Pure Elements™ Environmental Solutions—**Innovators in Operational Engineering™**

Corporate Profile

Pure Elements
Environmental Solutions™

Pure Elements
Environmental Solutions™

Contents

Alberta Office
Suite 28, 6420-79th Avenue SE
Calgary, AB, Canada, T2C 5M4
403.724.0014

British Columbia Office
1 Alan Graham Drive
Fernie, BC, Canada, V0B 1M5
403.724.0014

President's Message

Since inception in 1999, Pure Elements™ has grown from a small operations firm to a full service company, offering design, build, operations, environmental solutions and services to municipal, commercial and industrial markets. Staying true to our core values, we hold "safe, clean water" and the protection of public health, safety, and the environment paramount.

Rob Comartin, CEO

As leaders and Innovators in Operational Engineering™, we work closely with vendors, regulators, engineers and scientists to utilize the most advanced technologies and state-of-the-art equipment. Our staff is focused on providing you with effective and compliant water and wastewater treatment solutions together with fire protection, storage, piping and distribution facilities, instrumentation, and infrastructure management. We have a strong commitment to health, safety, and the environment.

On behalf of Pure Elements Environmental Solutions™, I would like to thank you for your interest in our company and your continued support in these exciting times as we seek to develop and implement solutions to bring increased economy of scale, efficiency, innovation, safety, and quality to our projects and clients. We invite you to explore our past projects and task us with finding a better solution to your needs. We will strive to find the best solution, both economically and environmentally viable for your water, wastewater, and infrastructure management needs.

Sincerely,

Rob Comartin
President
Pure Elements Environmental Solutions™, (1999)

Pure Elements
Environmental Solutions™

Company Overview

Pure Elements™ provides water, wastewater and process engineering, construction, and operational management services to the Municipal, Industrial, Commercial and Aboriginal sectors. Our staff are experienced in designing, building and operating all types of water and wastewater facilities and utilities. Growing from a practical and hands-on utility operations background, Pure Elements™ was incorporated in 1999 and is licensed to practice engineering and operations across Canada's North-West.

Robert Comartin, President, began operating water facilities in rural Alberta in 2000. He met Trina, at a water facility in 2004 and she began working in the business in 2006. Rob's background is industrial electrical, instrumentation and communications, while Trina is a civil engineer who specializes in water and wastewater processes and construction and environmental engineering.

Due to growing demand for contract infrastructure operations, the pair began to work together securing operational contracts for water and wastewater facilities and utilities.

In 2006, Pure Elements Environmental Solutions™ was asked to upgrade facilities damaged during 2005 flood events. Construction work began with an earth dam project in the MD of Foothills, completed on time and 25% under budget. This is the only water structure in the area that later withstood both 2008 and 2013 flood events!

Process water and waste water engineering were already inherent, and with the added value from significant operational experience, demand for company's services has grown from upgrades, new construction and projects such as water storage reservoirs, treatment facilities, assessments, lift stations, waste management, fire protection and emergency services to environmental, operations, construction and engineering services.

Throughout the years, the company has operated up to 30 facilities simultaneously in and around British Columbia, Alberta and the Northwest Territories, successfully treating millions of cubic metres of water with a small staff of up to 22, project dependent. Facility operational experience varies from municipal systems for small communities, with only 5-50 connections, to growing communities with over 2200 connections at build-out. Industrial operational experience consists of camp applications with <10 buildings to large compliant industrial operations removing trace metals and contamination with flows of 7.2 MLD – 9.1 MLD (equivalent to a Town of 30-40,000 people or ~ 10,000 homes).

Our Purpose

Pure Elements™ seeks to exceed expectations by profitably providing innovative, efficient and effective water and waste treatment and infrastructure management solutions, resulting in healthier communities and a safer environment.

Our Vision

Demonstrate leadership excellence by developing, employing and/or advancing new, innovative water, waste and infrastructure management technologies to help protect our environment and perpetuate sustainability.

Our Mission

Pure Elements™ mission is to protect public health, welfare and the environment. We do this by undertaking to live by and adopt a few key core values and principles, both corporately and individually, as our own.

Our Products & Services

Pure Elements Environmental Solutions™ provides the following products and services:

- Design Engineering, Construction and Operational Services for new and existing municipal and industrial water and waste treatment facilities, regional systems, and temporary facilities such as mobile packages for work camps, runoff and remediation projects
- Associated Infrastructure: Lift Stations, Process & Storage Tanks, Controls & Instrumentation, Piping, Fire Pumps & Fire Suppression Systems
- Remediation, Storm Water Management, In-Situ Aerobic Treatment
- Risk and Liability Mitigation
- Independent System Owner's Representative
- Regulatory Licensing and Applications
- Quality Assurance & Quality Control
- Sorting and Recycling Stations
- Third party proposal review, evaluations and recommendations
- Odour Control, H_2S and Hydrocarbon Removal & Management
- Waste Management Systems & Processes
- Infrastructure Financial and Operational Performance Assessments used in short and long term Budgeting, Management Strategies and Life Cycle Analysis
- Commercial and Industrial design, engineering, and construction
- Sales & Rentals of Packaged Treatment Facilities, Fireflow packages, Solid Waste Management solutions, Thermal treatment, Incineration Waste-to-Energy Innovations
- Managing and Improving Operational Performance of water and wastewater facilities
- Capital and Operational Financial Assessments
- CleanTech R & D Innovations such as Waste-to-Energy Incineration with re-capture of emissions to Botanical Greenhouse for Organic Crop Production (www.agraponics.ca)
- Comprehensive Laboratory Management & Testing Programs - Water, Soils & Air Emissions
- Procedure Documentation – Operations/ Emergency Response/Safe Work/Safety
- Preventative Maintenance Programs, Environmental Risk Assessments
- Scheduled Preventive Maintenance Programs and Contract Maintenance
- Environmental Monitoring and Environmental Compliance Programs
- 24/7 Facility Operations and Maintenance
- Related Emergency Response Services for Utilities Infrastructure
- Piloting and Design Services, sub-consulting services

Company Management & Ownership Team

Rob Comartin - President & CEO

Robert Comartin is a practical, experienced operations technician, specializing in water, waste, industrial operations and remediation. He has over 20 years of experience managing water and wastewater systems, facilities, operations, instrumentation, communications and construction. He is a Level II Certified water and wastewater operator. Rob is a practical, hands-on trouble-shooter who can assist with technical difficulties over the phone or in person. He has traveled to a variety of remote locations and has assembled, installed and commissioned treatment facilities and waste management equipment, trained non-English speaking personnel on operations and maintenance—the most recent International site being in Costa Rica. He can build most anything, repair most anything, and teach others how to do this in the field. Rob has developed and built water treatment plants, upgraded non-functional water and waste treatment facilities and performed, construction inspections including commissioning on behalf of the System Owner or Contractor, while optimizing system processes. Rob has successfully installed aeration and distribution systems, tertiary treatment packages, has resurrected wastewater systems originally deemed "beyond repair", and prepares operational reports and system summaries from a practical standpoint
Certified Water (II) and Wastewater (II) Operator

Trina Comartin - Vice President

Trina Comartin is a water and waste engineer specializing in municipal, industrial and remediation process design and operations. A civil engineer with a background in construction and environmental engineering, Trina began her career building gas plants for Nova with Emerald Oilfield in 1994, then moved to British Columbia where she worked on a number of innovative and environmentally sensitive projects including water and waste treatment near fish-bearing streams, tertiary treatment of lagoon water prior to release into wetlands, and numerous environmental projects involving re-vegetation, de-activation, erosion control, civil works and geotextile applications. She developed one of the first weighted in-water turbidity curtains, subsequently used by AG Appel Enterprises in Lake Okanagan in 1996 for a project with the City of Kelowna. Trina is licensed to practice engineering in Alberta, British Columbia, Northwest Territories & Nunavut. She has 23 years of experience managing construction, environmental, reclamation, remediation, production and operations-based projects, including facility management and holds Level III Certification designations in both water and wastewater treatment. As a result of recent successful fire suppression projects and recommendations, she is currently working towards additional designations as a Fire Protection engineer and Biosolids Management certification. She has expertise in regulatory and compliance management as it relates to contaminated soil and water treatment and release. Trina designs, manages builds, reviews plans, tenders projects, and oversees development of operations and maintenance programs and training. She is experienced in establishing, reviewing, implementing and assessing soil and water monitoring programs. Trina oversees all research and development at Pure Elements™. She delivered Small Systems and Level I & II operator courses in both Alberta and NWT and is experienced working with and delivering hands-on water and waste treatment courses to small remote communities including aboriginal organizations.
Registered Professional Engineer (APEGA, APEGBC, NAPEG)
Certified Water (III) and Wastewater (III) Operator
Alberta Onsite Wastewater Certified Designer/Installer

Pure Elements
Customer Commitment:

