



Associated
Engineering



Platinum
member



Peace Region Idea Group Information

APWA, Northern District

Sean Nicoll, P.Eng

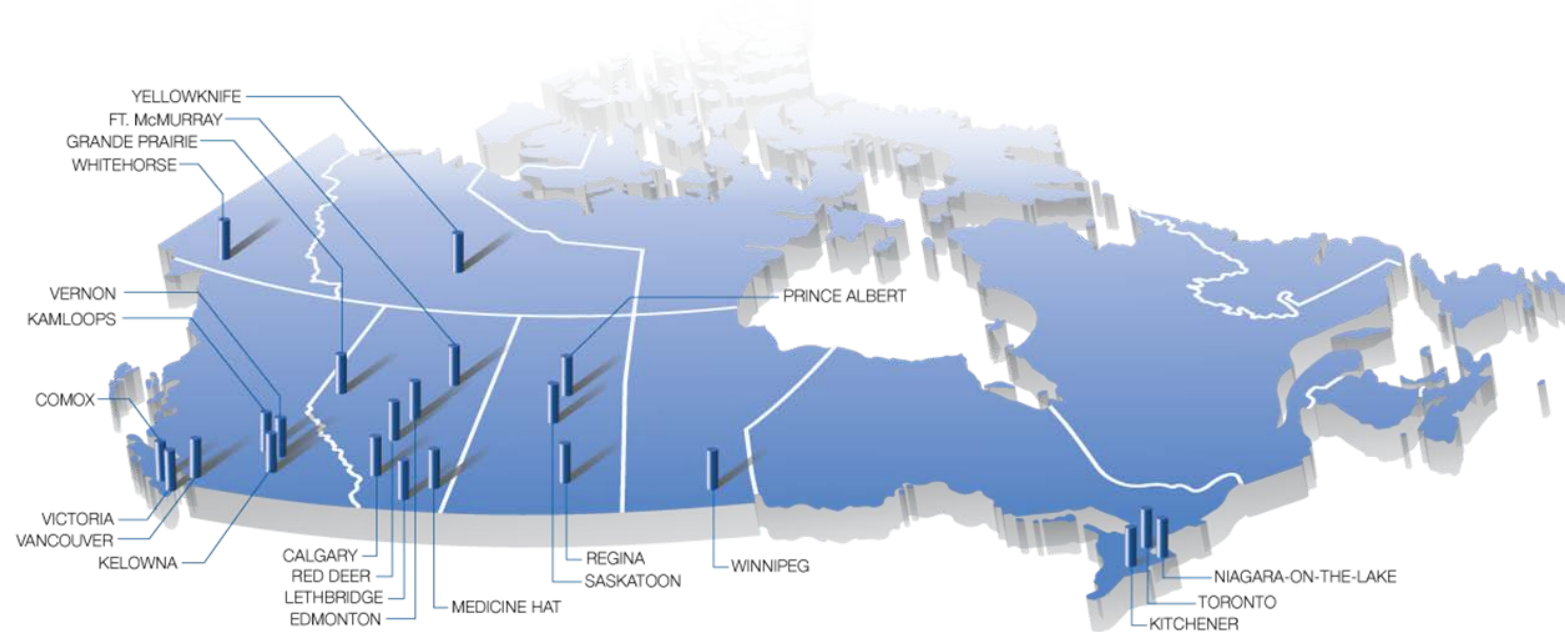
November 25, 2022

Agenda

- Intro to Associated Engineering
- Core Services
- Project Highlights
- Questions

Associated Engineering Ltd

- Multi-discipline consulting firm
- 75 years of history
- Employee Owned (+1100 Staff)
- 21 offices across Canada
- One company policy
- Global perspective local focus



Best Managed Company

- One of Canada's Best Managed Companies for 14 consecutive years
- Based on **business performance, innovation, growth, and dedication** to our staff



Core Practice Areas



Core Practice Areas

- Water / Wastewater
- Infrastructure
- Transportation
- Buildings
- Environmental
- Energy
- Asset Management



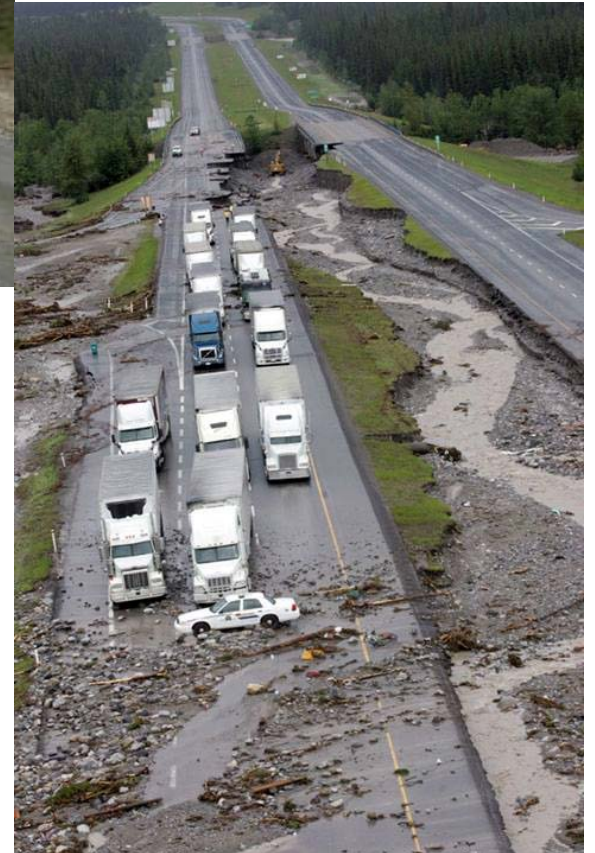
Core Project Services

- Project and Quality Management
- Planning (Studies, Feasibility, Predesign)
- Detailed Design (Costing, Scheduling)
- Tendering (Specifications, Q&A, Recommendation)
- Construction Management (Inspection, Quality Assurance)
- Contract Administration (PPC, Change Order)
- Post Construction Services (CCC/FAC)
- Asset Management (TCA Reporting)

