









City of Edmonton Leduc Annexation Infrastructure Serviceability

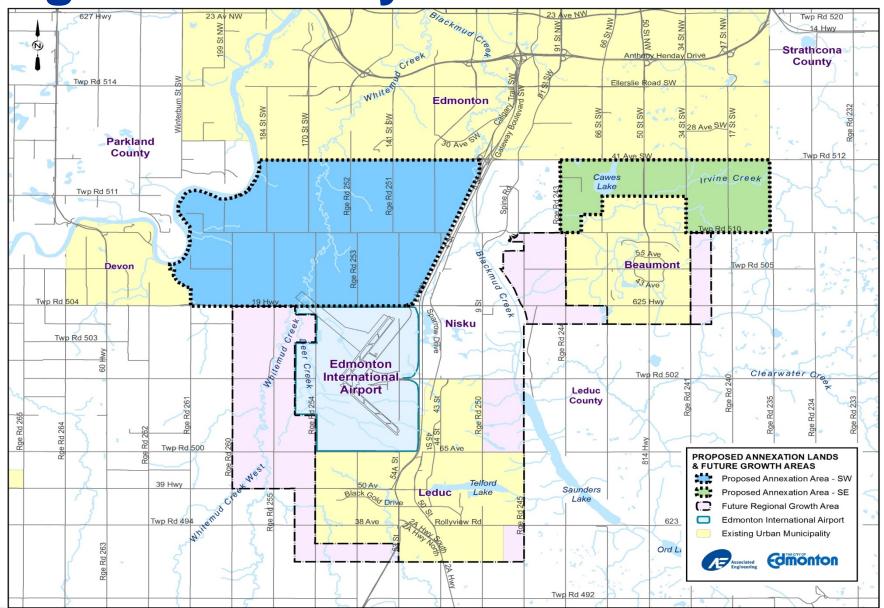
Tonderai Chakanyuka, MBA, P.Eng., PMP, C.Eng, Manager, Central Region

Outline

- 1. Background
- 2. Wastewater
- 3. Water
- 4. Stormwater
- 5. Transportation
- 6. Conclusions and Recommendations



Background: Study Area





Methodology

- Design flows were calculated for the proposed annexation lands and surrounding future growth areas.
- Review of capacity in the existing infrastructure located in close proximity to the study area.
- Assessment of available capacity in the infrastructure downstream of the study area was undertaken.
- Developed high level servicing concepts for the annexation lands and the future growth areas.



Infrastructure Costs – Annexation Lands

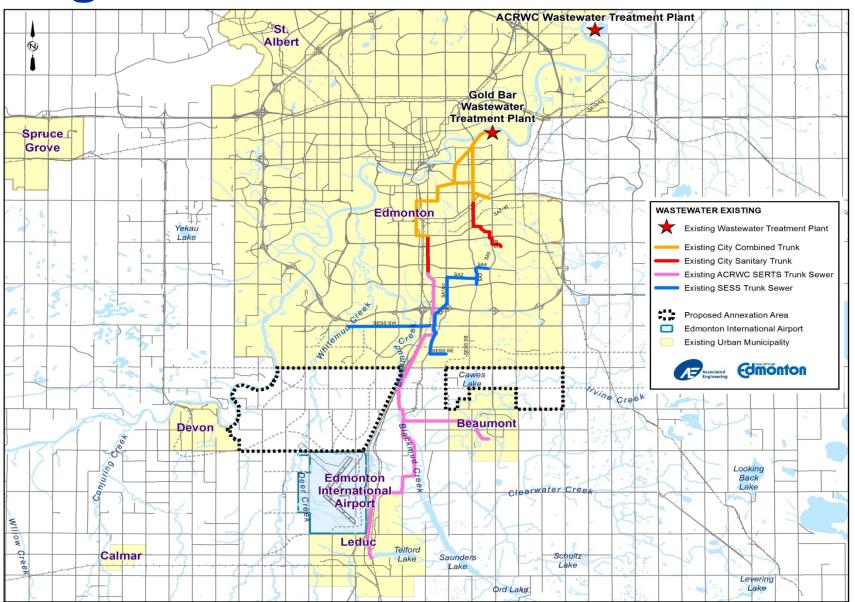
Cost estimates displayed in Millions of dollars (\$) - 2018

Infrastructure Component	Southwest Annexation	Southeast Annexation	Total Cost
	Area Costs	Area Costs	
Wastewater	\$546	\$260	\$806
Water	\$100	\$18	\$118
Stormwater	\$0	\$12	\$12
Transportation (roads)	\$945	\$166	\$1111
Transit	\$1065	\$102	\$1167
Total	\$2656	\$558	\$3214