Design it with Inherent Efficiency

Build it with Quality Materials

Operate it with Integrity™

Primary Products

AQUA CLEAR BLUE
WATER & WASTE SYSTEMS

AQUA CLEAR BLUE GW
GROUND WATER SYSTEMS

AQUA CLEAR BLUE IW
INDUSTRIAL WASTE SYSTEMS

AQUA CLEAR BLUE SW
SURFACE WATER SYSTEMS

AQUA CLEAR BLUE TW
TAILING WATER SYSTEMS

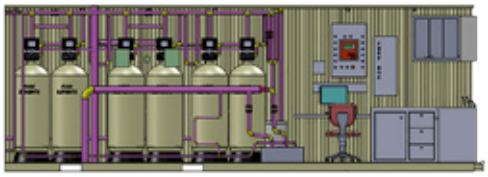
AQUA CLEAR BLUE WW
WASTE WATER SYSTEMS

AQUA CLEAR BLUE WW+
IMPROVED PHOSPHOROUS AND AMMONIA REMOVAL FOR WASTE WATER SYSTEMS

North American Distributor

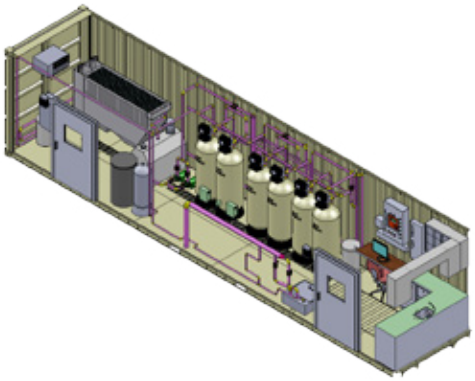
Aqua Clear Blue™ is a prefabricated modular water and wastewater system. All required components (instruments, tanks, chemicals, piping and valves) are included in a packaged building. The idea is that these packaged WTPs are pre-engineered and designed for a set capacity. The catalogued system for the consumer has a certain “model” with a set price that meets the customers' requirements. This is a packaged Good (Class 9).

Aqua Clear Blue™ systems are available for ground and surface water applications, industrial waste handling, tailing water and waste water treatment, and improved phosphorous and ammonia removal for areas with higher levels of contaminants.



How Aqua Clear Blue™ works?

- The piloting process began with oxidation
- Followed by media filtration using Greensand Plus/NexxSand
- The next stage includes ion exchange to remove trace aesthetic compounds
- This was followed by an ionic resin capable of colour/TOC (total organic carbon) removal
- A carbon filter is then employed for polishing
- Finally, a small-scale reverse osmosis is piloted for final treatment. This R.O. is a two-stage unit that treats the reject water from the first stage a second time to reduce volumes of reject water generated



UtiliPro™

Partnership

Engineering & Design
With 20+ years experience, our engineering team delivers optimal results on a wide range of projects from component to facility design.

Operations & Management
Excellence is about processes and expertise. We identify/implement systems to take your operation from good to great, and keep it there.

Building & Construction
We manage construction projects from start to finish, including procurement and oversight to deliver projects on budget, and on time.

Compliance & Maintenance
From compliance to manpower, we provide services that improve your infrastructure and deliver superior results to your bottom line.

UtiliPro™ Process Overview

1. Assess
At the assessment stage review a variety of objectives, costs and issues. An example is a sample review for a water utility whose objective was to:

- reduce water wasted
- upgrade facilities
- minimize increases to taxes and utility billing
- determine most cost effective OPEX and CAPEX

2. Plan
Based upon the Assessment, we prepare an infrastructure plan, together with options and budgets, to move forward with goals supporting the various infrastructure requirements. We can also conduct a Third Party Review of a Plan or Project that is already being contemplated, or based on a study or report, we can provide confirmation and verification that your goals and objectives are being met in a cost effective and efficient manner, with achievable Capex and Opex.

3. Implement
Here's where we take what we found out at the Assessment stage and implement the solutions, which support the overall infrastructure program objectives. These can be in a variety of formats to meet your infrastructure goals and objectives including: small tendered jobs provided by local contractors, to a one-stop "all-in" solution including Design, Build, Operate, Finance, Maintain and anything in between.

4. Maintain
In this phase we work to extend your infrastructure lifecycle, improving performance and reducing OPEX and CAPEX. By performing scheduled assessments and reviews, it allows our team to always be thinking of new ways to improve and extend lifecycle and mitigate Opex increases, or future Capex. Changing to a new chemical coagulant, negotiating term supply arrangements, or technologies may assist to reduce costs, improve performance and be less harmful to the environment.

Testing Equipment

Source water can be vulnerable to accidental or intentional contaminants and weather related or seasonal changes. Monitoring the quality of your incoming source water enables you to anticipate changes to the treatment process that are needed to react to storms, algal blooms, industrial discharge, chemical spills, reservoir stratification/ destratification, construction activity, sewage spills and other natural or man-made occurrences.

Analytical instruments and reagents are used to test the quality of water in a variety of industries and markets — from around the corner, to around the globe.

Coagulation, Flocculation, and Clarification

Coagulation, flocculation, and clarification are perhaps the most overlooked processes when installing instrumentation in a water treatment facility. This may be due to the fact that monitoring at these points is typically not a regulatory requirement. However, every step in the treatment process depends on preceding steps and those that follow to make the entire process function effectively. Measurement is critical at every step to optimize the process and control operational costs.

Filter Monitoring

Monitoring turbidity of filter effluent is required for regulatory compliance in many countries and helps to assure that the final product is safe for public consumption. In addition to meeting regulatory requirements, monitoring turbidity is also beneficial for optimizing filter performance, establishing filter backwash cycles, and detecting filter breakthrough. Turbidity instrumentation is available to meet the unique needs of both conventional and membrane filtration facilities.

Regardless of the type of disinfectant used, analytical testing can help you comply with regulations, maximize disinfection efficiency, determine adequate CT credits, optimize chemical feed pump rates, reduce the risk of disinfection byproducts, and control taste and odor issues. A wide range of analytical methods and instrumentation is available to address the specific needs of each unique plant.

Water analysis has to be right. You deserve complete solutions you can be fully confident in. We are your resource for expert answers, outstanding support, and reliable, easy-to-use products.

Water Analysis

Water testing for quality is an essential element of public safety, and a requirement bound by stringent regulatory conditions. Our comprehensive range of accredited microbiological and chemical water testing procedures and risk management services help to meet your legal and regulatory responsibilities while underlining our commitment to protect your reputation.

From potable, non-potable, recreational, surface, and cooling tower, We tests all the main categories of water. Tests include Legionella and a range of indicator organisms.

With a broad range of expertise and skilled resources at our disposal, Pure Elements™ performs chemical analysis that helps you identify the contents and composition of various materials and substances to suit a variety of needs.

Sensors and Automation

For water and wastewater technology, Pure Elements™ offers a variety of solutions for the most diverse applications. Whatever the requirements of measurement technology, Pure Elements™ always meets your needs, with the goal of guaranteeing consistent high quality water and treated wastewater.

Drinking water
Drinking water is humanity's most important food resource which cannot be replaced by other substances. Our pH, conductivity, and level sensors support your process and ensure that your drinking water is of a consistent quality no matter which method of water treatment you use.

Measuring pH in drinking water
Different parameters are measured to ensure that the drinking water is reliably monitored. One of the most important parameters is the pH value. The pH value of drinking water should not be less than 6.5 and not more than 9.5. pH.

Level measurement in groundwater
In ground or well water the level height should be measured regularly via changes in hydrostatic pressure using a level probe.

Turbidity measurement in groundwater
Continuous turbidity measurement with ecoLine NTU is an easy method of monitoring the raw water quality for undissolved substances in water. Furthermore, knowing the turbidity of the raw water makes the estimation of flocculating agents and the energy input in the flocculation stage easier.

Wastewater
Wastewater is treated in sewage treatment plants. Biological and chemical processes as well as mechanical ones are used here. Whether pressure, level, or flow: with Pure Elements™, you are ready for everything. Our pressure measuring devices can be adapted to all wastewater engineering processes.

Controlling the oxygen supply in the aeration tank
To create optimum living conditions for the bacteria, the aeration tank must be continuously supplied with oxygen (O2). Because ventilation – with a power consumption of 50 to 80 % – is the single greatest energy user in a sewage treatment plant, the first and obvious starting point for saving energy is the oxygen content in the aeration tank. Determining and continuously regulating the oxygen content in the aeration tank is absolutely essential.

Monitoring digestion
To survive in the digester the bacteria need a constant temperature of 35 to 37 °C. As a result, monitoring the temperature in the digester is absolutely essential. Additional measurands to be monitored in the digester are level and pressure.

Air Strippers

Pure Elements™ specializes in liquid phase granular activated carbon vessels, vapor phase granular activated carbon vessels, STAT low profile air strippers, oil-water separators, and on-site carbon exchanges. Each of these groundwater treatment systems come highly customized with sophisticated features that present innovative solutions for our customers' unique requirements.

The STAT Low Profile Air Strippers is ideally suited for removing volatile organic compounds (VOCs) from water in a variety of applications including municipal drinking water treatment, groundwater remediation and industrial process and waste water treatment. Air stripping is a process that introduces air into the contaminated water in order to create an interface between the air and water surfaces.

Large air stripper combines high removal efficiencies (99.9% or greater removal efficiencies for many VOCs), flexibility, ease of maintenance and durability with high flow rates. These air strippers can have flows up to 1000 gpm per unit. With multiple trays configurations and blower options each STAT air stripper can be customized to meet your site requirements.

Because STAT low profile air strippers operate at the lowest air flow rate of any low profile air strippers for a given removal efficiency, the off-gas from a STAT contains a higher concentration of contaminants and is at a lower air flow rate. This makes any off-gas treatment that may be required more cost efficient, whether you are using an oxidizer or granular activated carbon. Measured against other low profile air strippers, STAT can save thousands of dollars a year in off-gas treatment costs.