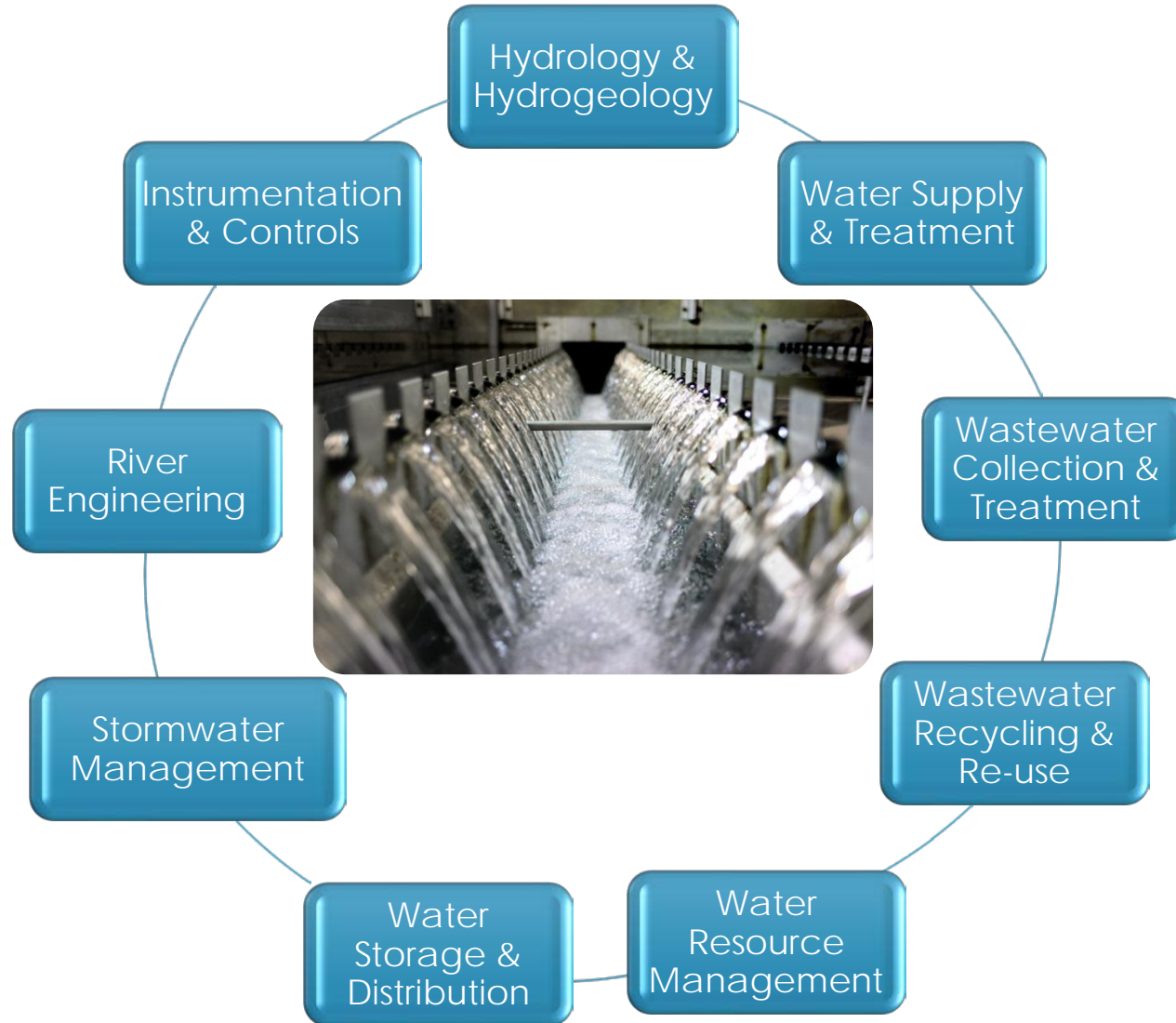


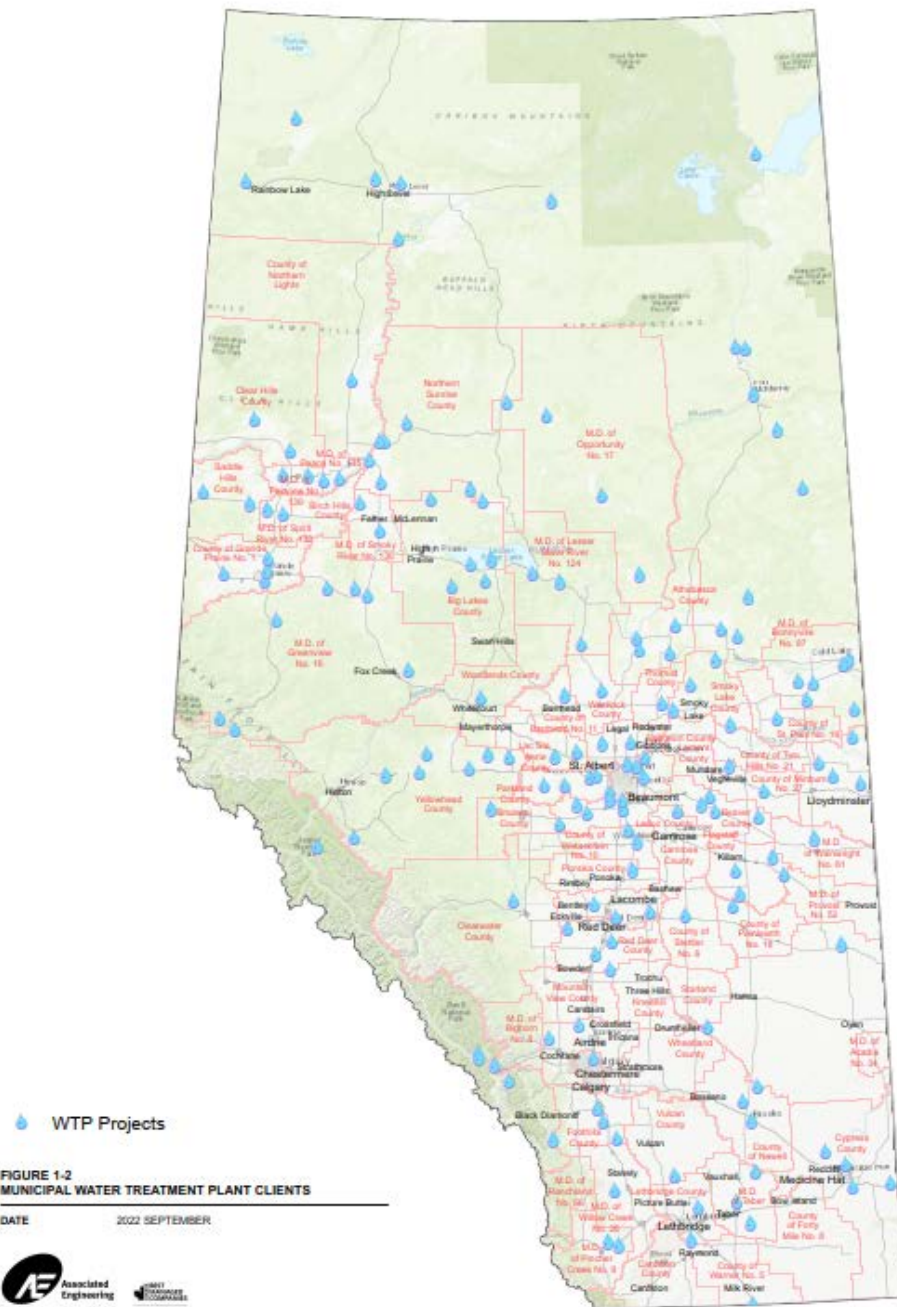
Additional Services

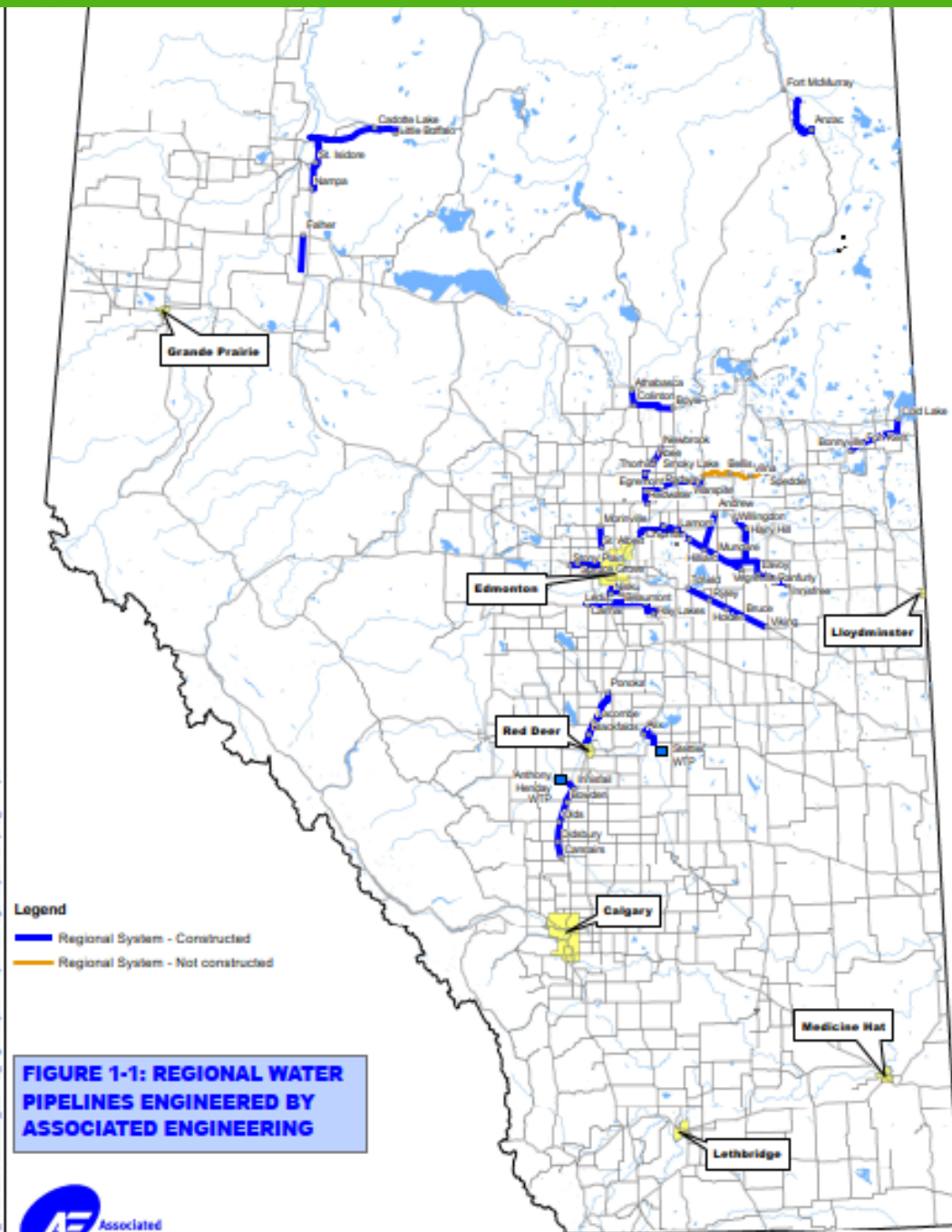
- Climate Change
- Resilience
- Disaster Recovery
- Sustainable Design
- Bioengineering



