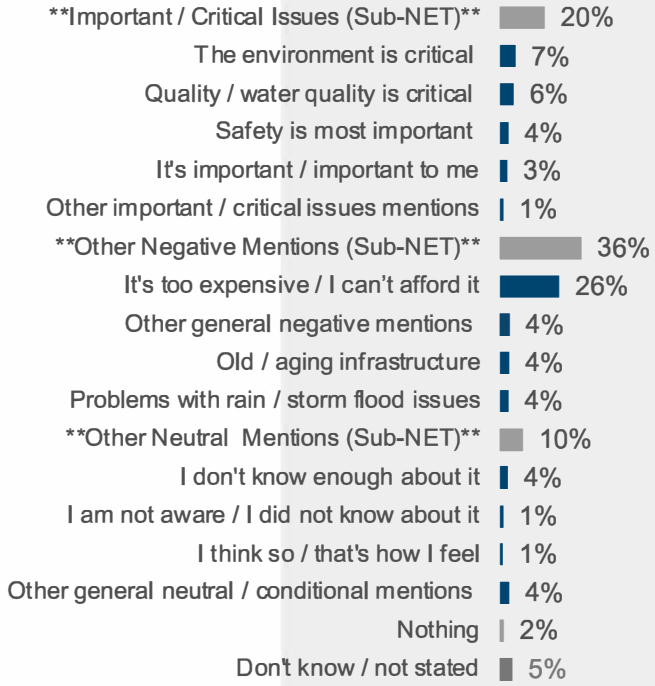
53

EPCOR PBR 2020 Phase 3

Stone—Olafson

In general, Edmontonians believe that increased investment is positive: investing and planning for the future is necessary. Although, one-in-four are worried about their own finances, indicating it is already expensive.





Base: All respondents: (n=500)
PS4. And why do you feel that way?

54

EPCOR PBR 2020 Phase 3

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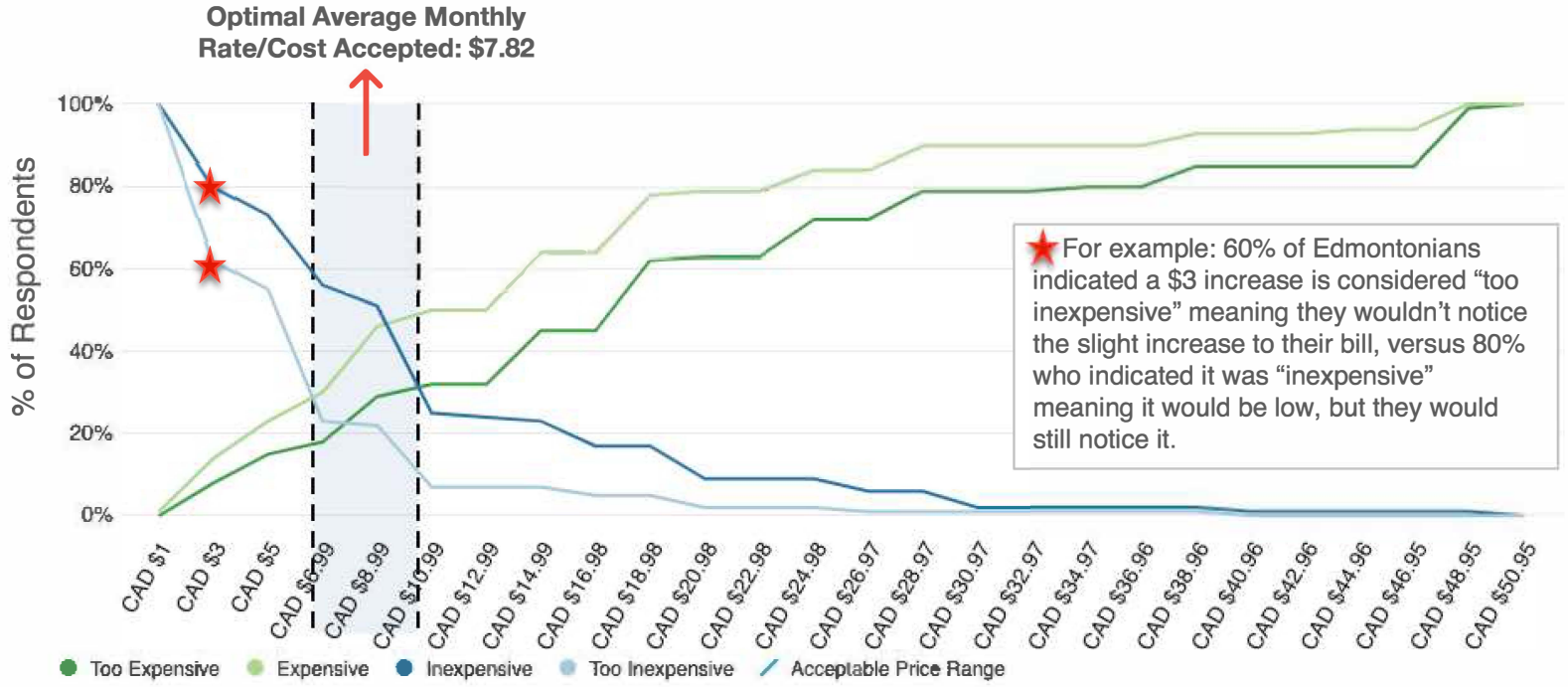
Price Expectations: Edmontonians indicate the ideal monthly price increase should be around $7.82, although are open to a range of $6.63-$10.51.



