

US Army Corps
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An Overview of USACE Dredging Operations



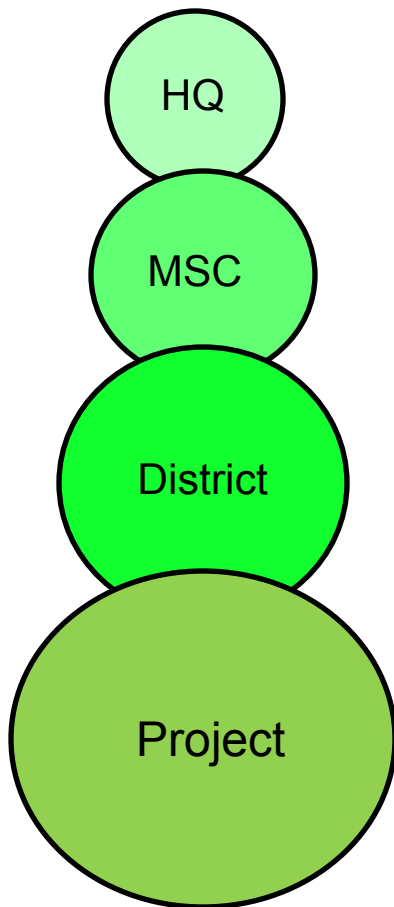
Presented by Mr. Thomas Verna





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Organization Hierarchy



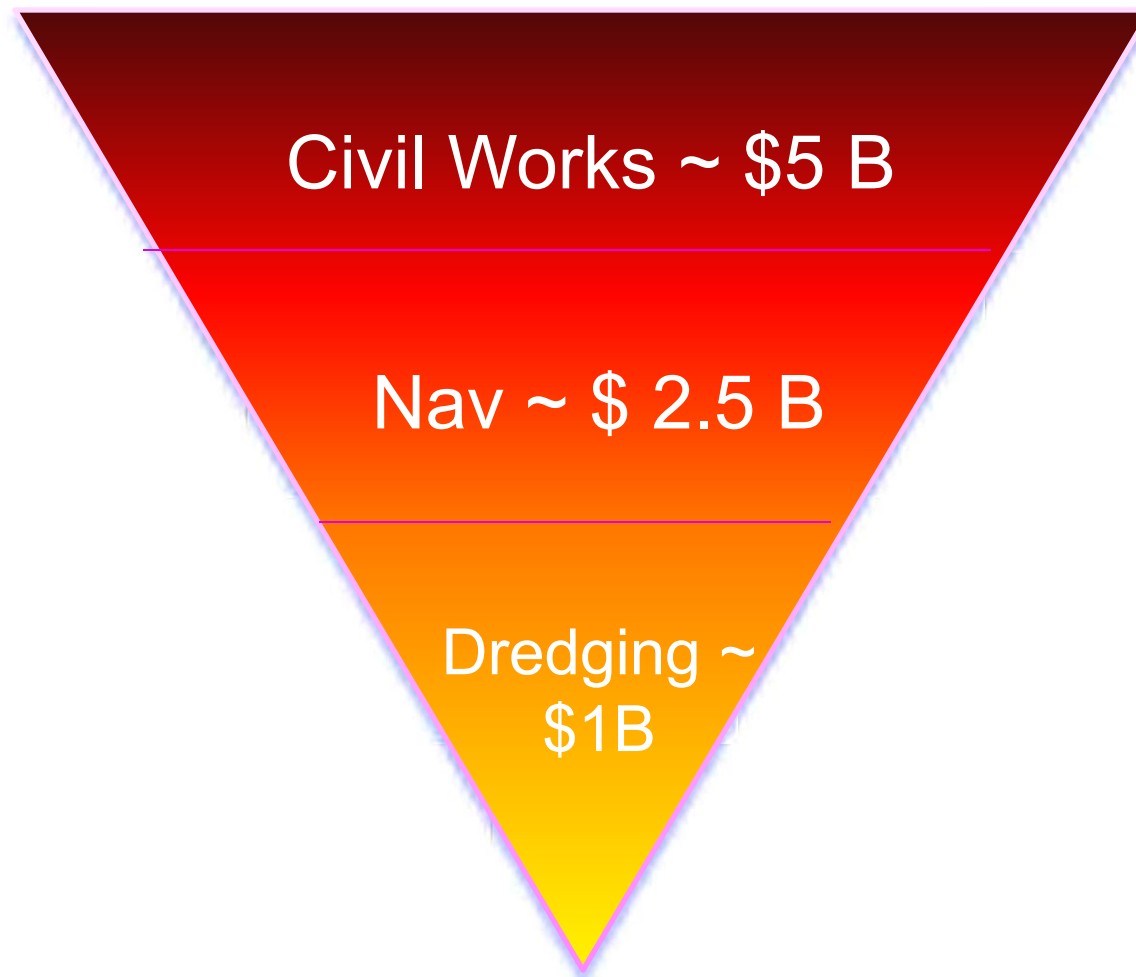
- OASA(CW)
- HQUSACE
- 8 Major Sub Commands or Divisions
- 38 Districts*
- Regions/Watersheds/Systems
- Projects

* not all districts perform dredging annually, 3 typically do not dredge at all

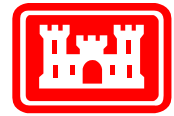
Funding Concept



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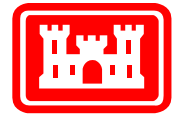
Dredging Definition



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“Dredging, *n* - the process of **excavating** sediments and other materials usually from underwater locations, including the **transportation** and **placement** (disposal) of the material - - - -for beneficial uses such as constructing new waterways, maintaining existing waterway dimensions, obtaining fill for land reclamation, beach nourishment, dike and levee construction, creating wetlands and marshes, and obtaining materials from borrow areas.”