Water/Wastewater











Infrastructure





Infrastructure

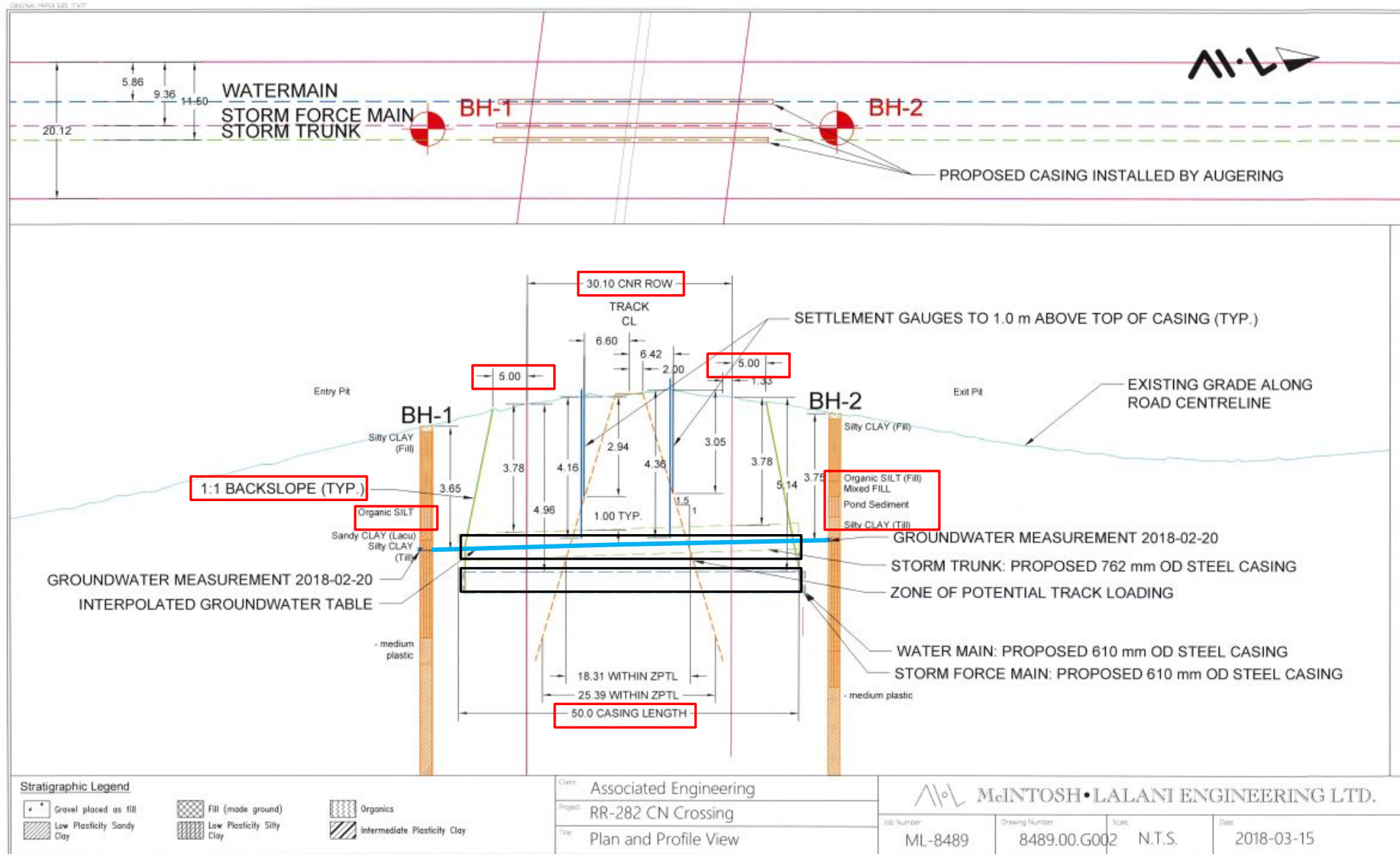
- Regional Water Lines – Grande Prairie to Dimsdale/CRPWSC
- Urban Renewal
- Transportation Studies
- Infrastructure Master Planning and Condition assessment

Trenchless Experts

- Auger Bore / Pilot Tube Guided Boring
- Horizontal Directional Drilling
- Microtunnelling
- Direct Pipe



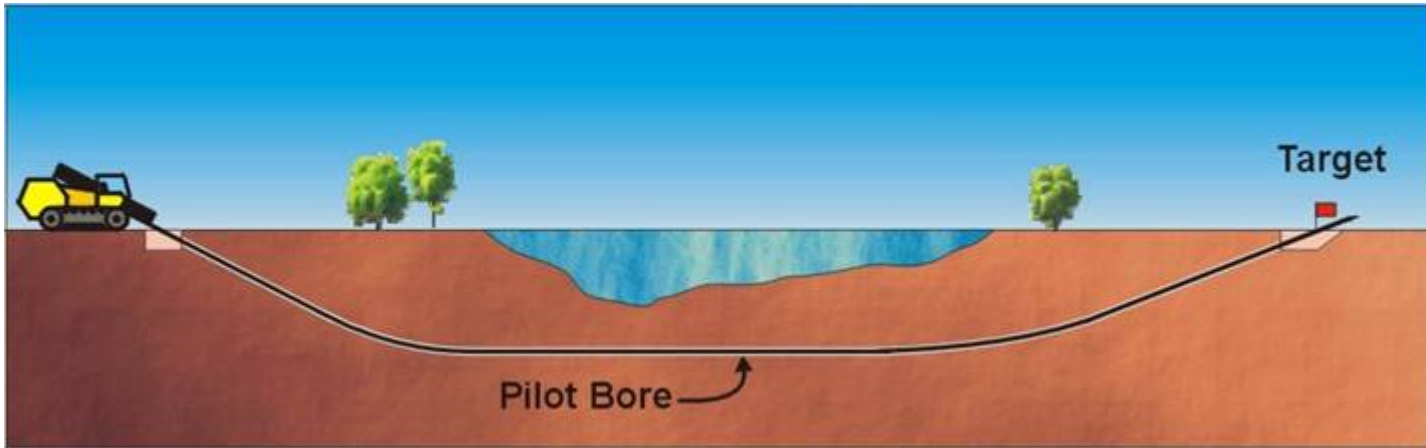
Guided Auger Bore – AE Case Study



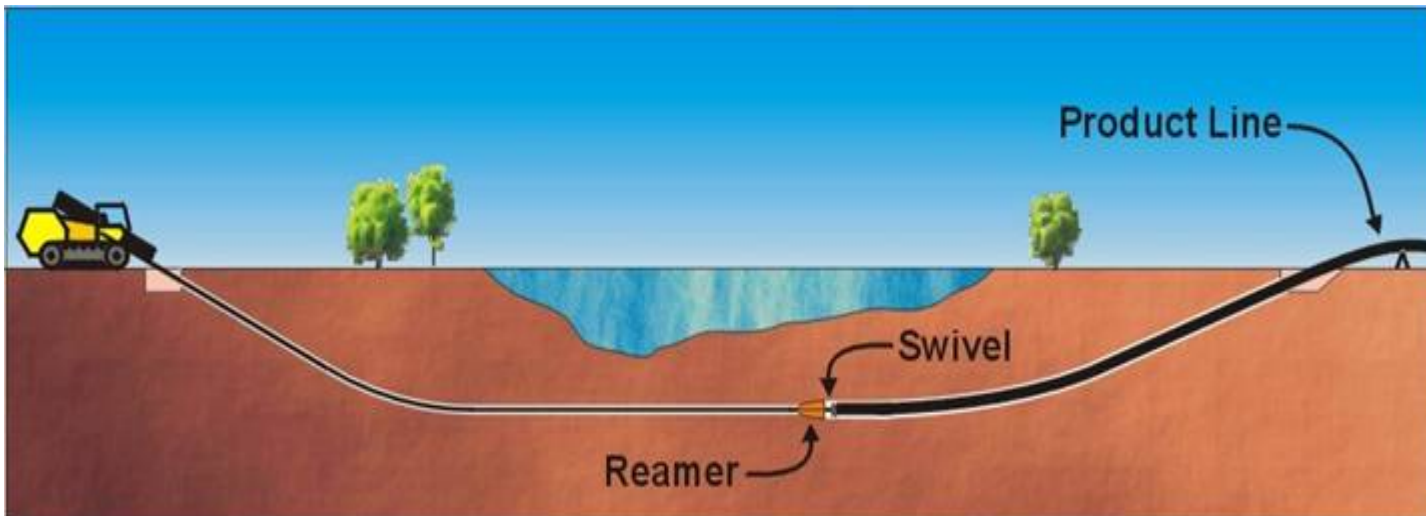
Auger Bore Construction



HDD – The Process



Pilot Bore

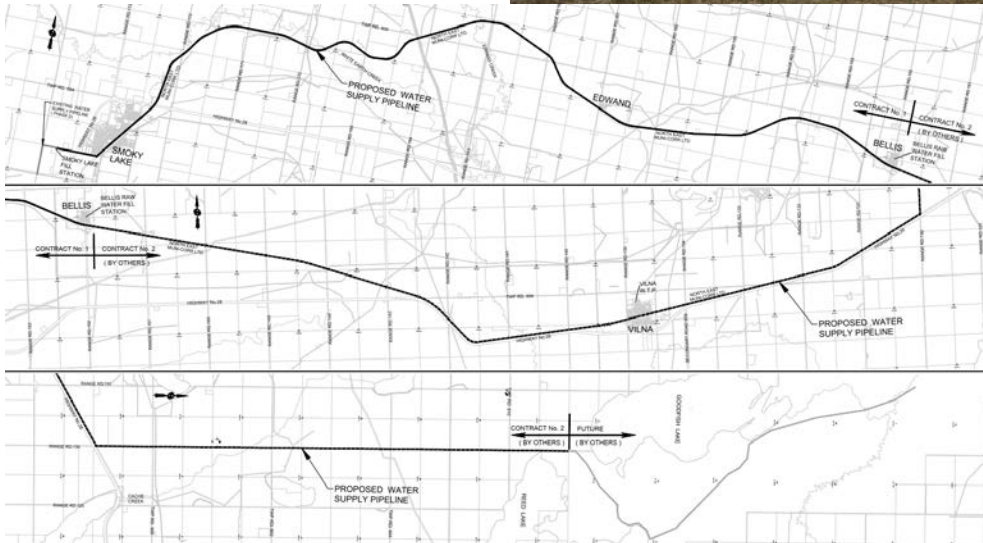


Backream

“A steerable trenchless method for installing underground pipes, conduits or cables in a shallow arc along a prescribed bore path by using a surface-launched drilling rig”

