

New Dredging Equipment: The MURDEN

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US Army Corps of Engineers
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Corps Navigation Mission

- Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems (channels, harbors, & waterways) for movement of commerce, national security needs, and recreation.



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How the Murden Came About

- Replacement for Fry
 - ▶ Past it's life expectancy (1944)
 - ▶ Fry updating = \$4.1 million, \$12,500 rental rate/day
 - Lifecycle cost = \$20 million
 - ▶ Replacing the Fry = \$10.5 million, \$10,000 rental rate/day
 - Lifecycle Cost = \$17.5 million
- Feasibility Study = 2 split hulls, 1 sidecaster, 1 debris removal



Dredge FRY



Dredge MURDEN



Role in the Corps' Minimum Fleet

- Shallow-draft Ocean bar channels along the Atlantic Coast
 - ▶ Industry = Limited to no capability
- Sidecaster would be used to dredge a pilot channel for the split hull dredge



Tech Specs

- Conrad Industries, Morgan City, LA
- Modeled after the Currituck
- Length = 156', Beam = 35', Depth = 11'
- Dredgeability depth = 5'
- Speed, Loaded = 10kts, Unloaded = 7kts
- Two drag heads, 12 cubic yards of material/minute

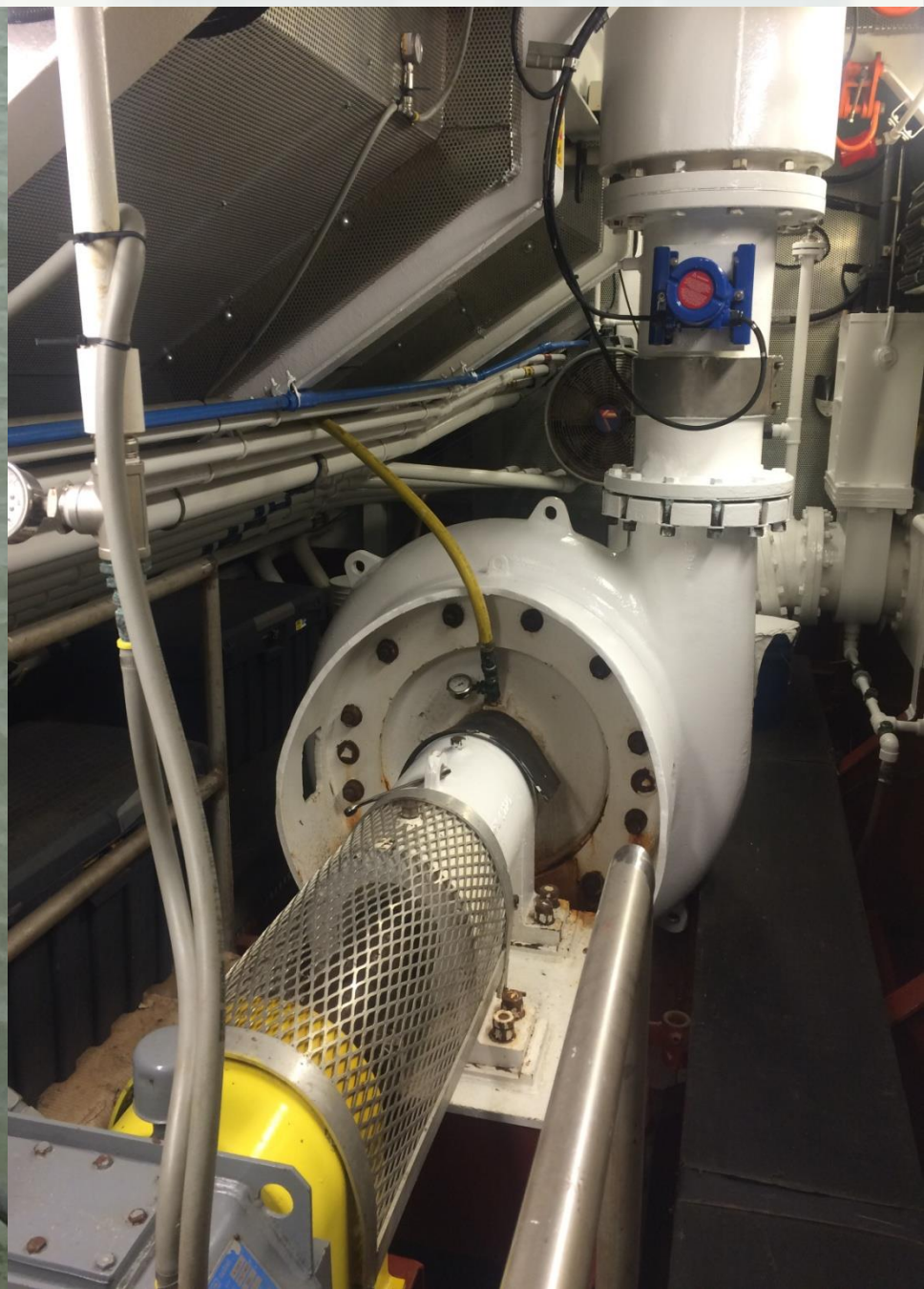


Tech Specs

Propulsion Engine

- Cummins QSK
19-m 760HP
@2100 RPMs





Crew

- Minimum 6 person crew
- Current:
 - ▶ 7 person crew working 8 days, two crews rotate
- No living quarters
- Galley and facilities







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Advantages

- Environmentally friendly
- Can be used for beach replenishment
- Ocean going
- Addresses a need that is of little interest to private industry
- Fragile wetlands or banks
- Other Waterway users are less impacted



Disadvantages

- Multiple trips due to dumping dredge material
- Draft increases as more material is dredged



Upcoming Schedule

Start Date	Stop Date	Done For		Estimated Quantity(cy)
		District	Job Name	
10/1/2015	10/31/2015	SAJ	St. Augustine, FL	53,670
11/1/2015	11/30/2015	SAJ	Ponce De Leon Inlet, FL	55,000
12/1/2015	12/31/2015	SAW	Carolina Beach Inlet, NC	42,000
1/1/2016	1/10/2016	SAW	Oregon Inlet, NC	16,789
1/11/2016	1/31/2016	NAO	Chincoteague Inlet, VA	35,600
2/1/2016	2/10/2016	NAO	Rudee Inlet, VA	19,543
2/11/2016	2/29/2016	NAB	Ocean City, MD	24,000
3/1/2016	3/31/2016	NAP	Barnegat Inlet, NJ	62,000
4/1/2016	4/30/2016	SAW	Oregon Inlet, NC	56,000
5/1/2016	5/31/2016	NAE	Hyannis Harbor, MA	56,700
6/1/2016	8/31/2016	SAJ	Jacksonville District	184,000
9/1/2016	9/30/2016	SAW	Oregon Inlet, NC	45,678



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Tour the MURDEN Video

<https://www.youtube.com/watch?v=tgHVaz1S3T0>



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Questions?



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