Optimal Monthly Cost Range: CAD $6.63 to CAD $10.51

For more information on this type of analysis, please see the Appendix slide: Van Westendorp Pricing Methodology.

55

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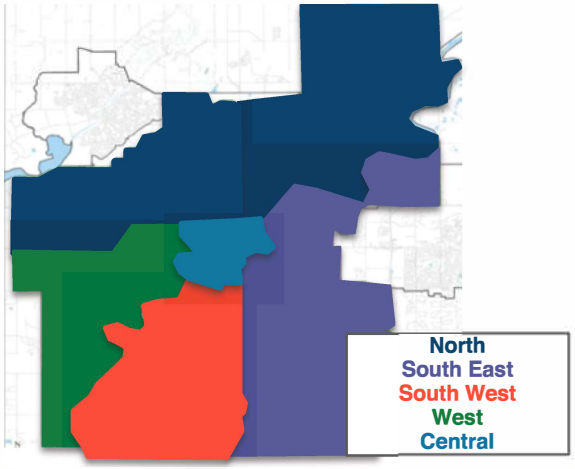
By Quadrant: Edmontonians who live in the West & Central are most price sensitive, with those in the Southwest the least price sensitive.

Southwest

	Phase 3	Phase 1
Satisfaction % Top 2	64%	67%
Invest to Improve % Top 4	41%	56%
Range of **Acceptable** Prices	$6.37 - $7.93	
Ideal price	$6.62	



North

	Phase 3	Phase 1
Satisfaction % Top 2	60%	57%
Invest to Improve % Top 4	41%	50%
Range of **Acceptable** Prices	$4.80 - $6.57	
Ideal price	$5.36	

West

	Phase 3	Phase 1
Satisfaction % Top 2 box	47%	64%
Invest to Improve % Top 4	39%	55%
Range of **Acceptable** Prices	$4.17 - $5.24	
Ideal price	$4.27	

Most likely to disagree that EPCOR rates are fair.

Southeast

	Phase 3	Phase 1
Satisfaction Top 2 box	65%	67%
Invest to Improve % Top 4	43%	53%
Range of **Acceptable** Prices	$5.34 - $7.05	
Ideal price	$5.65	

Central / Inner City

	Phase 3	Phase 1
Satisfaction % Top 2 box	54%	57%
Invest to Improve % Top 4	52%	63%
Range of **Acceptable** Prices	$5.23 - $5.44	
Ideal price	$4.61	

Thank you.

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Stone – Olafson Understanding people. It's what we do.