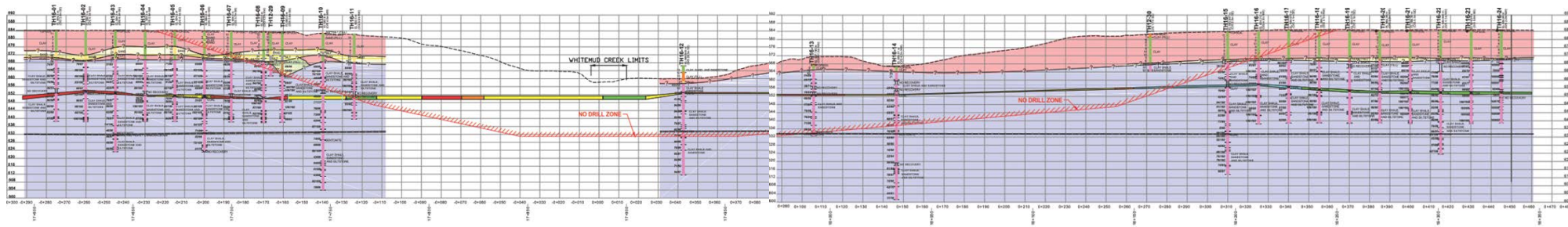
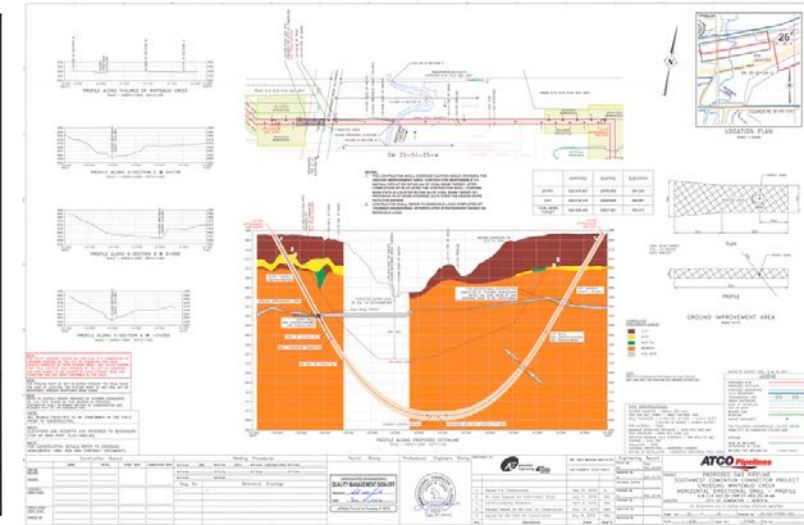
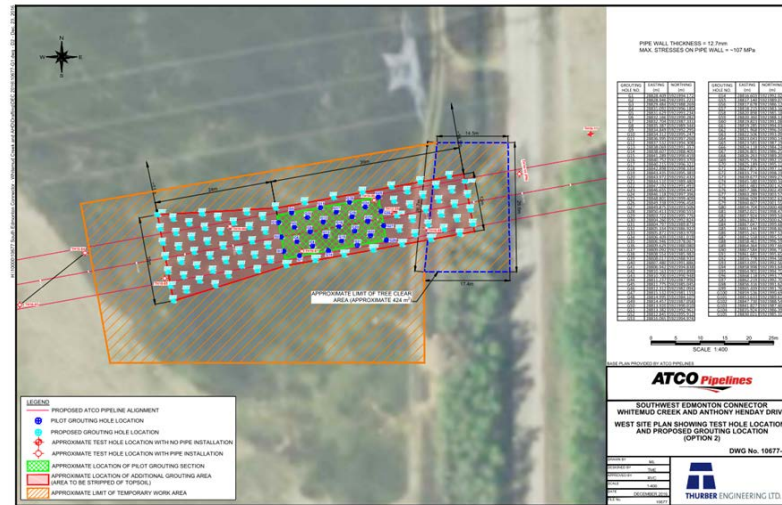
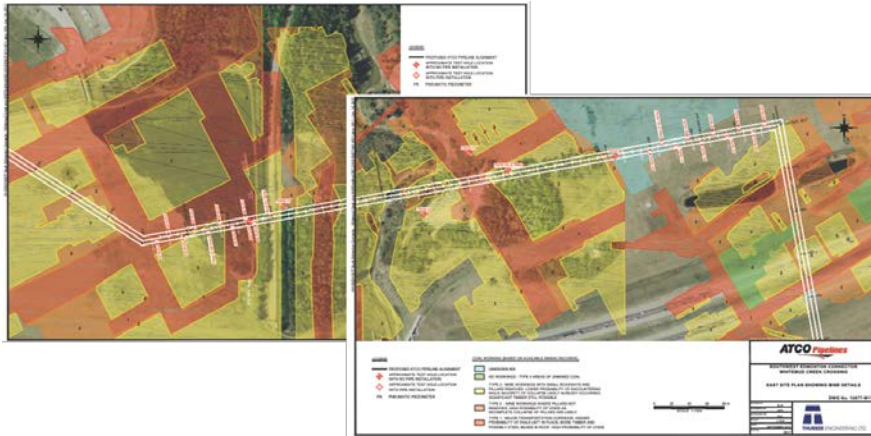
HDD – AE Case Study Small Installation

- Whitefish Lake – Design and construction of 63km 250mm Dia.



HDD – AE Case Study Large Installation

- Southwest Edmonton Connector – Design of a 700m long 500mm Dia HDD beneath the Whitemud Creek