Ref: Table 7.1, page 7-1

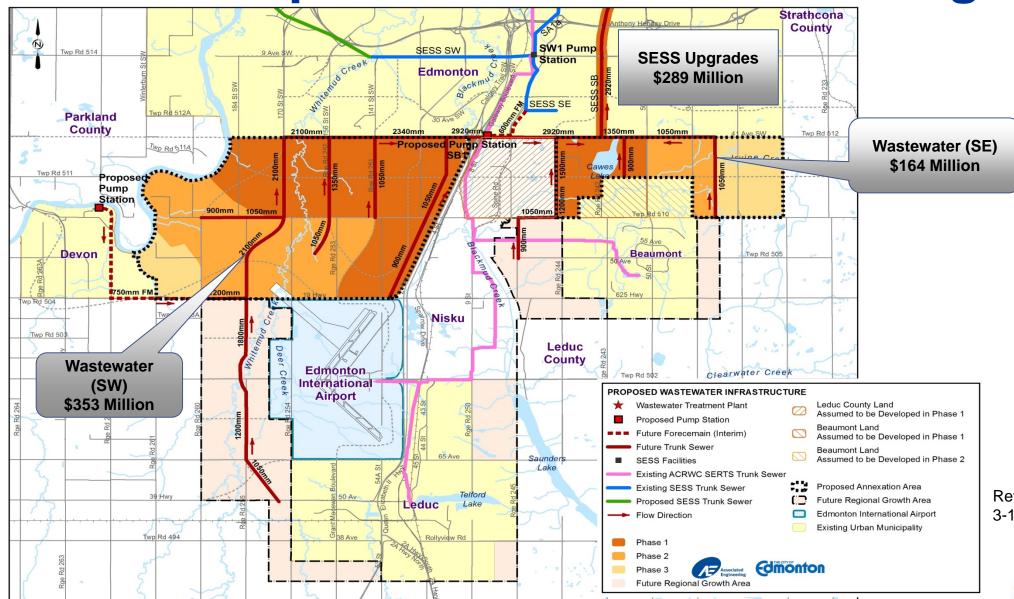


Existing Wastewater Network





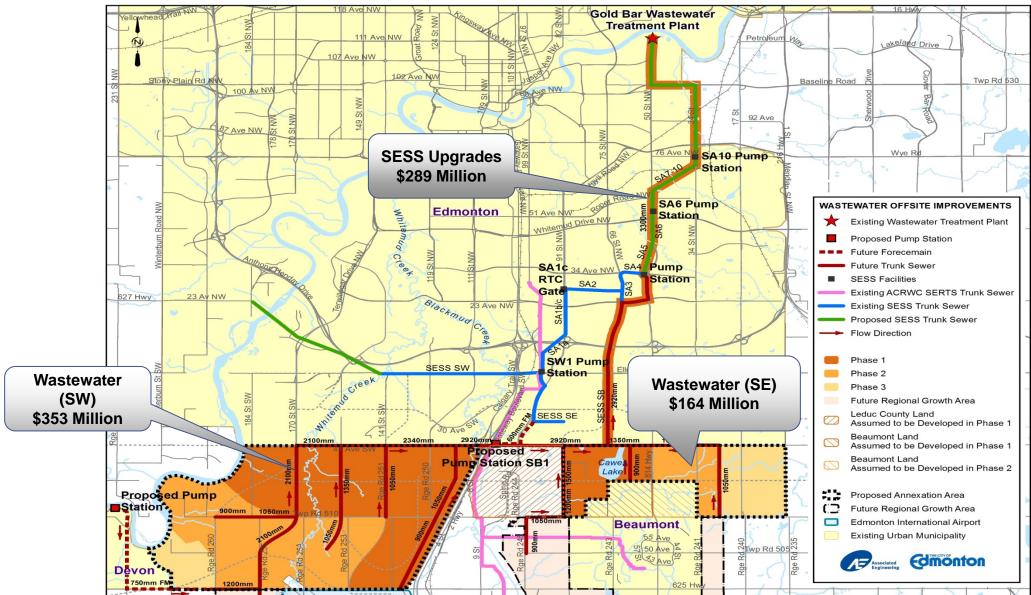
50 Year Conceptual Wastewater Servicing



Ref: Page 3-12, 3-13, 3-14



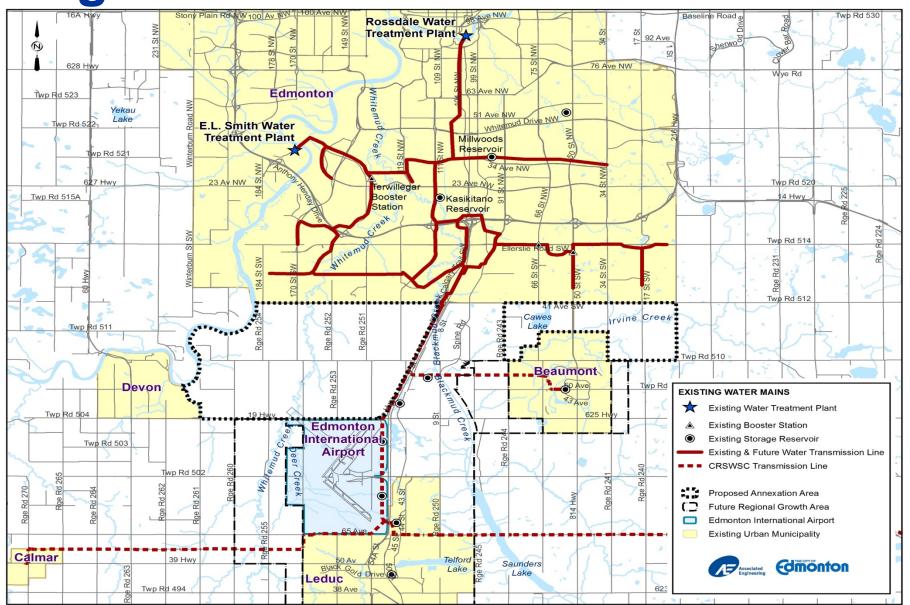
50 Year Conceptual Wastewater Servicing



Ref: Page 3-12, 3-13, 3-14



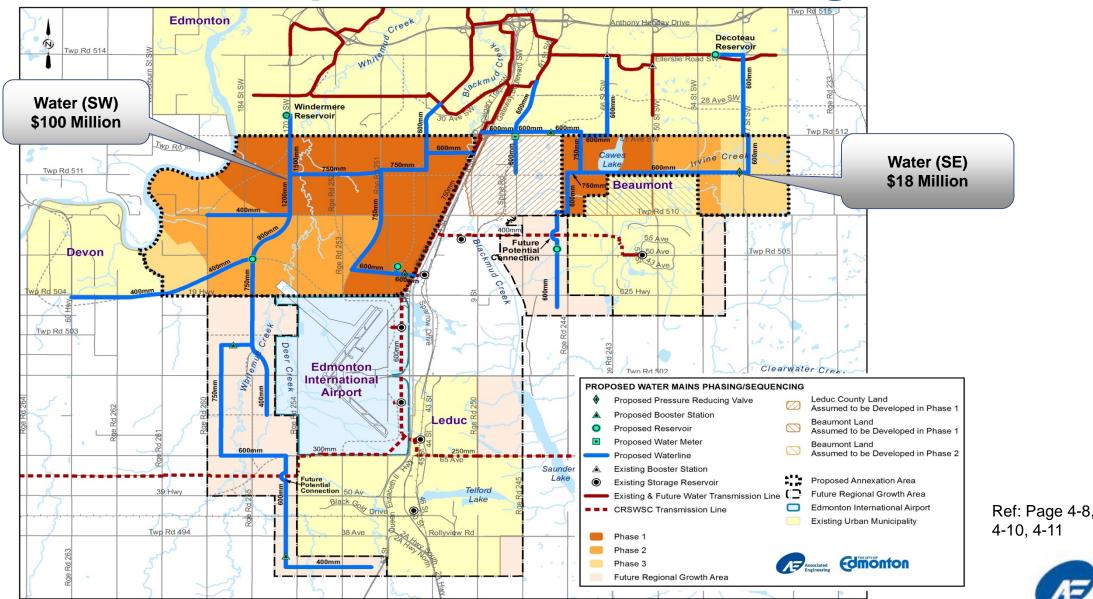
Existing Water Network



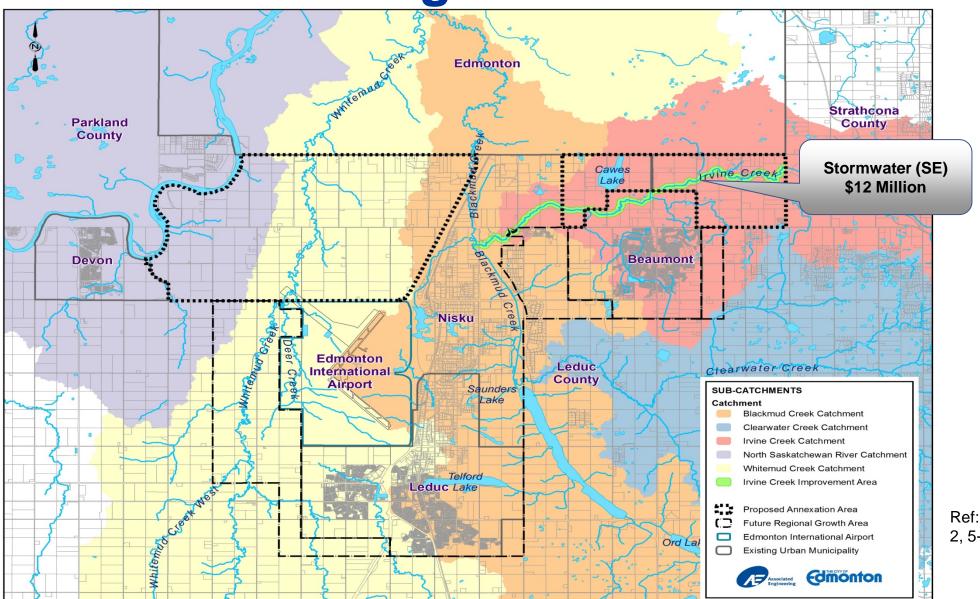
Ref: Page 4-3, 4-9



50 Year Conceptual Water Servicing



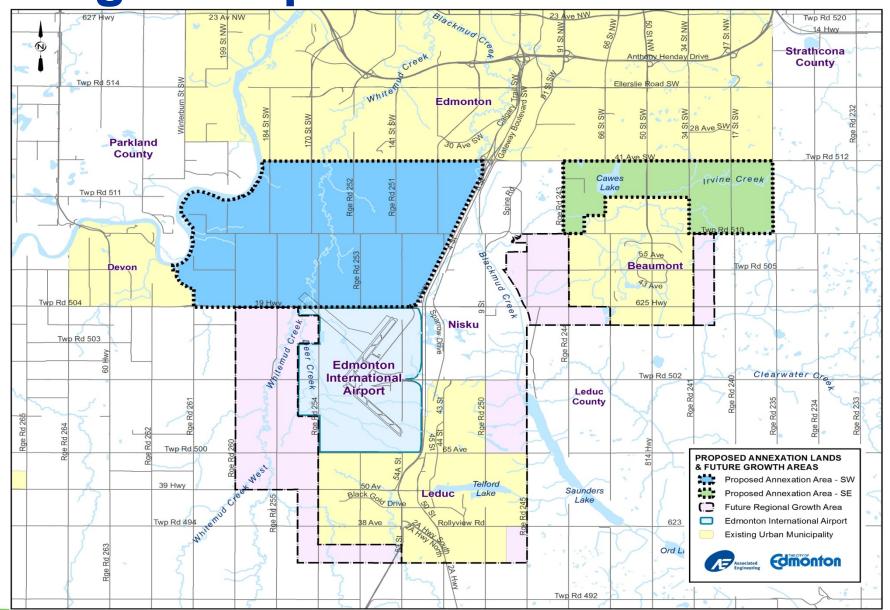
Stormwater Servicing



Ref: Page 5-1, 5-2, 5-5, 5-7, 5-8



Existing Transportation Network





50 Year Conceptual Transportation Services Conceptual Transportation wp Rd 514 41 Ave **Upgrades BRT** LRT: 41 Ave to \$45 Million 28 Ave SW to **HWY 