Hardware

From municipal to industrial as well as commercial industries applications, **AquaTrack**™ is a monitoring system device for use in water treatment facilities that includes a hardware component with connection to all instruments and probes to a single device. The device electronically uploads the collected data to a cloud based database and generates weekly, monthly and annual reports for the customer.

Operation and display of **AquaTrack**™ are centrally combined in a color TFT touchscreen. The screen is based on a resistive operating principle, which makes it possible to operate even with gloves on. An additional protective film eliminates reflections on the screen and provides enhanced protection against environmental influences and mechanical damage.

Our full system consists of **AquaTrack**™ hardware sensors installed on locations, which require and report water damage to the **AquaTrack**™ software suite. Different sensors are available for all types of water monitoring requirements. We only use the most reliable hardware on the market. **AquaTrack**™ systems can be easily configured for any type of water or wastewater needs on any size project for any industry sector.

Software

AquaTrack™ can monitor and report on any aspect of your water, including volume, composition, flow and much more. The best of all, you can access **AquaTrack**™ directly from your phone or tablet, making this ideal for workers in the field as well as office staff.

Monitoring system includes:

- Informing of the operator of emergency or other events at the facility
- Logging system for which the operator attends the site, thereby tracking samples or preventative maintenance performed at the facility
- Asset inventory management, notification of stocks levels (like a chemical or reagents)
- Offering a one-click request for resupply
- Supervisory control and data acquisition (SCADA) system

Tanks and Covers

Hot press GRP sectional water storage tanks

With an unrivaled reputation for quality and service Pure Elements™ offers GRP sectional tanks, which can be pre-insulated, ranging from 1mG-1000mG litres capacity and erected to a height of 4m in 1m and 0.5m increments. These tanks carry WRAS approval for potable water storage, LPCB and FM Approvals for fixed fire fighting sprinkler systems. All panels are fully tested to resist pressures in excess of six times their working pressure.

Manufacturing process

These sectional tank panels are hot press moulded in glass reinforced plastics (GRP) using isophthalic unsaturated polyester resins and electrical glassfibre reinforcement. The panels are moulded at temperatures up to 150°C under strict quality control disciplines. The process results in strong, consistent panels which are fully cured, dimensionally accurate with sharply defined profiles and smooth surfaces on both faces. Drilling and finishing of the panels is undertaken in a purpose built controlled area, where high technology automated drilling equipment is used to complete production to exacting tolerance levels.

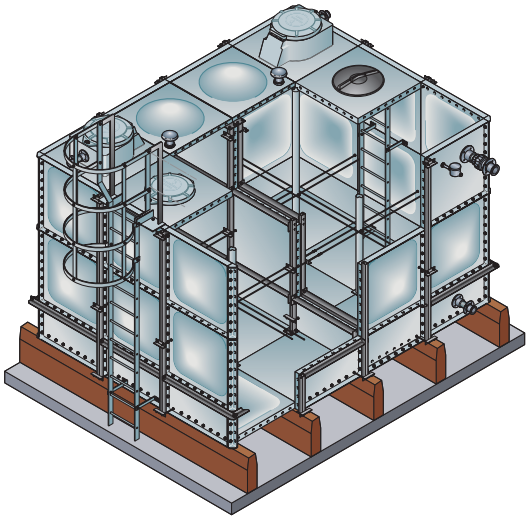
Thermal insulation

The sectional tanks use expanded polystyrene (EPS) materials in their thermally insulated panels. This is made using a pentane expansion agent which is CFC and HCFC free and can be recycled by melting down and reforming.

Digestore Covers

Glass fused to steel (GFS) tank covers form an integral part of the company's industry offering. These covers are being used to retrofit existing tanks so using anaerobic digestion they can recycle source-separated organic waste into valuable products – including heat, electricity and organic derivatives – all while reducing the requirement for landfill disposal.

Civil engineering, fire fighting, potable/non-potable water, anaerobic digestion, biofuel, biomass, wastewater treatment, desalination and drainage are all key sectors for these tanks.



Water Pumps

Proven, versatile and comprehensive design, supply and servicing of pumps, pump packages and equipment for a wide range of applications and industry sectors. Pure Elements™ pumps and systems are installed for industries, such as oil and gas production, water and waste water treatment, power generation, construction, mines and for large industrial plants.

Water movement, management and treatment represent critical, 24/7 applications. Energy intensive, they expose pumps to arduous operating cycles. Our available pumps' pioneering Lowest Lifecycle range is helping to reduce energy costs, and cutting emissions, whilst increasing operating reliability.

Comprising split case and vertical turbine pumps, these pumps' Lowest Lifecycle range provides end users with the lowest cost of ownership – realising operating significant annual savings. With key UK and European water industry approvals, other products include end suction pumps, sewage pumps, diverters, turbines for hydro generation, multi-stage pumps and electric dewatering pumps.

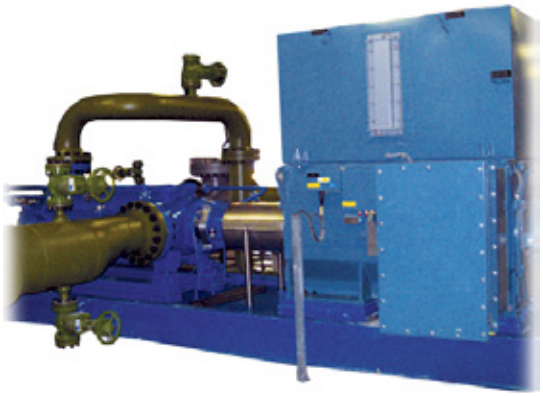
WATER SECTOR APPLICATIONS

- Water treatment
- Potable water supply
- Sewage lift and transfer
- Package wastewater pumping systems
- Turbines for power generation
- Flood prevention

WATER SECTOR PUMP SOLUTIONS

- Lowest Life-cycle Cost split case pumps
- Lowest Life-cycle Cost vertical turbines
- End suction pumps
- Sewage pumps
- Diverters
- Waste water/storm pumps
- Pumps as Turbines (for power generation)
- Multistage pumps
- Autoprime electric pumps
- Packaged booster sets

UPSTREAM									
API Classification	Water Injection	Pipeline	Booster	Sea Water Lift	NFPA 20 Fire Pump	Others	Charge	Process Transfer	Bottom
OH2/3			●		●	●		●	●
BB1		●	●		●	●		●	
BB2		●	●			●	●	●	●
BB3	●	●				●	●	●	
BB5	●	●				●	●	●	●
VS4/5			●			●		●	
VS1, VS6			●	●	●	●		●	



Energy efficiencies

In recent years, as energy costs have dramatically risen, companies are closely scrutinising consumption and pump system running costs.

Large pump systems that run continuously are especially costly to operate. However, most pumps are typically oversized – operating far from their optimum efficiency points. Coupled with poor pump intake conditions and inefficient running regimes, this mismatch equates to wasted and costly energy use.

To save costs, our pump suppliers energy division undertakes comprehensive site assessments focused on complete pump systems. Within a succinct report, they make detailed recommendations for corrective action identifying cost savings, kW/hr savings, payback time and CO2 reduction.

By implementing these recommendations, you can realistically expect reductions in energy consumption and system running costs in excess of 30%. In addition, you'll enjoy reduced inventory, maintenance and administration costs.

MIDSTREAM & DOWNSTREAM						HIGH PRESSURE WATER			
Propane/ Butane/ LPG Handling	Diesel Oil/ Gasoline/ Naptha/ Lube Oils etc	Sodium Carbonate Caustic Sour Water	MEA/ DEA/TEA (Stock & Lean Solution)	Power Recovery	Others	Desalination	Water Treatment	Descaling	Mining
●	●	●	●		●	●	●		
	●				●	●	●		
●	●	●	●	●	●	●	●		
				●		●	●	●	●
●	●	●	●	●		●	●	●	●
●	●	●	●		●				
●	●	●	●						

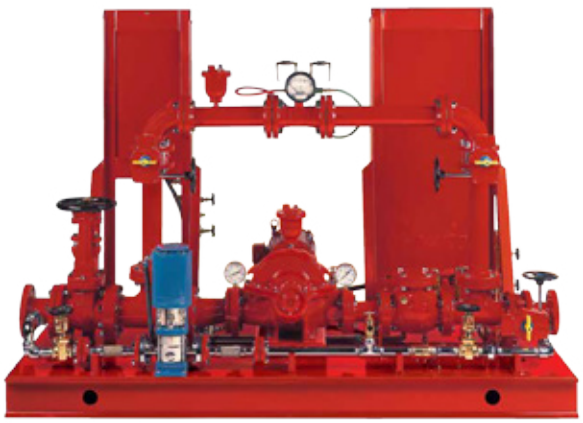
Fire Pump system

Safety requirements in the prevention of contamination during fire suppression are severe and stipulate the use of small quantities of water to extinguish fires, particularly since run-off water must be boiled. Water mist at high pressure meets these requirements. As well, with this system, the typical water consumption will be around a tenth of the quantity traditional sprinklers will use. Another advantage of low water consumption is that consequential water damage to the building is kept to a minimum.

PACKAGED FIRE PUMP SYSTEMS

Packaged fire pump systems are fully-integrated and custom-engineered, designed and built to meet and exceed the requirements for each unique job specification. They are built to the stringent standards of NFPA 20, UL,FM, and other regulatory bodies, and ship fully tested and certified to the highest quality standards. Packaged fire pump systems provide single source system responsibility for maximum reliability and uptime.

