

**BARRICADE**

Barricade Environmental Ltd.

barricadeltd.com

COMPLETE FLUID MANAGEMENT

Providing all Aspects of Fluid Transfer Services

WATER DIVERSION

SPILL ISOLATION

ANY TYPE OF INDUSTRY

EMERGENCY RESPONSE



Barricade offers a complete range of Fluid Management Services to customers in the Oil & Gas, Forestry, Mining, and Emergency Response Industries, as well as municipalities. We have the experience and ability to provide all aspects of fluid management from obtaining permits and arranging the logistics of transferring the water. We offer full set up packages prior to frac operations, where we set up transfer operations and equipment, containments, as well as restraints for high pressure iron.

Barricade has been in service for 5 years, and our affiliate company in Canada; Big Bear Energy Services, has been in operation for 15 years.

We are a medium sized company; with an ownership group that is involved in daily operations; allowing us to focus on providing the highest level of services, as well as utilizing our resources to provide a large quantity of equipment, and exceptional safety standards. We operate under policies and procedures that we have developed over the past 7 years, adapting to the experience we have gained to create functional SOP's.

Our transfer pumps can be controlled and monitored remotely, utilizing an automation system designed specifically for us. Due to safety, we do not automate the operation of valves. We have automatic RPM control functions, tank level monitoring, as well as client specific log in's for the ability to monitor rates, pressures and flow meters.

OUR ENVIRONMENTAL EXPERIENCE

AND OUR ATTENTION TO DETAILS AND REGULATIONS:

- Produced and fresh water transfers require a high level of regulatory compliance, causing us to treat all transfers as though they are produced water.
- Secondary containments are placed at all pump stations and whip checks are installed at all critical points. We utilize Department of Fisheries and oceans compliant intake screens, as well as hourly monitoring and per job reporting of flow rates to the regulator. Any spills are immediately reported to the regulator.
- Emergency response packages mitigation plans are compiled for quick action.
- Remote access sources and drastic elevation changes are executed with a high level of detail and specifications. We utilize communication devices as well as off road equipment.

OUR FLUID MANAGEMENT FLEET

CONSISTS OF THE FOLLOWING:

- 3 Rig Up Crews, and the available Manpower to handle 4 full frac jobs. (Subject to fluctuate)
- Approx. 30 miles of 12" LF, 40 Miles of 10" LF, 10 - 12"x10" 600hp pumps, 18 - 10"x8" 325hp pumps; and a strong network for obtaining more equipment for rental or purchase.
- 2" up to 10" Lay Flat Hoses, 10" Short Hoses
- 2" up to 8" Suction Hoses, Suction Screens, Suction Floats, and Water Safety Packages
- Flowmeters, Y Connections, Whip Checks, Misc Fittings, and Anti Erosion Tarps
- Filter Units, Generators, Submersible Pumps, Road Crossings
- Fire Safety Packages, Bear Deterrent Packages, Chain Saws
- Gooseneck Trailers, and Skid Steers with Attachments
- Off Road Remote Access Equipment and Safety Supplies
- 1-Ton Trucks, 24 Hour Crews, Radios, and Boosters
- AST's and Lay Down Style Frac Tanks Complete with all Necessary Manifolds
- Frac Fluid Super Heaters 11 MBTU – 40 MBTU, Propane and Natural Gas