19** \$102 Million Parkla \$710 Million Coun County Twp Rd 5112 **Terwillegar** Irvine Greek Drive/ 170 St Twp 510 (East-Extension **West Connector)** \$319 Million \$17 Million Beaumont Devon wp Rd 50 Nisku LRT: HWY 19 **HWY 19** to EIA **Upgrades** \$284 Million \$210 Million Clearwater Cree Edmonton PROPOSED TRANSPORTATION INFRASTRUCTURE International Leduc County Land Future or Upgrade Interchange Airport **HWY 39** Assumed to be Developed in Phase 1 Beaumont Land Existing Interchange **Upgrades** Assumed to be Developed in Phase Beaumont Land \$110 Million Assumed to be Developed in Phase 2 Leduc Existing & Future Highway & Freeway LRT (Century-41 Ave) -Proposed Annexation Area Existing Expressway & Arterial Future Regional Growth Area ---- Future Expressway & Arterial approx. \$1B * Future Major Transit Centre Edmonton International Airport BRT - \$173 M Existing Urban Municipality ---- Future Public Transit Line Twp Rd 494 Terwillegar Dr - up to Figures are conceptual and Phase 1 not to be used for construction. **Anthony Henday -**These will be superseded by ASP/NSPs. Phase 2 Associated Edmonton \$230M Future Regional Growth Area

Ref: Page 6-13, 6-14, 6-15, 6-17



Conclusions and Recommendations

- The City of Edmonton can efficiently service the proposed annexation areas
- Total cost of infrastructure is estimated to be \$3.214 Billion (annexation area)
 - Southwest Annexation Area: \$2.656 Billion
 - Southeast Annexation Area: \$558 Million
- Detailed infrastructure servicing studies are required prior to development





Questions?