Packaged Fire Pump systems include the pump, driver, controller, jockey pump and jockey pump controller, and other required components mounted on a common base. Whether simplex, duplex, or triplex configuration, electric motor or diesel engine driven, the systems are pre-piped and pre-wired for ease and speed of installation. Every detail is integrated in a fully coordinated system to ensure that the heart of the system performs perfectly, now and in the future. The line of Packaged Fire Pump systems we have available come with full protective enclosures suitable for any climate or site condition.



Incinerators

Disposing of waste in an environmentally-friendly manner should be high on any company's agenda. Using an array of thermal treatment solutions, we can work alongside you to ensure that you have a waste disposal solution that is fit for purpose and will continue to be so even once your waste streams increase or diversify.

Incinerators can also provide you with the optimal way to create energy from waste and make it usable, whether you need it for washing, disinfection, heating or even for the generation of electricity. Our incinerators achieve clean air emissions from waste destruction.

Typical Uses:

- Temporary Camps
- Disaster Areas
- Camp sites for leisure purpose
- Confiscation and the destruction of Drugs
- Contaminated waste
- General waste

Our waste treatment solutions include:

Medical Waste Incinerator

Designed for medical/pharmaceutical, hazardous and hospital waste management. Capable of disposing of type IV pathological waste and all medical waste. Our range of medical incinerators have been specifically designed for the clean processing and safe disposal of clinical waste. The type of waste generated by hospitals, health centres, clinics and laboratories covers everything from the safe destruction of sharps to the handling of contaminated pathological waste. By the nature of their design our incinerator systems can safely destroy all type 1 to type 4 categorized waste.

Animal Waste & Carcass Incinerators

Catering to small to large sized animal related businesses, such as poultry farms, cattle farms, sheep farms, pig farms, stables, kennels, abattoirs, testing laboratories, catteries, pet crematoriums and ABP rendering plants. Animal diseases, new virus strains and spread of infectious diseases are only few of the consequences of improper animal waste treatment. Incineration is the way forward for Bio-secure waste disposal.

General Waste Incinerator

Our range of commercial/industrial incineration units use the latest combustion technologies to ensure a clean burn process and emissions that conform environmentally. All our incinerators have a wide range of options such as electricity using our Waste to Energy Systems, hot water and hot air from our Heat Exchangers. Commercial and Industrial waste streams can be incinerated and the waste air used to run these various processes.

Medical Waste Incinerators

Animal/Poultry Waste Incinerators

General Waste Management Incinerator

Electrochlorination and Chlorine Dioxide Treatment System

We are focused on water treatment with a particular emphasis on water disinfection, biofouling control and filtration solutions.

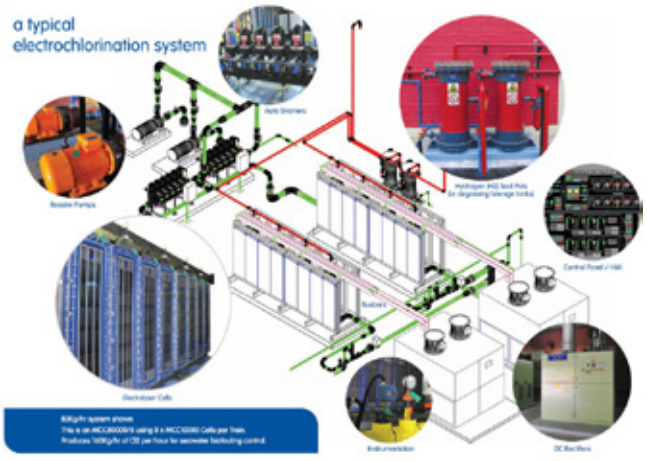
Our suppliers water disinfection and biofouling control systems use Electrochlorination and/or Chlorine Dioxide as the base technology to ensure personnel safety, continuity of supply and cost effectiveness for the end user.

Electrochlorination

Electrochlorination Systems produce the disinfectant Sodium Hypochlorite from Salt & Water (brine) or Seawater on your own site. Sodium Hypochlorite is a chemical compound with the formula NaOCl. Sodium Hypochlorite solution, commonly known as bleach is frequently used as a disinfectant or a bleaching agent.

ChlorineDioxide

Chlorine Dioxide (ClO2) is a highly effective, environmentally friendly microbicide and a selective oxidant that eliminates both planktonic and sessile bacteria, disinfects surfaces, and destroys biofilms very rapidly. It is 2.5X stronger than chlorine and is approved by the EPA for use in disinfecting drinking water. It is fast becoming the biocide of choice for a wide variety of applications.



Applications

- Potable, Wastewater and Seawater Disinfection
- Marine offshore
- Resort & Commercial Swimming Pools, Water Parks and Water Features
- Biofouling control for Power Stations, Refineries and Petrochemical Mining Industry
- Water Treatment for remote locations
- Industrial, Municipal, Commercial and Agricultural

Lift Station Engineering

Sewage/Wastewater lift stations, also called pump stations, are used for pumping wastewater or sewage from a lower to higher elevation, particularly where the elevation of the source is not sufficient for gravity flow and/or when the use of gravity conveyance will result in excessive excavation and higher construction costs.

A wastewater pump station may be used as a matter of economics or to overcome inadequate hydraulic head when it is obvious that no other solution is practical. For instance, it may be more economical to utilize a sewage pump station to pump or lift the sewage over a ridge and let it flow by gravity to a sewage treatment plant, or to elevate sewage to pass through a sewage treatment system by gravity.

These units are commonly built as a factory assembled package system. Key elements of pump or lift stations include a wastewater treatment receiving well (wet-well), equipped with lift pumps and piping with valves, a junction box, and an equipment control panel with alarm system.

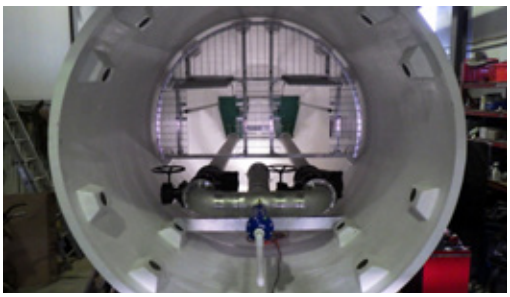
At Pure Elements Environmental Solutions™, we provide lift station units to handle your needs for water and wastewater pumping treatments. Using leading edge fiberglass tank construction, mild steel, stainless steel or aluminum, and the best pump products in the industry, we offer cost-effective and high quality lift stations products and treatment solutions to municipal and industrial clients. Our various Lift Stations products have capacities up to 1,000 gpm.

Features:

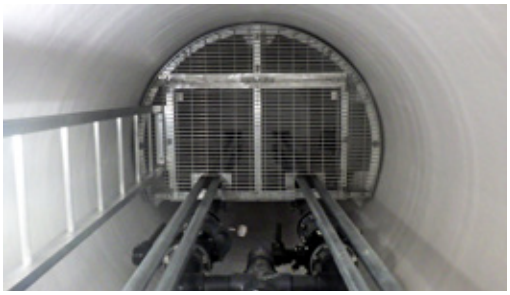
- Fiberglass basin
- Check and plug valve
- Lift out system
- Aluminum platform and lid
- Heater/blower
- Heavy duty ladder
- Goose neck vent
- Optional communication system and anti-flotation bases

Prince of Peace
Calgary, Alberta

Grandin Heights
Morinville, Alberta



Black Diamond
Black Diamond, Alberta



Aeration

The single best thing you can do to improve your water quality is to manage oxygen levels through aeration. Oxygen is a critical component to keeping ponds, lakes and other managed water supplies healthy and clean.

Oxygen not only keeps fish alive but also supports the effective breakdown of nutrients in the water and bottom muck layer. Both the bacteria that feed on nutrients and the chemical breakdown of nutrients require oxygen. Without sufficient oxygen levels a pond or lake will become unhealthy, often stratifying, and have an increased probability of eutrophication.

Aeration introduces millions of micro-air bubbles into the effluent, under a flow rate designed to match flow to the treatment unit/s. Oxygen encourages growth of aerobic bacteria which help to digest organics, resulting in further BOD and TSS reductions.

Aeration is the process of increasing oxygen saturation within the water. This happens when the water and air come into contact. This is done by infusing air into the bottom of a lake, lagoon, pond or from surface aeration like a fountain. This allows for oxygen exchange at the surface and the release of gases like carbon dioxide, methane or hydrogen sulfide, which can harm aquatic ecosystems. Low levels of dissolved oxygen can cause harm to fish and other animals, while also interfering with types of bacteria, which help to decompose organic matter within the ecosystem.

Applications:

- Promote healthy aquatic ecosystem
- Remove carbon dioxide
- Improve the decomposition of organic materials
- Reduce blue-green algae growth
- Reduce phosphorus concentrations to promote algae growth
- Oxidation of iron and manganese found in many well waters
- Improve oxygen levels

Types of aeration:

1) Subsurface aeration
   - Jet aeration
   - Coarse bubble aeration
   - Fine bubble aeration

2) Surface aeration
   - Fountains
   - Floating surface aerators
   - Paddle wheel aeration

Rentals

Pure Elements™ also has a line of rental equipment available for your water and waste needs.

