



**You can rely on CEDA Environmental Fluid Solutions (EFS) to be aligned with your business objectives and perform diligently to ensure your fluid handling requirements are managed efficiently. EFS delivers services with an emphasis on quality, safety, fiscal control, schedule efficiency and environmental compliance.**



CEDA International Corporation is one of the largest providers of specialized industrial maintenance, turnaround and construction services in North America. Since 1973, clients have relied on CEDA to deliver outstanding technical services that optimize their investments, improve their competitive position and increase their long-term success.

CEDA employs talented and passionate people who are committed 24/7 to delivering world class service through innovative technologies, equipment and processes, safely every time. CEDA is comprised of several subsidiary companies and has offices throughout Canada and the United States.

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**YOUR PARTNER FOR  
EFFICIENT FLUID MANAGEMENT.**





# WATER MANAGEMENT SYSTEMS FOR TODAY'S ENVIRONMENTAL CHALLENGES.

CEDA Environmental Fluid Solutions (EFS) is a self-performing contractor specializing in the delivery of fluid handling services for clients throughout Canada and the United States. EFS has assembled a talented and experienced team committed 24/7 to delivering turn-key services to assist energy, mining and forestry companies as well as municipalities with the management of their fluid handling systems. EFS has long term contracts with a number of leading companies and was involved in the world's first reclamation of an oil sands tailings pond near Fort McMurray, AB.

## DREDGING

EFS has been delivering dredging services to clients throughout Canada since the 1980's. EFS operates a fleet of more than 20 dredges ranging from 6" to 36" in size. Dredges are available for rental and leasing. EFS supplies skilled operators with dredges for 24/7 operation. Dredge maintenance is also provided as well as floating pipelines and catwalks. EFS also designs and manufactures dredges to meet specific client specifications. Manufacturing facilities are based in Edmonton, AB and Louisiana, USA. EFS has the capacity to build up to 18 dredges per year and offers complete replacement parts sales as well as installation and maintenance services for various dredge owners and operators. On-call troubleshooting services are also available.

## HIGH VOLUME FLUID HANDLING

EFS provides skilled technicians and equipment for high volume transportation and handling of fluids for industrial facilities and municipalities concerned with sewer and bypass water systems, piping refurbishment, water filtration, site de-watering and flood control. EFS also provides equipment and people to manage long distance slurry transportation. EFS fluid equipment includes 60 diesel driven pumps (size 4" to 18" with flow rates from 100 gallons/min to 20,000 gallons/min). EFS also owns a number of Sharples PM75000 unitized centrifuge systems, a plate and frame mobile filter press unit and 2 filtration skids and with more than 12 support pumps. EFS uses permanent and temporary high density polyethylene (HDPE) piping and fittings to support all dredging, pumping and fluid transmission applications.

## SKILLED PEOPLE

EFS is comprised of numerous specialists including service technicians, fluid handling technicians, welders, riggers, millwrights, truck drivers and engineers. Our specialists work together to perform dredging, pumping, fluid transmission as well as maintenance and trouble shooting for industrial facilities and municipalities.

## SERVICES AND TECHNOLOGY

### Fluid Management Services

- Dredging and Dewatering
- Portable Centrifuge Systems
- Process Flow Filtration Units
- Deep Well and Storage Cavern Pumping
- High Volume Water and Wastewater Pumping Systems
- High Density Polyethylene Pipe Rentals, Sales and Fusion
- Custom Dredge and Pumping System Design and Fabrication
- Pump and Pump Skid Rentals
- Preventive Maintenance Programs
- Energy Efficiency Improvements
- Rebuilds and Repairs
- Filter Media Change Out
- Process and Equipment Evaluations
- Service Contracts

### Specialized Equipment

- 20 Dredges, sizes from 6" to 36"
- Dredges include Electric, Diesel, Self-propelled, Amphibious, Amphibex, Mudcats
- Numerous Booster Pumps
- Numerous Process Flow Filtration Units
- Plate and Frame Mobile Filter Press Units
- 2 Sharples PM75000 Unitized Centrifuge Systems
- 2 Filtration Skids with 12 Support Pumps
- 60 Diesel Driven Pumps, sizes from 4" -18"
- Flow Rates from 100 gallons / min to 20,000 gallons / min.

### Project Management

- Constructability Reviews
- Planning and Scheduling
- Budget Preparation
- Subcontractor Management
- In-house Engineering and Quality Control
- Project Startup and Commissioning
- Project Procurement

## SUCCESSES

### Pond Reclamation

#### PROJECT HIGHLIGHTS

- First oil sands tailing pond to be reclaimed
- 7,000 manhours
- Zero TRIF
- Dredging, pumping and pipeline services
- 2 - 18" dredges, 1 amphibious dredge
- Numerous pumps from 6" to 18"
- 2 crews, working 24/7
- Project on-going since 2007

#### CLIENT VALUE

- Adapted to challenging pond conditions
- Project delivered on-schedule

### Dredge Manufacturing — 36" Electric Power

#### PROJECT HIGHLIGHTS

- 4 units manufactured over 2.5 years
- 36" dredges
- 40,000 US gallons/min, nominal pumping velocity
- Dredges can be operated remotely
- 10,000 manhours per dredge
- Zero TRIF

#### CLIENT VALUE

- Dredges exceeded client performance requirements
- Dredges built to aggressive timeline

### 2009 Tailings Dredging and Pumping Program

#### PROJECT HIGHLIGHTS

- Supplied 20 12X12 skid packages - pumps used in various locations
- 20,000 manhours
- Zero TRIF
- Design and build of pump stations/dredge
- Piping fusion and pump system design
- Contract to operate and maintain until 2012

#### CLIENT VALUE

- Dredging exceeded client expectations
- Project delivered on aggressive timelines

### Mine Tailings Removal

#### PROJECT HIGHLIGHTS

- Removal of 100,000 cubic meters of tailings
- Remote mine site in northern Ontario
- 60 days of 24/7 field work
- Zero TRIF
- Dredging and de-watering services

#### CLIENT VALUE

- Equipment exceeds performance requirements
- Project delivered on aggressive timelines

