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Optimizing Water Supply, ReUse and Disposal for Hydraulic Fracturing

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Improving the security of supply while reducing life cycle cost of water management is critical in today's commodity price environment, particularly as operators transition to the manufacturing (harvesting) phase of unconventional gas development. Supply logistics must address reduced fresh water availability due to weather/climate patterns and regulatory stewardship trends. Storage alternatives must address the CAPEX/OPEX and risk profile associated with ponds, c-Rings and/or conventional steel tanks. Recycling systems must address water chemistry issues including elevated levels of iron, NORMs, polymeric slickwater additives, elevated H_2S and residual hydrocarbons including condensate. Likewise, disposal costs are significantly affected by proximity to injection well capacity and the availability of cost-effective alternatives in remote locations. The presenters will share their experiences with water hub design-build case studies including Canbriam's c-62 water hub and other systems located in BC and Alberta. The presentation will emphasize lessons-learned and key trends in water infrastructure design to improve water supply logistics and reduce water management costs.

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Bill Berzins has more than 33 years of experience in design-build-operate facilities with an emphasis on water, wastewater and waste management. His work focuses on the application of treatment technology, modularization and workflow automation to reduce CAPEX and OPEX for water supply, recycle and disposal. Bill is currently involved in the planning of a number of water hubs throughout western Canada and has been involved in supply systems up to 10,000 m3/day and recycling systems up to 19 m3/min.