Water filtration facility rentals includes:

- Set-up costs
- Maintenance costs
- Power supply generator
- Valved flex hose connection
- Labour
- Value added services (certified operators, on-site QA/QC program)

Piloting Services

The purpose of a scalable pilot system is to gain an understanding of site-specific challenges and needs as source water can vary greatly by location. Bench-scale testing is performed prior to and during the pilot phase to analyze on-site water quality and inform the design and mobilization of the pilot system prototype. During pilot testing, the efficacy of various treatment technologies are evaluated to determine what the optimal treatment configuration is for the reduction of target contaminants.

Once the pilot project is complete, Pure Elements™ will provide clients with a comprehensive treatment report and recommend a course of action based on projected operational costs, treatability, and feasibility. The implementation of pilot projects helps Pure Elements™ to work with clients to find the best solution for your water needs.

Product Fulfillment

Product Delivery

Every project has its own site specific requirements for product delivery and service, and is established in agreement with each supplier. Some products might be delivered as drop ship, while other products require delivery to Pure Element's™ location for assembly before being shipped to the customer. Some projects involve onsite construction, installation, commissioning and training.

We are flexible to develop initiatives to work within the needs of the customer to benefit the product or end-user.

Logistics

We are familiar with shipping to some of the most difficult and complex remote locations including logging roads, mining roads, winter ice roads, via seaplane and Buffalo and overseas container shipping. We have shipped a 192 cubic meter tank, broken down into components overseas and land. We have shipped a 100,000-gallon tank via rail, winter road and airplane – all to meet client expectations to deliver to remote destinations under strict timelines. We have acted as an "aggregation centre" to collect assorted goods and then ship by airplane with "heat-packs" in -40 degree Celsius temperature to protect contents from cold weather damage. Ask us and we will work with our expeditor's to make it happen for you. We managed a drastic 8-16 week delivery reduction for a combined fire suppression system, reservoir, pumping system, automated control instrumentation and back-up power generation.
When a manufacturer was delayed by 14 days, we arranged for a temporary Fire Response Plan with the Authority Having Jurisdiction to allow startup operations with a temporary occupancy permit – so the facility could open on time!

Staffing

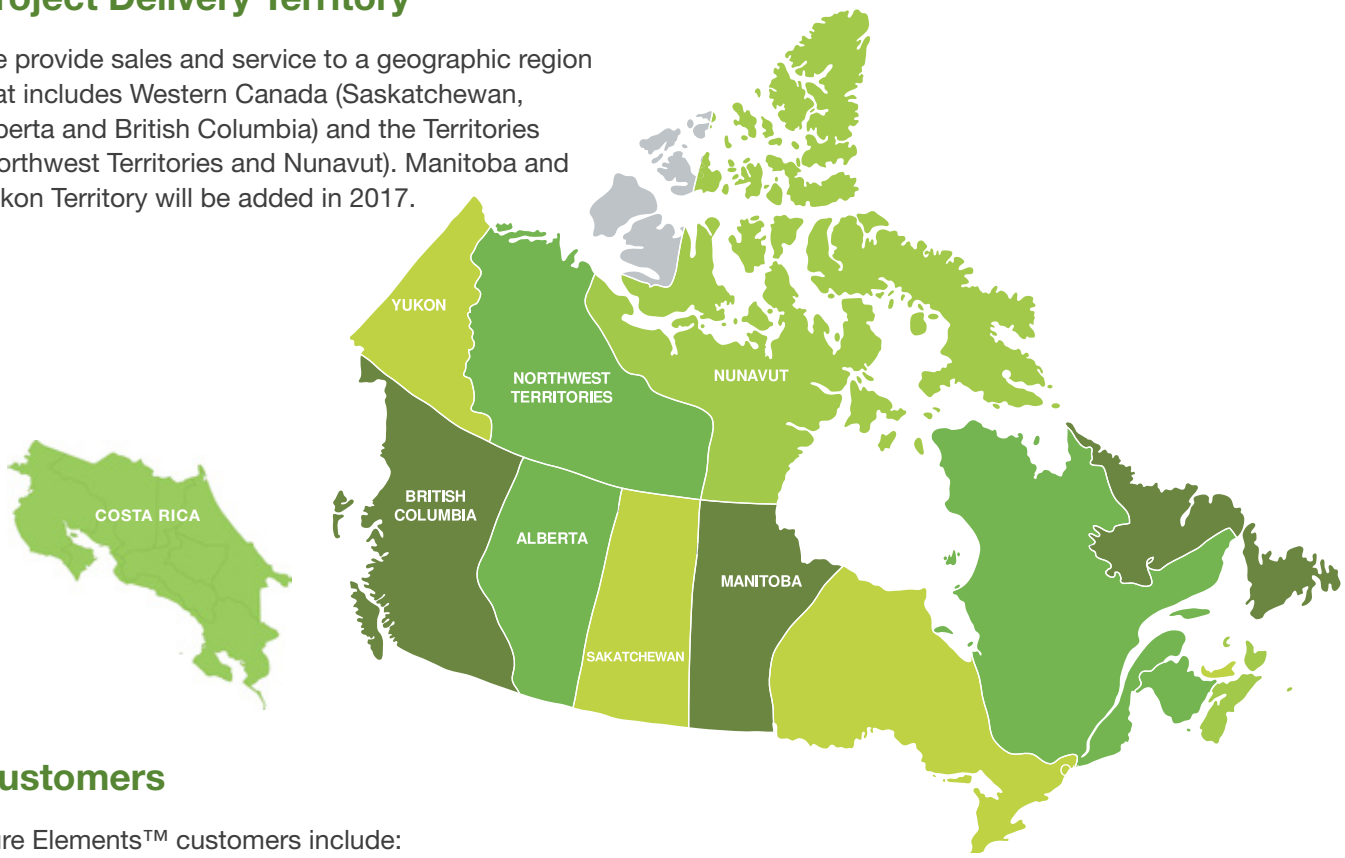
Pure Elements™ has staffing in place to ensure proper and timely delivery of products and services to all of its customers. Product ordering systems and ongoing follow-up with Vendors allow us to consistently meet customer's needs. Rob Comartin personally coordinates all mechanical and instrumentation procurement and installation to ensure everything required for the job is on hand when needed. We employ a staff of skilled engineers, technicians, and certified operators to ensure we are able to deliver projects from design to fully operational.

Customer Support

With our knowledgeable staff and engineers, Pure Elements™ is able to provide superior service to ensure adequate and timely delivery. Pure Elements™ offers support during normal business hours; as well as operates a 24-hour emergency line. Help and trouble-shooting is just a phone call away. Our technicians can travel to your site on short notice, if required, to complete emergency repairs or installations, and conduct site-specific training.

Project Delivery Territory

We provide sales and service to a geographic region that includes Western Canada (Saskatchewan, Alberta and British Columbia) and the Territories (Northwest Territories and Nunavut). Manitoba and Yukon Territory will be added in 2017.



Customers

Pure Elements™ customers include:

Industrial / Commercial / Municipal

- Commercial
- Developers
- First Nations/Aboriginal Organizations
- Industrial Facilities
- Mining
- Power Generation
- Food Processing & Production
- Agriculture
- Municipalities
- Oil & Gas
- Camps

Specifiers and Decision-Makers & Others

- Companies with a need for a team to perform Research & Development activities
- Design Engineers
- Consulting Engineers
- EPC Engineering firms
- Government Agencies who approve and permit treatment facilities

Cargill · De Beers Canada · Black & McDonald · Canadian Natural · Dow
Town of Sundre Visit.Live.Explore. · SNC·Lavalin · High River · Alterra Power Corp

Innovations

AquaTrack™

Pure Elements Environmental Solutions™ has partnered with Jumo, a German company specializing in instrumentation and process control to create **AquaTrack**™. Over the past five years both companies have interacted in a vendor/client relationship, exploring the municipal and industrial water and waste facilities market in Western Canada. During this partnership, both companies have identified the need to bridge the gap between current technology advancements and what facility operations can feasibly achieve with manual and human-driven processes. The collaboration between Jumo and Pure Elements™ addresses the following improvements: migrate from manual testing to automated, reliable and repeatable testing, migrate facility operations and management from paper/spreadsheet driven to data and analytics driven.

The overall **AquaTrack**™ hardware and software system will define and enforce processes and solutions meeting regulatory standards, and the needs of public stakeholders. The solution has the potential to benefit both countries, and is of international significance, in many aspects, including the ability to offer real-time information in real time.

We have assembled a well-rounded team skilled in project management, civil, environmental, municipal, mechanical, and electrical engineering, software development, and all aspects of instrumentation and facility operations. Our experience in past projects has put us in a favourable position to undertake the development of new tools to satisfy the ever-changing utility market.

Our partner's capabilities bring a valuable European perspective with time-tested processes, to solidify project success. We have developed a strong relationship with Jumo, by addressing market needs with solutions, rather than approaching the partnership with a purely revenue-driven focus. Our mission statement reflects our founding principles, and is remarkably similar in some aspects to our partner company.

BeAST™

BeAST™ technology developed by the National Research Council (NRC) uses microbially catalysed electrochemical reactions to achieve high rate waste degradation, transforming organic waste into biomethane. The process is energetically net-positive, works efficiently even at low temperatures, and energy produced can be further utilized for heat or electricity generation. Biomethane production from sewage helps to avoid methane release to atmosphere from anaerobic sewage lagoons common in northern communities as well as to reduce GHG emissions through decreased consumption of fossil fuels.