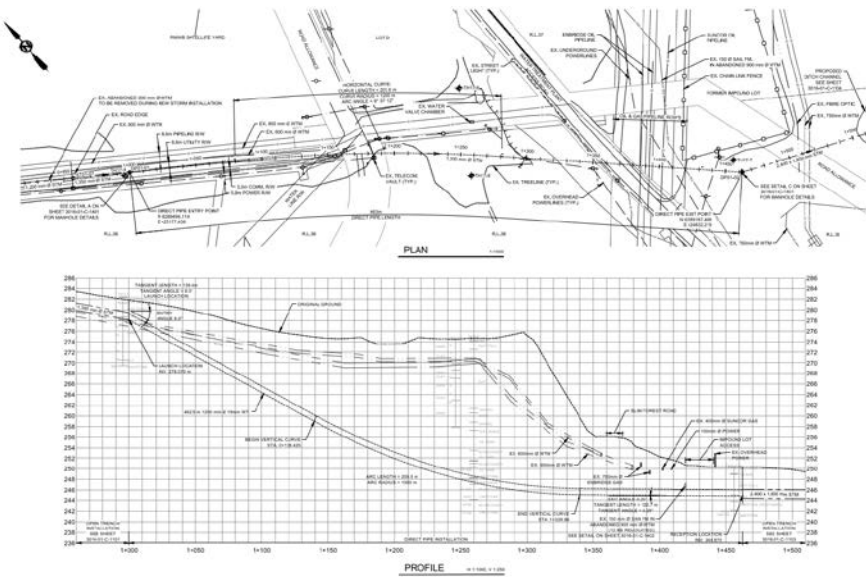


Microtunneling – AE Case Study

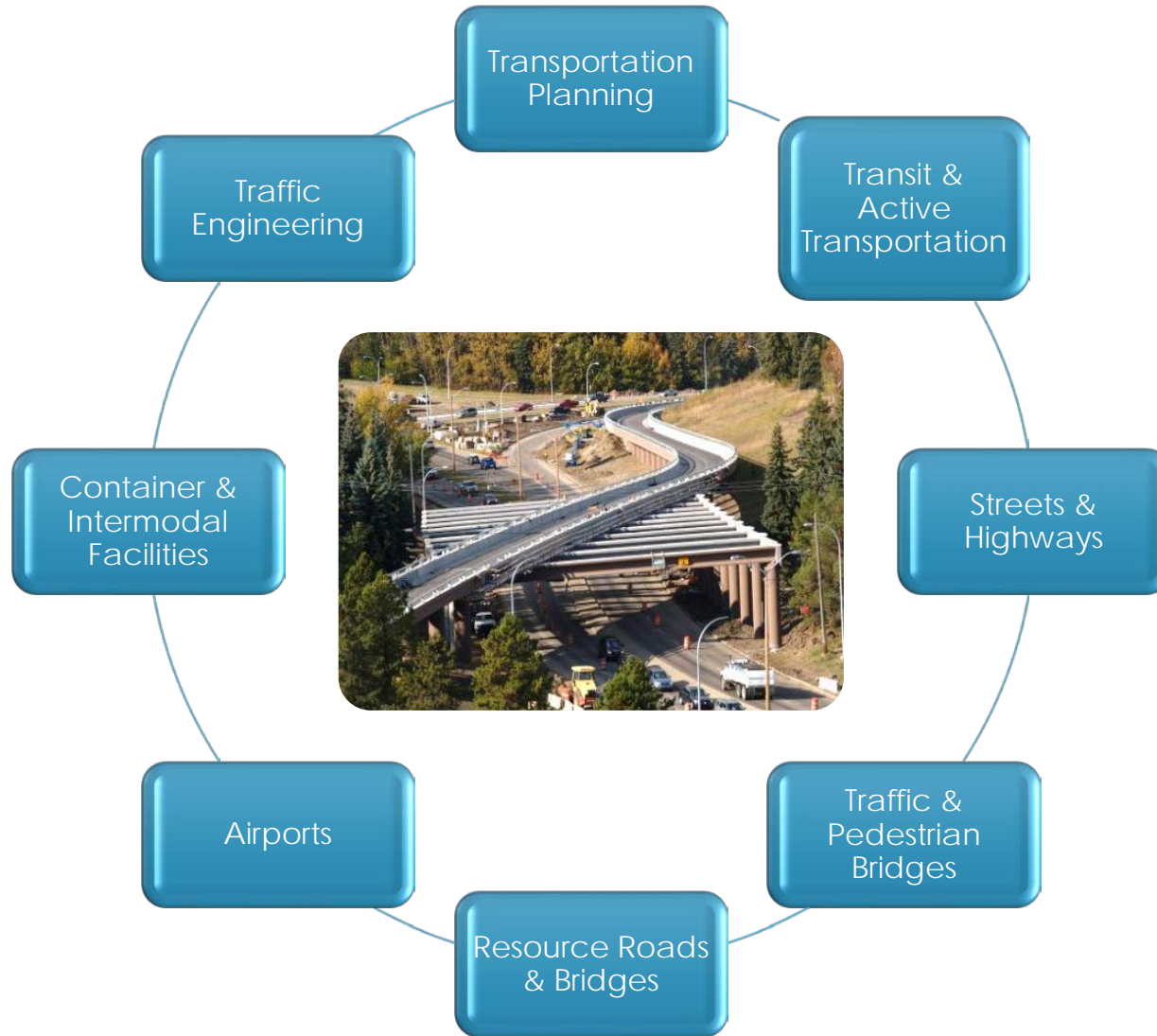
- 37 St Storm Trunk
- 400 m long, 2500 mm ID



Direct Pipe- AE Case Study



Transportation



Bridge Program Management

- AE actively providing Municipal Bridge Program Management for multiple clients across Alberta
- Ongoing success in securing grant funding for clients to maintain adequacy of inventory



Why Bridge Program Management ?

- Proactive Approach vs Reactive Approach
- Avoids costly emergency repairs and closures.
- Allows for timing to apply for STIP funding.
- Prioritizes structures that are most likely to receive funding.



Success Stories

- Bridge required emergency closure in Spring 2021.
- STIP funding already secured for same client on another similar project (less urgent).
- STIP funding reallocated to complete emergency repairs.
- Bridge repaired and operational by Fall 2021 and completely funding by STIP.





Buildings





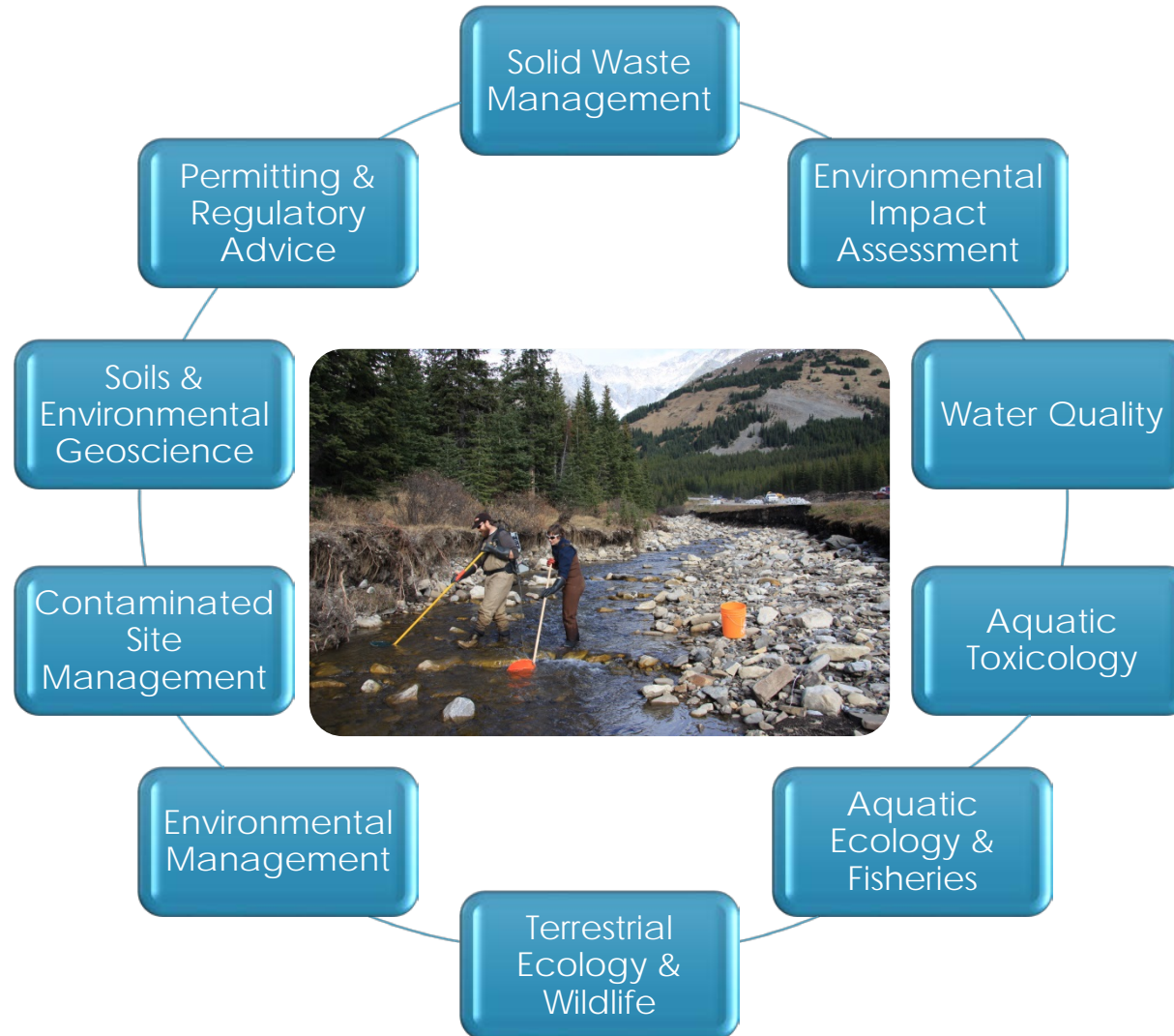


Pembina Place, Town of Redwater







Servus Credit Union Place, City of St. Albert

Environmental Services






Environmental Advisory Services

Managing risk through early identification and regulatory navigation

Creek Crossings / Bridges	Trenchless Exploration and Linear Development	Pre-Disturbance Assessments
<p>We can provide federal, provincial, and municipal authorizations, approvals, and permits regulations including:</p> <ul style="list-style-type: none">• Negotiation and liaising with regulatory agencies• Permit and approval tracking• Fisheries assessments and QAES reports 	<ul style="list-style-type: none">• Conservation and Reclamation Plans• ECO plan development• Frac out plans• Site inspections and audits  	<p>Project siting/feasibility studies for lagoons, snow storage sites, and all municipal infrastructure</p> <ul style="list-style-type: none">• Completion of soils, vegetation, wildlife, rare plants, and wetland surveys• Development of Environmental Overviews 

Environmental Advisory Services

Operations – throughout lifecycle of project

Water / Wastewater	Remediation and Groundwater Monitoring	Lagoons / Sludge Analysis
<ul style="list-style-type: none">• Water quality studies for municipalities• Aquatic ecosystem health and watershed management• Wastewater characterization and regulatory compliance of effluent discharge (WQBEL) 	<ul style="list-style-type: none">• Phase I and Phase II• Remediation Options and Monitoring plans• Annual Groundwater Monitoring Programs• Site Closure Plans• Landfill Monitoring and Contaminant Tracing 	<ul style="list-style-type: none">• Management of Water and Sludge for reuse or disposal• Understanding of regulatory requirements related to waste water discharge and land applications for sludge 

Environmental Advisory Services

Social and Community Enhancement

Wetlands Replacement

- Wetland Replacement Program
- Administered by Environment and Protected Areas through the Wetland Replacement Program
 - Funding available to participants to cover all phases of project, from project siting to monitoring



Before

After

Water Toxicity/Algae Management

- Algae bloom analysis and understanding of the Phosphorus cycle
- Water toxicology
- Sediment toxicology



Stakeholder engagement / Grant Applications

- We can provide support to identify and support relevant provincial and federal grant funding streams
- Community and public engagement presentations
- Volunteer Workshops
- Support from our Indigenous Committee Working Group



