A new era in dredging for Eastern Canada
Subjects covered

- Definition of dredging
- Main dredging activities
- Type of dredging and equipment
- Dredging markets
- Market growth factors
- Operating costs
- Technological equipment available in Eastern Canada
- Trailing suction hopper dredge in action
- Opportunities for a trailing suction hopper dredge
- Conclusion
Definition of dredging

Dredging involves extracting materials located on the bottom of a body of water to allow port engineering work (digging ponds or channels), maintaining river or sea channels borrowed by ships when filled by sediments, carrying out landfill operations to replenish the beaches, gaining land on the sea or meeting the different needs of the construction industry.

Dredging is generally done by specialized ships and dredgers whose characteristics depend on the nature of the work and the environment in which it must be performed: hydraulic, mechanical or suction dredge, vessel capable of maneuvering or a single barge. The extracted materials are stored on board to be transported further or discharged through pipes. According to its characteristics, the dredge performs his work while being static or moving.
Main dredging activities

The dredging market consists of six (6) segments

- Trade capital
- Trade maintenance
- Energy
- Coastal protection
- Urban development
- Leasure
Type of dredging and equipments

Mechanical
- Bucket dredge
- Backhoe dredge
- Barge

Hydraulic
- Pump dredge
- Trailing suction hopper dredge
- Cutter dredge
Dredging markets

The international dredging market represents over 14.5 billion US dollars

North America - 8%
Canada - 0.5%
Quebec - 0.075%
Market growth factors

- Growth of world population
- Urbanization
- Global warming
- Development of marine industry
- Increasing global consumption of energy and metals
- Increased tourism

A 5,4% annual growth is anticipated until 2018.
Operating costs

Cost breakdown of the four (4) major dredging companies

- Wages: 18%
- Operating cost: 63%
- Depreciation: 10%
- Profit: 9%
Technological equipment

- Hopper capacity of 1,180 m$^3$
- Dredging depth 30 m
- Length 64 m x breadth 13 m

- Investissement of $25 M
- Dredge pump capacity of 5,500 m$^3$/h
- Draught of 4 m
Trailing suction hopper dredge in action
Opportunities for the OCEAN TRAVERSE NORD

The Ocean North Traverse could allow recovery of dredged material. Once vulnerable sites identified, it represents an effective solution to problems related to erosion, it can be used to establish buffer strips and / or perform the reconstruction of eroded banks.

60% of the coastline of the estuary and Gulf of St. Lawrence is eroding.
Opportunities for the OCEAN TRAVERSE NORD

The average size of freighters that carry annually six (6) billion tons of goods traded globally by water is increasing. For this reason, the depth of water is one of the best benefits of marketing that a port can provide its shipping and ship owner customers.

*Maintenance dredging of the Traverse du Nord ensures a depth of more than 12.5 m on 32 km, and allows 6,000 vessels annually.*
Currently all sediments from dredging operations in Quebec are transferred downstream or in other portions of the network.

In the port of Dos Bocas in Mexico, 300,000 m³ of dredge sediment were discharged on land 500 meters from the dredge site through the hydraulic unloading system of the OCEAN TRAVERSE NORD.
Conclusion

The dredging market in eastern Canada, particularly in Quebec, approximately $10 M, is very small which makes it difficult for dredging companies to be profitable and provide advanced equipment.

Ocean Dredging DSM is privileged to benefit from the strength of a group such as Ocean in order to continue to provide dredging services in eastern Canada and advanced equipment. Ocean is recognized as a leader on the St. Lawrence and Great Lakes, employs over 700 people and owns the largest fleet of marine equipment in Canada. Through its various sister companies, it offers a wide range of integrated services.
Ocean – Marine Solutions

**Services offered:**

- Marine equipment rental
- Modular floating wharves
- Harbour towing
- Refloating
- Shipbuilding and ship repair
- Marine transportation
- Even more...
Ocean – Marine Solutions

- 7 dredges
- 1 trailing suction hopper dredge
- 31 tugboats
- 30 workboats
- 8 pilot boat
- Over 350 barges
- 1 shipyard
- 1 multifunctional workshop
- 1 mobile repair unit
Discussion
Contact

Steve Côté, BAA, MBA
Director, Business development

105 Abraham-Martin Street
Suite 500
Québec (Québec) G1K 8N1
www.groupocean.com

T.: 418 694-1414