Many small and remote communities in Canada, including those in the Canadian Arctic, use waste water lagoons. Most existing lagoons cannot produce effluent with quality parameters that conform to Environment Canada's standard, nor can some communities meet the new Federal Wastewater Effluent Discharge Guidelines. BeAST™ technology brings significant efficiencies and innovations to the waste treatment process, offering simplicity and lower costs compared with conventional wastewater treatment technology, improved quality, reduced secondary sludge, a net-positive energy return, and a reduction in greenhouse gas (GHG) emissions which in turn will help these communities attain their goals in wastewater treatment.

With researchers at NRC working hand-in-hand with Pure Elements™, as well as working closely with Kitikmeot Association and instrumentation partner, Jumo, the team offers a collaborative approach, covering a range of disciplines from engineering to scientific researchers, and experienced field operators and trainers, with solid experience delivering water and wastewater operational skills, training and capacity building to remote Northern communities. Pure Elements™ is well suited to carry out this project as we possess key experience required to not only operate but also design, build, setup, commission, and provide key operational training to communities to learn more about wastewater treatment technology, and water and waste operations, as a whole.

Research & Development

Investing in Research and Development allows us to forge ahead and predict future trends. In turn, this allows our customers to prepare for future regulatory changes or upcoming requirements. It allows us to work with partners to develop new and innovative products that offer our customers either cost benefits, quality improvements and operational efficiencies. The research and development projects we are currently working on are as follows:

Agraponics™

- Description: Thermal treatment of municipal waste, re-capture of thermal heat and electricity conversion to heat greenhouse, simultaneous removal of nutrients from water. The system, uses waste, makes heat and electricity, grows food, uses nutrients from nutrient-rich water (which is otherwise causing Alberta's lakes and streams to become eutrophic) and replaces that water with higher quality, higher oxygen water, thereby cleaning up the source.
- Partners: We are currently seeking partners for this project.

AquaTrack™

- Description: For municipal, industrial and commercial applications, **AquaTrack**™ crosses chasms with compliance hardware and software management systems.
- Offering 24-7 monitoring, the system also automatically uploads and securely stores collected data, while automatically generating compliance, safety, operational, performance and financial reports.
- **AquaTrack**™ can monitor and report on any aspect of your water, including volume, composition, flow and much more. **AquaTrack**™ can be accessed directly from your phone or tablet, making it ideal for field operators as well as system owners, regulators, and management. Reports generated with **AquaTrack**™ can be used as valuable budgeting, performance and future planning tools.
- Partners: JUMO Germany
- Demonstration: Sites, Alberta

FIREWALL™

- Description: Installed and used on-the-fly to prevent spread of wildfires.
- Partners: Monty Armstrong, Deputy Fire Chief, Rockyview County
- Stage: We are currently seeking partners for this project.

BeAST™

- Description: Bioelectrochemical Anaerobic Sewage Treatment technology.
- Partner: National Research Council of Canada
- Stage: Lab Bench and Alpha Prototype successful, Beta Prototype in planning stage.
- Demonstration: We are currently seeking two sites – one in Northern Alberta and one in NWT or Nunavut for large scale and small scale pilot systems.

Professional Affiliations and Certifications

With our ongoing training and certifications, our certified and qualified staff and operators provide you the best service based on the highest quality standards every time.

- Permits to Practice in Alberta, British Columbia, Northwest Territories and Nunavut
- Insured – Corporate Underwriting – CGL, E&O, Pollution Liability, Commercial Auto, Contractors Broadform
- ComplyWorks offers an easy to use, scalable, integrated, proactive web based risk management solution to help streamline contractor compliance management.

Proud member of:

MEMBER OF NFPA

COMPLYWORKS Get ready to work.

Alberta Onsite Wastewater MANAGEMENT ASSOCIATION

APEGA

AWWOA DEDICATED TO THE ESSENTIALS

NAPEG

BCWWA BC WATER & WASTE ASSOCIATION

APEG Professional Engineers and Geoscientists of BC MEMBER

Western Canada Water

Alberta Construction Safety Association

Health & Safety

Pure Elements Environmental Solutions™ is committed to providing a safe and healthy workplace for all our employees and contractors. We believe that all injuries are preventable and that excellence in health and safety is a key to our long-term success. Pure Elements™ is committed to compliance with all governmental agencies, regulations, and to industry Best-Practices. We utilize regular audits, inspections and weekly safety & operations meetings to communicate, monitor and improve our health and safety program.

We hold all personnel accountable for working safely, and we provide a safe work environment, enforcing safe work procedures and practices. Management and supervisors lead and demonstrate their commitment to health and safety by example, ensuring everyone understands their responsibilities to possess the necessary knowledge to work safely, to follow safe work practices and procedures, to refuse work considered unsafe, and to ensure the provision of a safe environment to allow all this to happen. At Pure Elements™, Health & Safety is held in as high a regard as productivity, environmental compliance and quality control.

All employees, regardless of position, are encouraged to contribute to improving the company health and safety program.

Safety Mission

At Pure Elements Environmental Solutions™, we believe "Safety begins with Me". Our Safety Mission is to be "the" exemplary company other businesses think of when it comes to safety in our industry. We pride ourselves on being proactive in all aspects of safety for our employees, subcontractors and the general public. Our safety practices are monitored to meet and exceed industry standards on an ongoing basis. We believe that no deficiency should be overlooked. We maintain communication within our company and share with others, our commitment to promote and maintain safety as our top priority. The end result of our diligent efforts serves as a foundation to support our corporate mantra – "Protect Public Health, Safety and the Environment."

Project Profiles

Municipal

Apple Creek

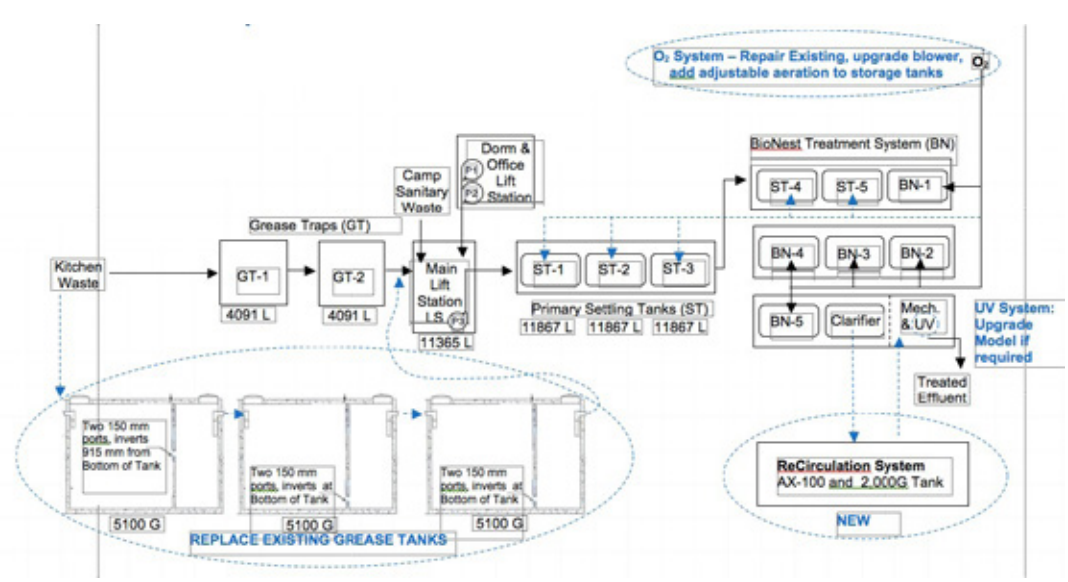
Event Centre, Club House Water & Wastewater Re-Engineering

Project description:

- Water Management, Site Planning, Re-Engineering, Project Management, Permits
  - Distribution line, Potable water storage reservoir
  - Wastewater Treatment (Re-design Level 3 Facility for Interim System reducing Operating costs by approximately 75%)
  - Fire Suppression & Emergency Pumping (reducing Stored Water Costs by 80%)
  - Backup power
- Civil site construction, mechanical and instrumentation
- Mechanical, Electrical, Civil, process/municipal engineering

Total Project Value:

1.5 million



Industrial

Toba 28k (Alterra Power/SNC Lavalin)

Toba Inlet, British Columbia

Project description:

- Upgrade Class II Water Treatment & Wastewater Treatment Facility to comply with regulatory permit and potability requirements
- Supply, install, commission and train workers on new incineration equipment and handling of site hazardous waste
- Infrastructure Management & Operations, Power Generation, Fire System, Propane Supply, Incineration & Waste Management, Camp Mechanical, Water, Wastewater, Float Camp Barge

Project Owner/EPC Firm

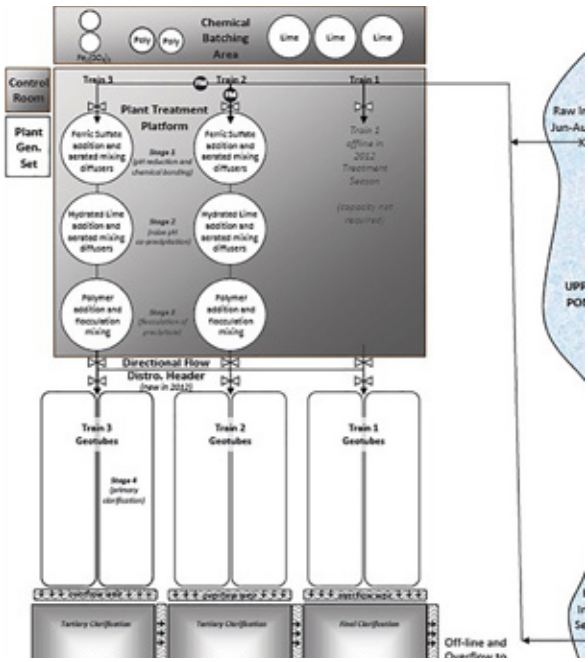
Alterra Power/SNC Lavalin

Type of system and size:

198 man camp system & Float Camp Barge - upgraded wastewater treatment, completed operational and process changes for water plant to achieve potability status, system facility and infrastructure documentation.