Environmental Containment

- Landfills
- Industrial Containment
- Brine Storage
- Snow Storage Sites

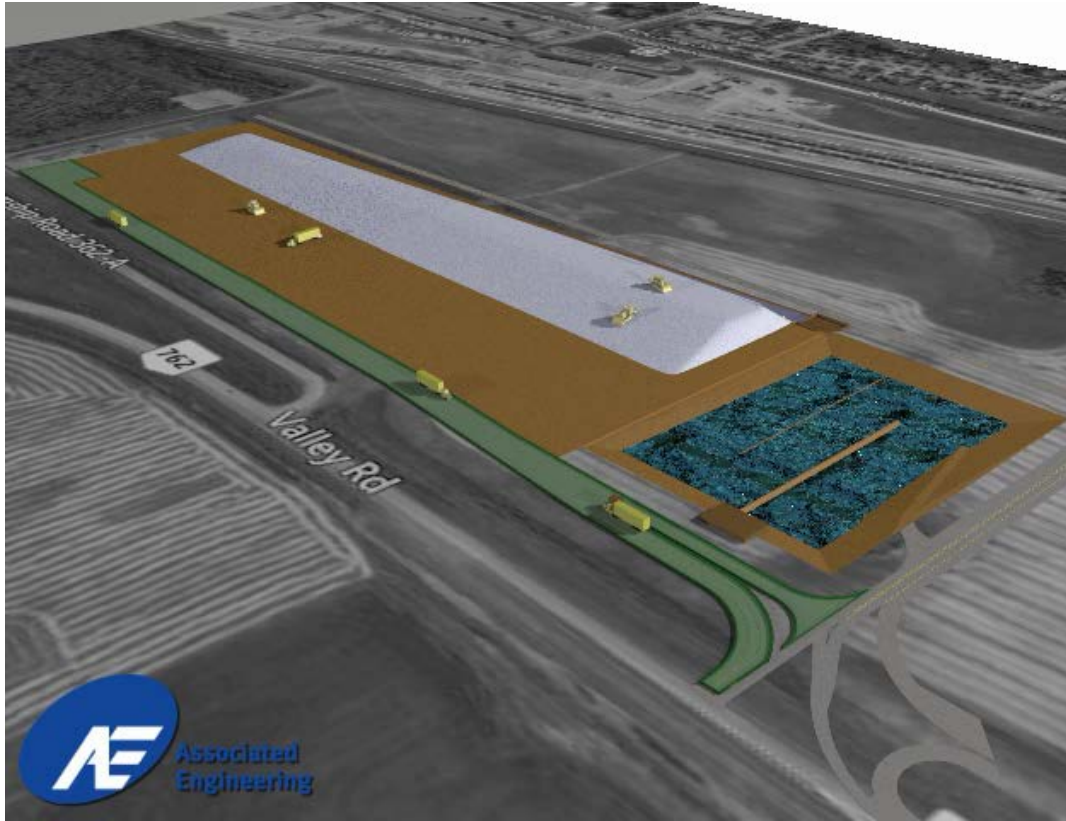


Environmental Containment

- Planning, Design/
Construction
- Leachate collection system
and site controls
- Operations/ Monitoring and
Closures

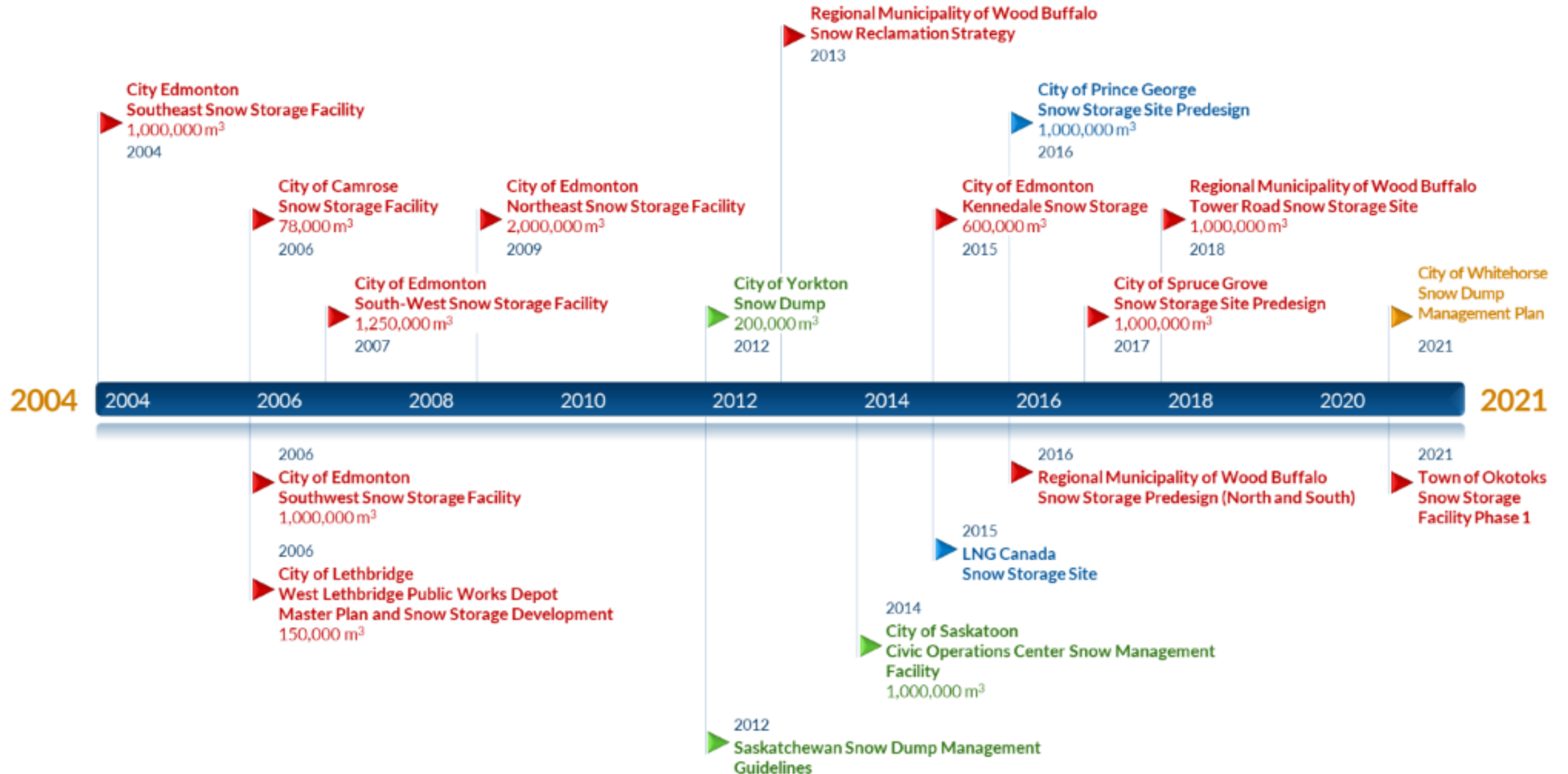


Snow Storage Sites



Snow Storage

- Management of an Environmental Risk
- Increased focus from Regulators on how this risk is managed and where the melt water is released to

