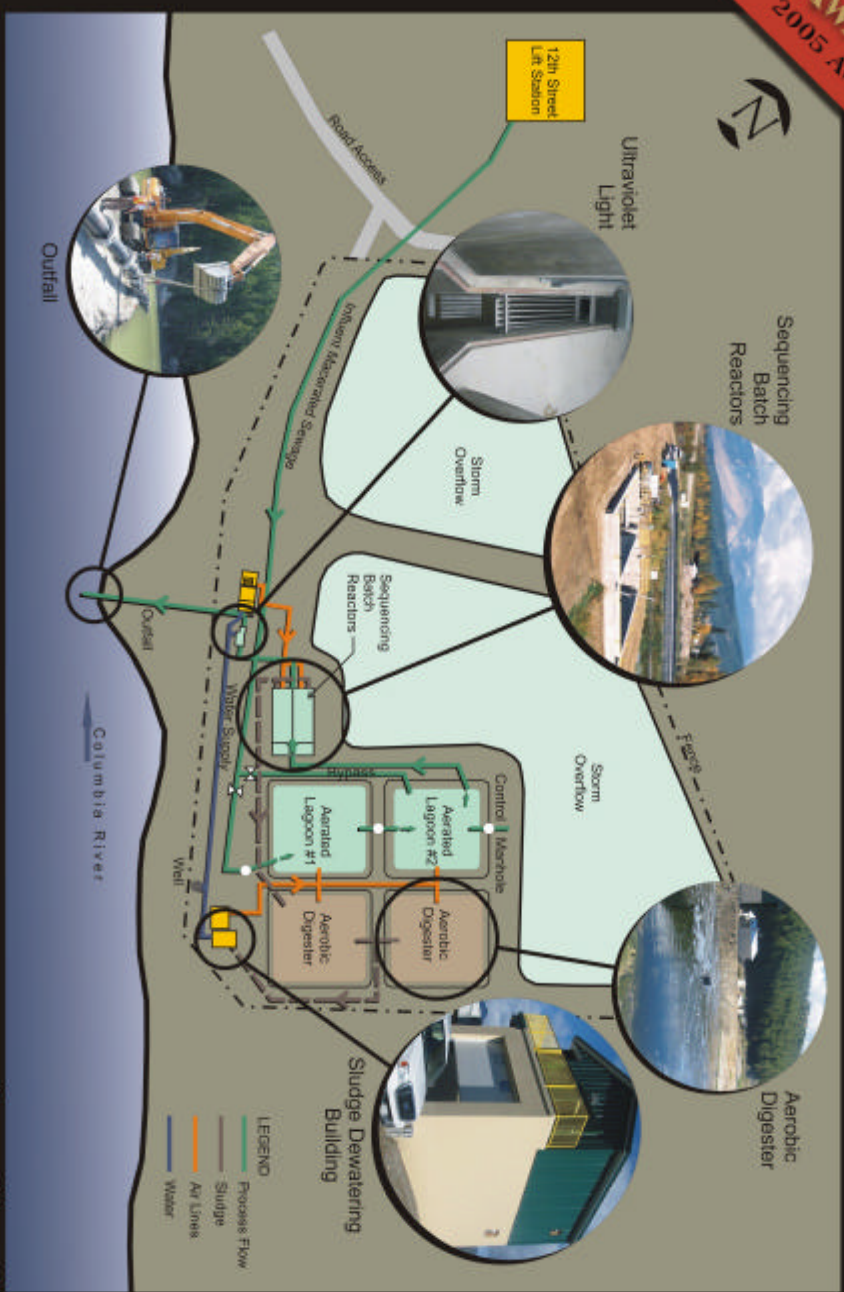




**AWARD OF EXCELLENCE**  
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# Town of Golden Sewage Treatment And Disposal Upgrading



**Owner:**  
Town of Golden - Ron Bus, P.Eng.

**Contractor:**  
Maple Reinders Inc., Andrew Ambrozy, P.Eng.

**Subconsultants:**  
M. Milligan and Associates - Structural, Kam Soltani, P.Eng.  
ITS - Electrical / Controls, Bill Nestor, P.Eng.  
McIntosh Lalani - Geotechnical, Nazim Lalani, P.Eng.

Process Schematic

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PLANNERS • ENGINEERS • LANDSCAPE ARCHITECTS

The Town of Golden breached their Permit by discharging effluent into the Columbia River. Upgrades were needed in order to comply with the BC Municipal Sewage Regulations. Urban Systems Ltd. assisted to find a cost-effective, environmentally-sustainable, operationally-appropriate solution.

Three options were explored. The first option reviewed two different plants, the second option was to expand the existing aerated lagoons and the third option was to add mechanical equipment to the existing site. The third option had the lowest present value and involved the least impact on the public. It maximized the use of existing treatment process components and reallocated their functions into an innovative process design. This was achieved by placing aerated lagoons upstream of new sequencing batch reactors.

The next step was to define the effluent criteria. Urban Systems Ltd. undertook an environmental impact study to confirm the necessary criteria for environmental sustainability. This study concluded that phosphorus and nitrogen are actually a benefit to the food chain instead of being a pollutant.

By identifying phosphorus and nitrogen as nutritional resources in the Columbia River and by designing a unique combination of process components, maximum use of the existing infrastructure was made. This yielded an estimated saving of \$3.3 million by comparison to constructing a new plant.

**Project Manager:**  
Chris Town, P.Eng., M.A.Sc.



Preconstruction Storm Overflow Lagoons