Created facility reports and documentation:

- Safe Work Procedures
- Reports
- SOP's
- Facility Documentation
- Preventative Maintenance Schedule
- Preventative Maintenance Procedures for:
  - Water Plant
  - Wastewater Plant
  - Power Supply System
  - Fire Sprinkler System
  - Heating System
  - Waste Management
  - Camp Waste/Incineration
  - Hazardous Waste Management



Mining

Tundra Mine Wastewater Treatment Plant

Tundra Mine Site, Northwest Territories

Project description:

Treatment of nearly 1,000,000 m^3 of tailings water at Tundra Mine, NWT – 0 permit exceedances at flow rates up to 5,000 gpm.

The contractor that was previously selected for the project was unable to deliver a water treatment facility meeting the requirements for the project and permits.

Pure Elements™ was called in last minute to build and operate a treatment system (see schematic illustration). Pure Elements™ was also instrumental in designing and fabricating a splitter header in order to allow for "on-the-fly" operational adjustments to process as well as preparation of all Annual compliance reports.

Type of system and size:

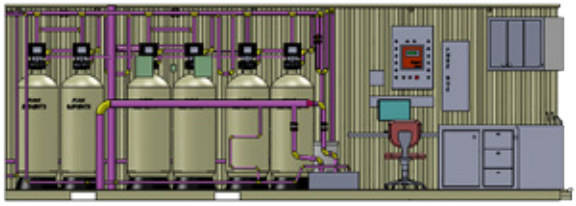
- 5000 gpm
- Treatment of 1,000,000 m^3 of Tailings Water for arsenic, lead, zinc, and copper
- Discharge to Environment

Pumping Capability:

7.2 MLD

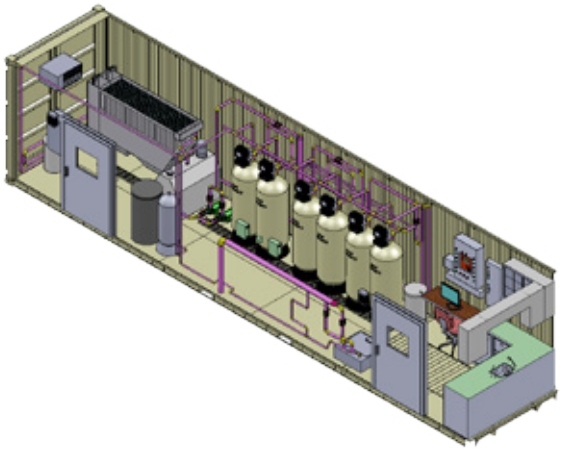
Municipal

Piloting and Design-Build



Project description:

Pilot, Design, Build, Site Civil Works, Commissions & Startup



Completion of a water treatment, storage, and distribution facility in the Hamlet of Bodo.

Pure Elements™ provided the preliminary treatment system design, a reject water storage/reuse system and a distribution system. Scope of work included:

- Recommend Treatment Process and successfully demonstrate via a pilot test
- Design, Engineering, all Regulatory permitting and construction of water treatment plant system and infrastructure
- Design, Engineering, all Regulatory permitting and construction of Electrical, Instrumentation, Mechanical & HVAC systems

Power

Site Support Services

Jimmie Creek, BC - Run-of-River Power Generation Project

Project description:

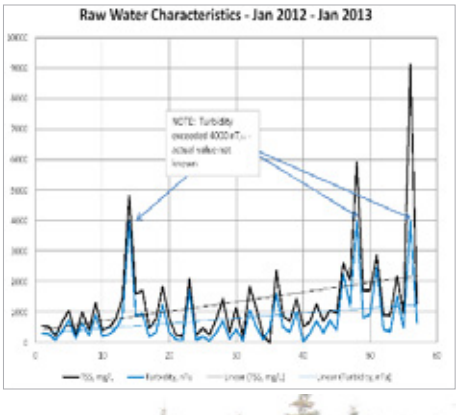
This project consists of site support services for a new renewable power facility in the Toba Valley on Jimmie Creek, approximately 80 km northeast of Powell River on BC's Sunshine Coast. The powerhouse connects to the existing 155 km, 230 kV, Toba Montrose transmission line then interconnects at Saltery Bay with the BC Hydro system. It has the capability to produce electricity for over 15,000 homes.

Project work included: Site Infrastructure Management, Water & Wastewater Upgrades, Facility Operation and Maintenance Management of site infrastructure including: camp, water, wastewater, site power, backup power, site heat, waste sorting and disposal.

An assessment of the existing wastewater system and performance was conducted. Other work included extensive upgrading of water and wastewater facilities, additional filtration, changes in chemical addition and the addition of ultra-violet disinfection as well as permitting with the BC Authorities.

Project Value:

$1.5 million



Mining

DeBeers Group

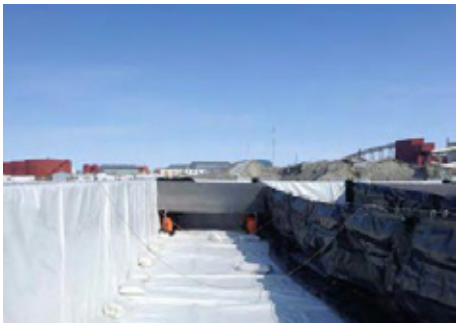
Snap Lake Mine, NWT

Project description:

Design, Build, and Commission a Water Treatment/combination Filtration-Clarification unit for Snap Lake Mine. The requirement was to provide for additional capacity for turbidity and total suspended solids reductions for flows on average from 10,000 m^3/day, with peaks reaching up to 15,000 m^3/day. Raw water quality and the treated objective was < 14 nTu for discharge.

Since the customer planned to de-commission the mine site the following year we proposed a quick and economical solution.

This innovative solution involved a 100,000 gallon Clarifier with double liner, featuring coagulation, flocculation, 6-stages of clarification and multi-stage filtration. The system was built in modular components (treatment processes were pre-tested at our shop) and then the entire system was packed on skids, trucked to Yellowknife and then flown to the site, all in 3-4 weeks at a cost of less than $300,000. The final discharge turbidity was < 2.0 nTu and allowed the water to be discharged as opposed to sending underground, flooding the mine. The system worked so well DeBeers decided to leave the system in place, using it for future site maintenance.



Pumping Capability:
15MLD (2755 gpm)

Project Value:
$300,000

Municipal

The Town of Turner Valley Waterworks System

Turner Valley, Alberta

Project description:

Pure Elements™ has been engaged to supervise operations of the Turner Valley's water treatment plant and distribution system. The system consists of 3 shallow wells, raw water storage reservoir, and the most intensive ground water monitoring program in Alberta. The water is treated by a conventional water treatment plant with a validated UV disinfection system.

Type of system and size:

Fully Automated Class II WTP

Emergency Response

High River Water Treatment Plant

High River, Alberta

Project description:

During emergency flooding in 2013, Pure Elements™ volunteered several level II and III Operators to Town of High River for 3 weeks (June-July, 2013) to support water plant staff in bringing the water system back online. This included developing new critical safety procedures for high strength chemicals and manual filter scour and backwash procedures, due to higher required volumes, in order to get the plant back up and running. Re-establishing the water treatment facilities meant both a change in chemical delivery type, as well as volume, as the existing chemical system was unable to keep up. A process was developed for receiving, mixing and injecting the new chemical and projections were right on target. Procedures for multi-stage process to safely conduct manual filter air scour and backwash procedures succeeded in getting the plant back up and running quickly.

Type of system and size:

Water Treatment for approximately 10,000 residents
And supply of large industrial clients

Municipal

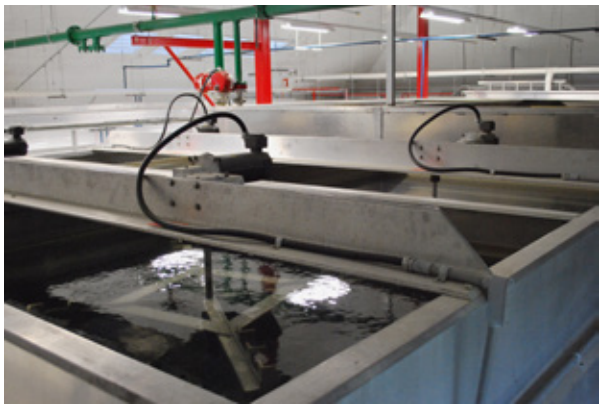
The Town of Sundre Water Treatment Plant
Sundre, Alberta

Project description:
Operated and Maintained Level II Water Facility for ATCO Energy Solutions

Wrote and ran the following programs for the facility:

- Preventative Maintenance
- Quality Control
- Monitoring Program
- Standard Operating Procedures
- Daily Operations

Type of system and size:
Town of 2200 people, 700+ connections



Municipal

Monterra at Cochrane Lakes

Cochrane, Alberta

Project description:

- Design-build-operate services for water and waste water treatment facilities
- Operations and maintenance of facilities around the clock
- Emergency response services for WTP & WWTP facilities, and other emergency services
- Piloting and design services for various water projects
- Training, development and securing of funding for user-friendly operator training program for Northern operators. This is a two year program designed to offer practical experience and on-the job training required for an operator to obtain Level I Certification. Additional training for Level I to Level II is currently being developed

Type of system and size:

Fully Automated Class II- WTP using DAFOutput Capacity of 40 L/s

Industrial

Canadian Natural Resources Ltd.