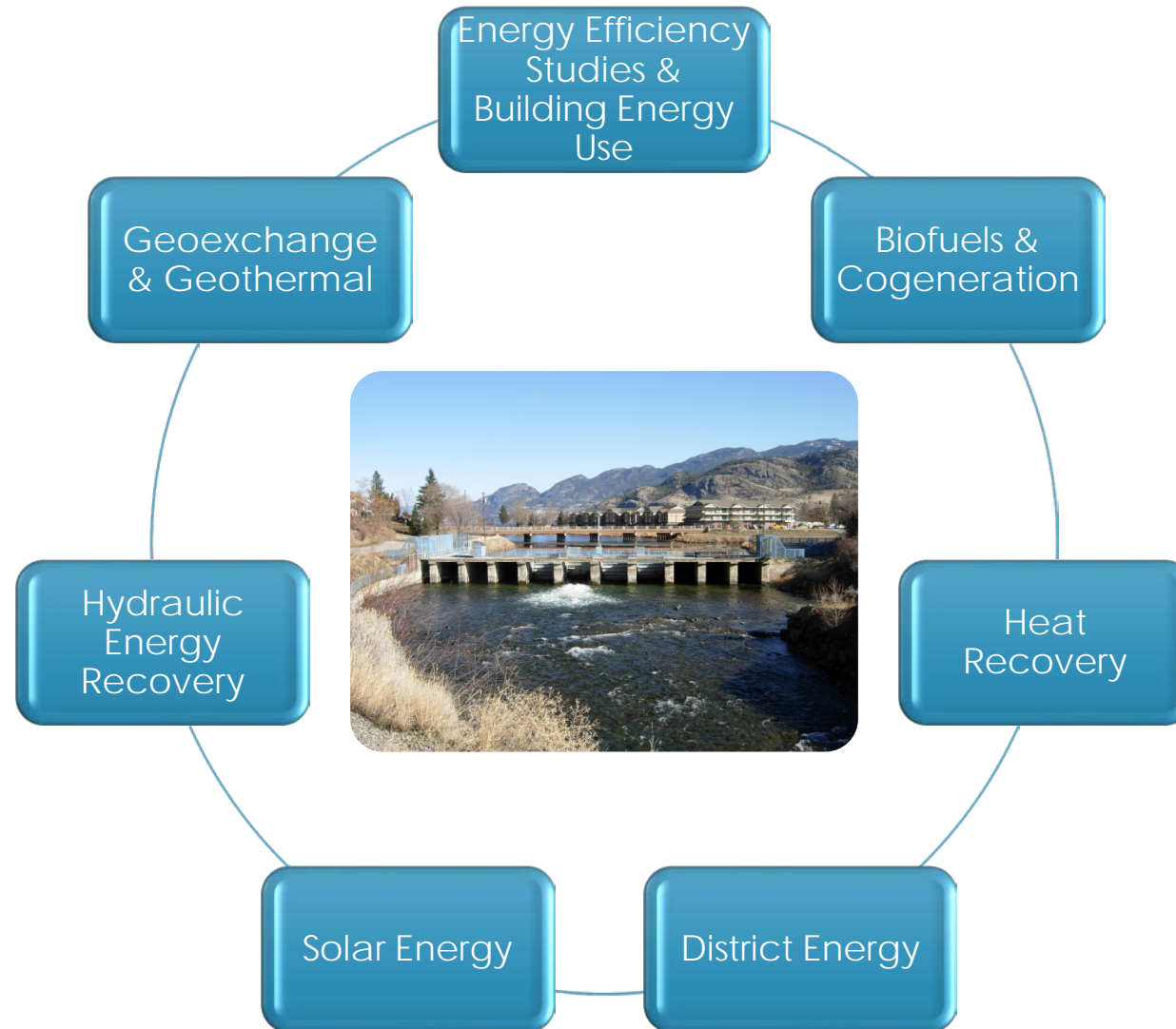


Snow Storage

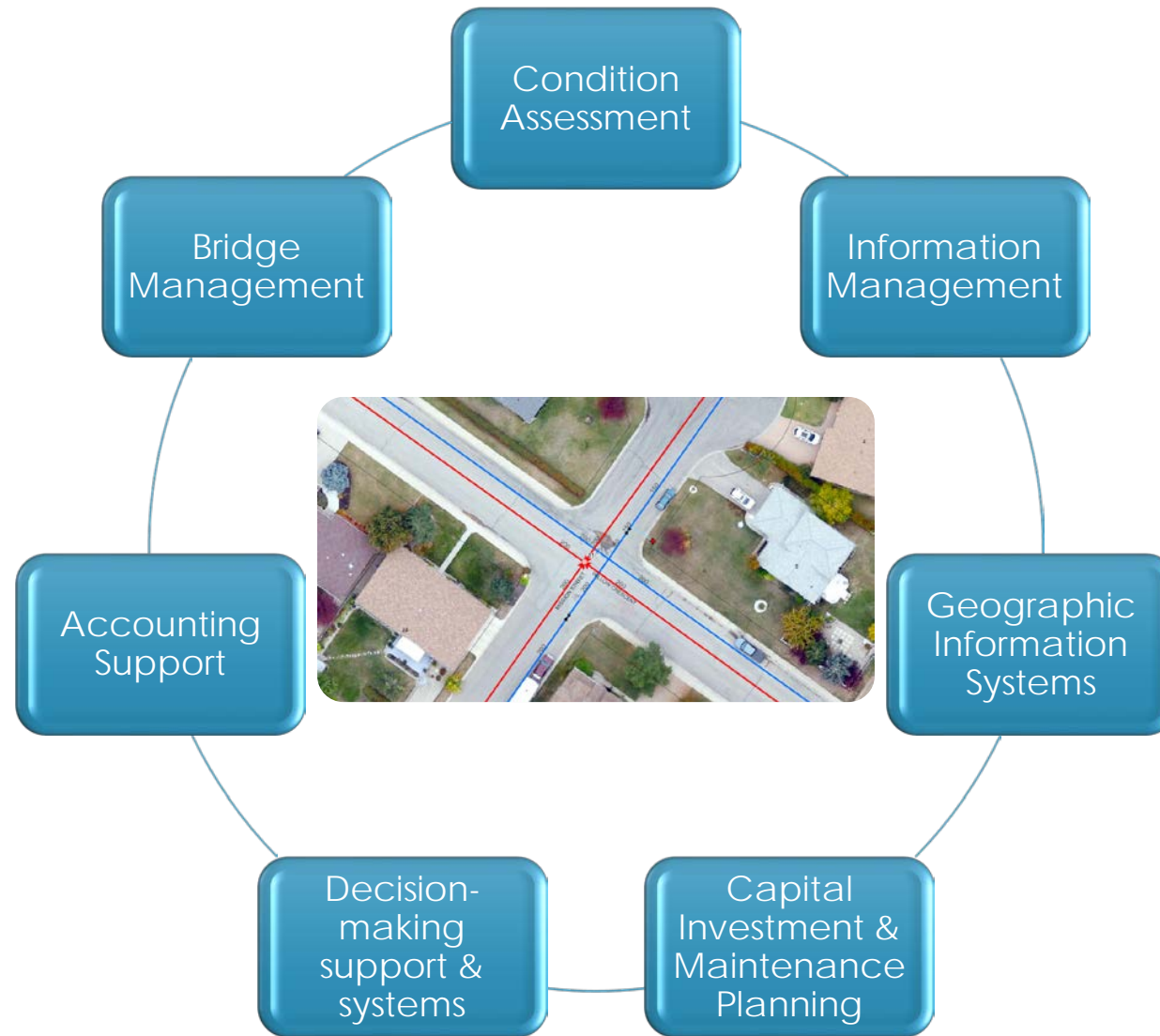




Energy



Asset Management



Asset Management

- **Prioritization of Capital Projects** based on Asset Management, Engineering principals and Funding.
- Organize current data to allow **better spending decisions**.
- Invest in assets at the right time to ensure asset **life-cycle**.
- **Risk reduction** by empowering **fact based decision making**.
- Potentially increase **Level of Service**.





Grants – Bridges – Asset Management

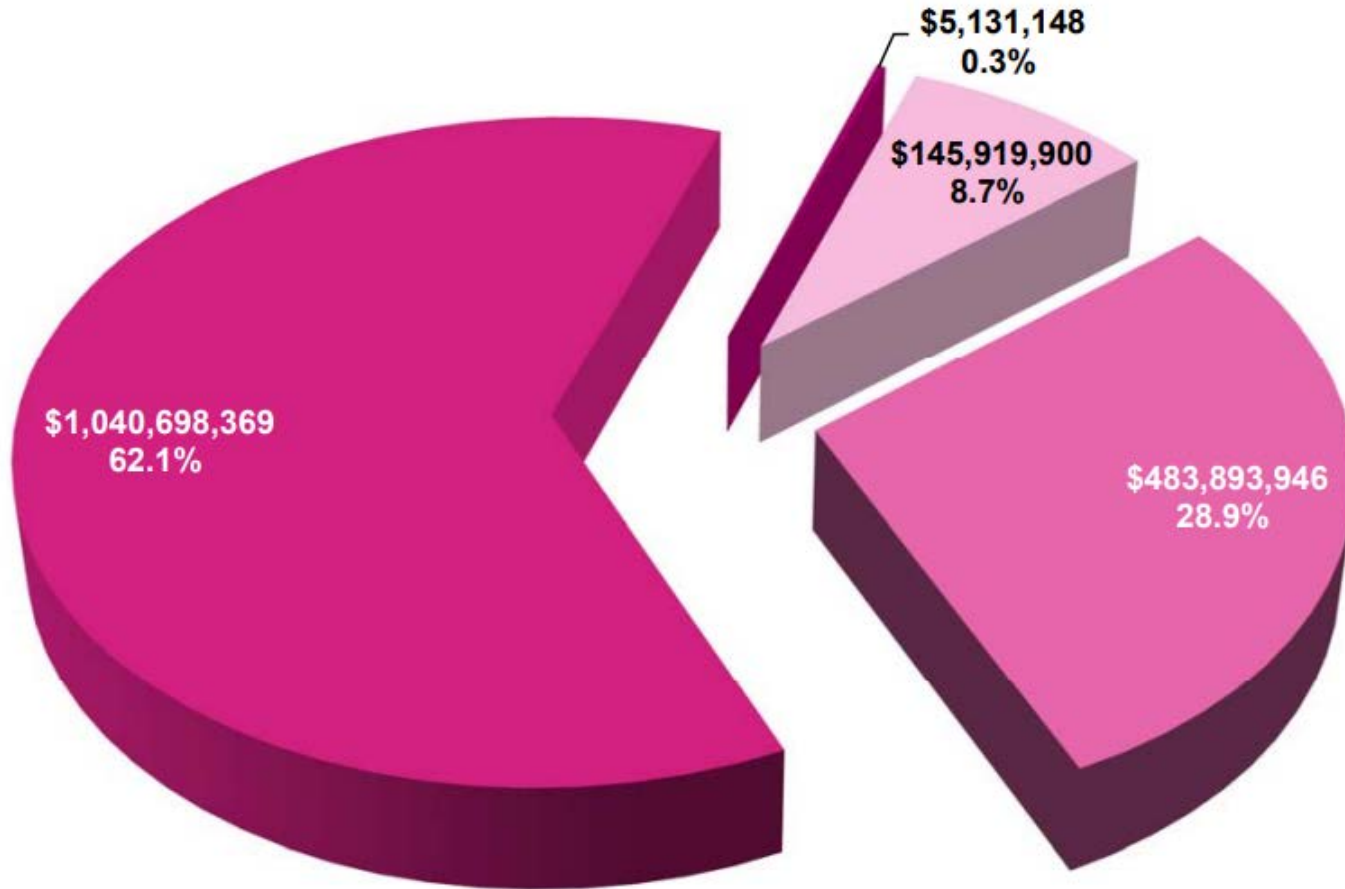
Sean Nicoll
Andrew Christopher
January, 2022

Government-Wide Objectives (GWO)

- **GWO 1:** To support initiatives that promote the **viability and long-term sustainability** of municipalities.
- **GWO 2:** To support the maintenance of **safe, healthy, and vibrant communities**.
- **GWO 3:** To support the development and maintenance of **core municipal infrastructure** to meet existing and changing municipal needs.
- **GWO 4:** To support **capacity building** within municipalities.

