

Applying Quality Management & Lean Six Sigma in the RFP Phase: Wastewater Treatment Plant Design (Ontario, Canada)

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Audience: Municipal project leaders, procurement specialists, wastewater engineers, compliance stakeholders

Primary Use: Governance, procurement quality, and owner-side advisory positioning

Topics: Lean Six Sigma, RFP quality, DMAIC, Ontario procurement

Executive Summary

A long-form owner-side governance presentation applying DMAIC, visual management, structured review cycles, scoring matrices, and FMEA to wastewater-treatment RFP workflows in Ontario.

Key Points

- Ontario regulatory framework: Environment Canada standards, Ontario Water Resources Act, municipal bylaws, and professional engineering codes
- Bid evaluation timeline: RFP development (2-3 months), bid submission (30-60 days), technical evaluation (3-4 weeks), financial assessment (2-3 weeks), contract award (2-4 weeks)
- Scoring matrix: Technical Criteria 60% (process design 25%, compliance 15%, innovation 10%, energy efficiency 10%), Financial 30%, Qualifications 10%
- Risk assessment frameworks: probability-impact matrix, critical path analysis, compliance checklists, and Monte Carlo simulation for cost overrun analysis
- Common deficiencies: incomplete hydraulic modeling, inadequate cold-weather design, insufficient future capacity planning, lack of power redundancy
- Case study: Ashbridges Bay Treatment Plant Upgrade — \$350M, 818,000 m³/day, completed 2 months ahead, 5% under budget, energy 15% below projections

- Value engineering: process-train optimization, Ontario-specific material durability, modular vs. traditional construction, emerging vs. proven technology balance

Citation

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