Fort McMurray, Alberta

Project description:

Built one mile of 10” pipeline in 3 days for a temporary application

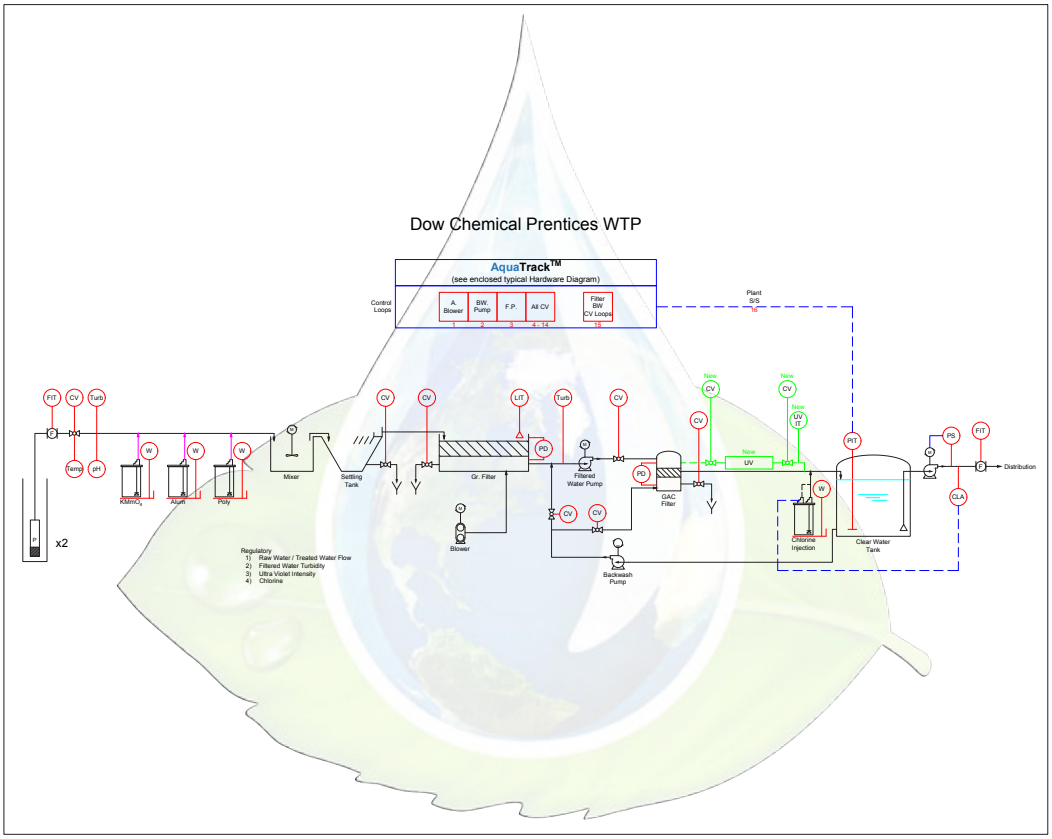
Project owner and contact information:

- CNRL – Canadian Natural Resources Ltd.
- Storm water piping for pond – rental pump package

In 2014, Pure Elements™ built a mile of 10” pipeline in 3 days at CNRL Horizon in order to discharge water from a storage pond on an emergency basis. In less than 7 days qualified for Comply Works, obtained pre-site entry qualifications, coordinated worker drug and alcohol testing, packed trailers of rental equipment, piping and valves and headed to site. Received commendation from CNRL Site Safety Superintendent for JHA submissions.

Type of system and size:

Handled runoff water for entire site



Industrial

Dow Chemical Canada ULC

Prentiss, Alberta

Project description:

Operates and Maintains Level II Surface Water Facility for Dow Chemical Canada ULC

Ran the following programs for the facility:

- Preventative Maintenance
- Monitoring Program
- 3 Stage Chemical Addition
- Coagulation/Floculation
- Clarification
- Rapid Sand Filter made up of Anthracite and Sand
- Carbon Filtration(taste/odour)
- Chlorination

Emergency Response

Millarville
Millarville, Alberta

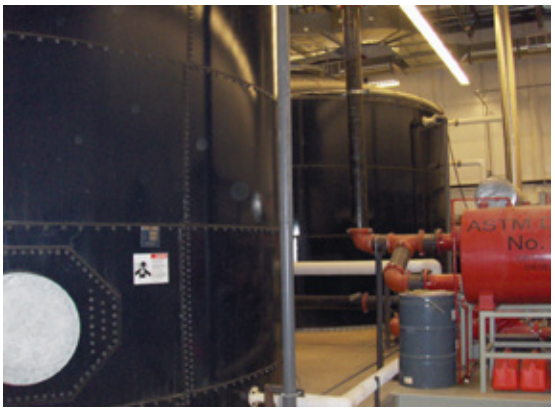
Project description:

During flooding in 2005 and subsequent flooding in 2006, the existing weir control structure at Millarville Crossing's stored raw water reservoir failed. Working with Westhoff Engineering, Pure Elements™ made improvements to the design then managed and completed the re-construction project. Pure Elements™ was instrumental in overseeing the re-design and construction of the reservoir weir and spillway with sheet pilling seal. Services also included soil clean up, removing nutrients in runoff and installation of erosion control products.

Designed and implemented:

- Dam
- Aeration System
- Shoreline Protection
- Raw Reservoir Iron Removal

Working with the First Nations



Grey Eagle Resort and Casino
Calgary, Alberta

Project description:

The Grey Eagle Casino was a new commercial venture by the Tsuu T'ina Nation, in partnership with Sonco Gaming (Alberta) Ltd. This casino and hotel/entertainment project is located on Tsuu T'ina lands in southwest Calgary.

- Pure Elements Environmental Solutions™ commissioned, operated and maintained the MBR (Membrane Bio-Reactor) System for the Casino as well as groundwater supply, treatment and distribution systems
- The facility was designed for up to 50,000 gallons per day, but sometimes saw 100,000 gallons overnight
- Treated effluent water was delivered to tile fields
- Completed upgrade of water treatment filtration and iron/manganese removal equipment with great success. Operated and maintained all aspects of both water and wastewater systems

The complete wastewater system includes an in-ground equalization and sludge storage basin, lift pumps, and MBR package system (fine-screen, anoxic and aerobic biological treatment reactors, and a two-cell membrane system followed by disinfection). Effluent is discharged to a subsurface disposal system and ultimately drains into Pine Creek. The system has been meeting all discharge requirements since it became operational in 2007.

Type of system and size:

Fully Automated Class II WTP
Fully Automated Class II WWTP

First Nations Training

Tli Cho

In November of 2009, Pure Elements™ signed a Joint Venture with Aboriginal Partner, Tli Cho, to offer the Aboriginal and Northern Operator Training program. Pure Elements™ spent considerable time and effort (one year) in meeting and in discussions with various government and aboriginal groups and organizations in order to understand and effectively accommodate the unique needs of the Northern and aboriginal communities in obtaining certified operators, and retaining certified operators.

The program consisted of a two year training program training based at the Deton Cho Training Centre, with two days of courses every two weeks and the rest of the time spent on the job training at the Tundra Mine site. The students stayed at the training centre and there was approximately 30% classroom time and 70% practical field training. The response was overwhelmingly positive.

The overall objective was to develop employment opportunities for aboriginals such that they can live and work in their community, or close to home, or obtain employment as certified operators for Northern industry, such as in mining effluent treatment, projects such as Tundra, or other mine remediation projects or water and wastewater services type projects for permanent and temporary camp or community systems involving water and waste water treatment.

Tsuu T’ina

In conjunction with Tsuu T'ina Nation, Pure Elements™ provided a training course that was developed to ensure that staff at the new Grey Eagle Resort and Casino were properly ticketed and provided with all of the correct equipment to successfully complete operations and maintain the infrastructure of their new Water Treatment Plant and Fire Hall. Casino staff were instructed on how to maintain their own wastewater treatment system, for confined space entry, acid washes, chemical usage, and correct safety and maintenance procedures. Pure Elements™ also arranged to participate in the first few acid cleanings of the MBR membranes which involved the use of SCBA and confined space entry. Facility Manager Jack Minifie is quoted as saying, "Pure Elements™ was very patient and thorough to ensure the casino's staff were trained to perform the work properly and safely".

We provide safe, clean water

for the protection of

public health, welfare

and the environment.

Pure Elements
Environmental Solutions™

Suite 28, 6420-79th Avenue, SE
Calgary, AB CANADA T2C 5M4

Tel: 403.724.0014

pure-elements.com