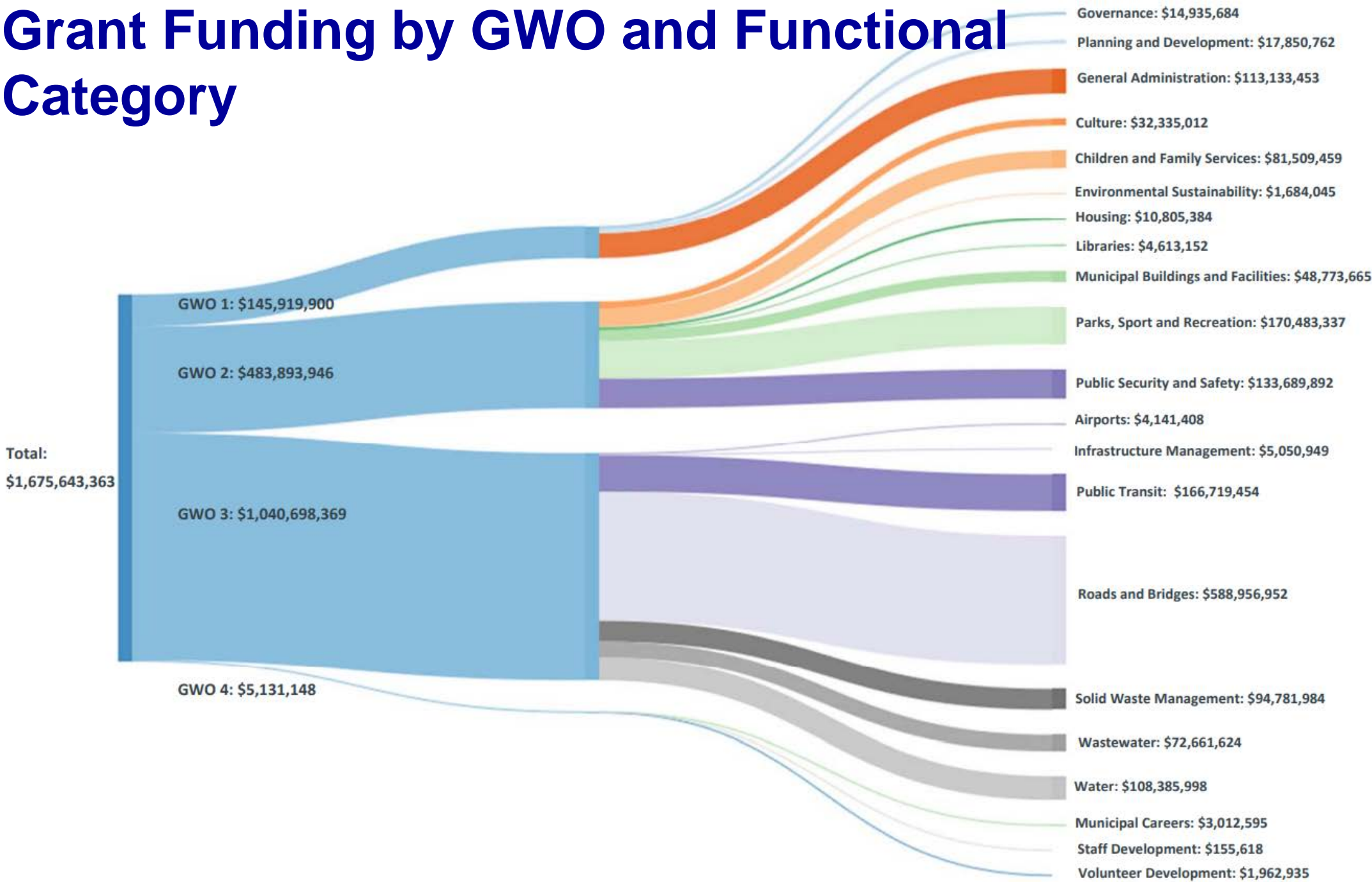


Grant Funding by GWO



- GWO 1 To support initiatives that promote the viability and long-term sustainability of municipalities
- GWO 2 To support the maintenance of safe, healthy and vibrant communities
- GWO 3 To support the development and maintenance of core municipal infrastructure to meet existing and changing municipal needs
- GWO 4 To support capacity building within municipalities

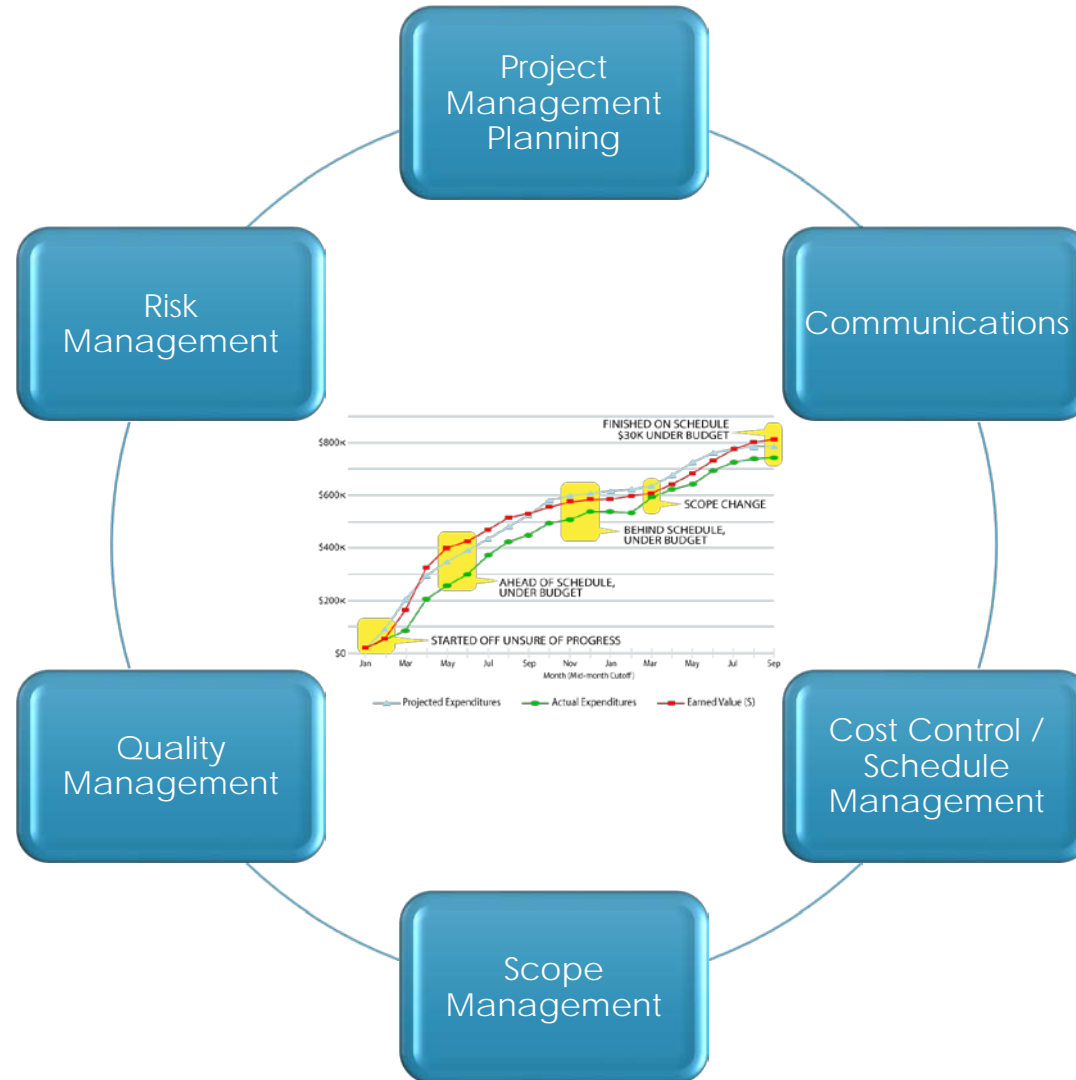
Grant Funding by GWO and Functional Category



GWO – Eligibility

- **GWO 1** - **Regional co-operation**, diversification, land use and growth plans .
- **GWO 2** - **Development of facilities and operational support** for cultural and recreational activities, such as libraries, sports, parks, arts and heritage-related activities, and environmental awareness/protection activities.
- **GWO 3** - Development and maintenance of core municipal infrastructure: **highway systems, road networks, bridge repairs, public transit, etc.), water and wastewater systems, solid waste management, and other core municipal infrastructure needs.**
- **GWO 4** - Recruit, train, and retain **staff**.

Project Management



Capacity Building Seminars

- Bio Engineering
- Trenchless Technologies

Why Associated Engineering?



We Can Bring a Complete Team

- 
- Environmental
 - Transportation Planning
 - Landscape Architecture
 - Civil
 - Building Mechanical
 - E&IC
 - Site Development
 - Urban Planning
 - Water/ Wastewater
 - Trenchless Experts
 - Asset Management



Questions?