Dredging of Channels & Waterways



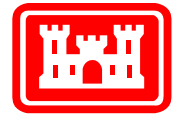
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WHAT DO WE DREDGE ?

Dredge Federal navigable waterways
and federal channels for:

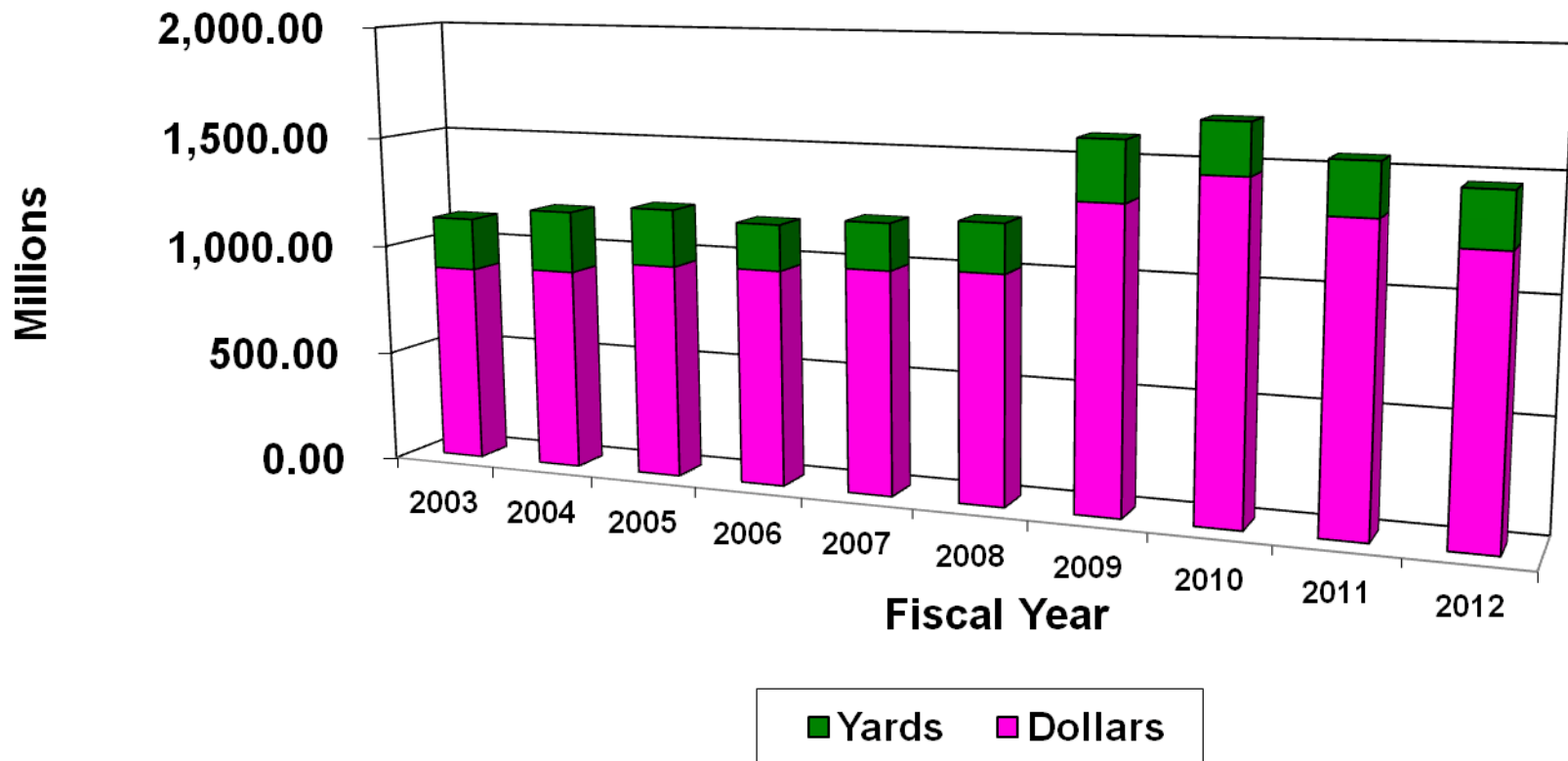
- **maintenance of existing channel dimensions**
- **construction of new channels**
- **urgent requirements**

National Dredging Program



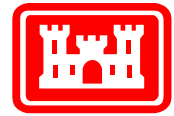
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Total Dredging FY 2003-2012



Note: 2005-2011 includes PL 84-99, PL 109-062 HSW(Katrina Supplemental), PL 111-5 ARRA

National Dredging Program

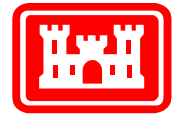


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DREDGING FY 12

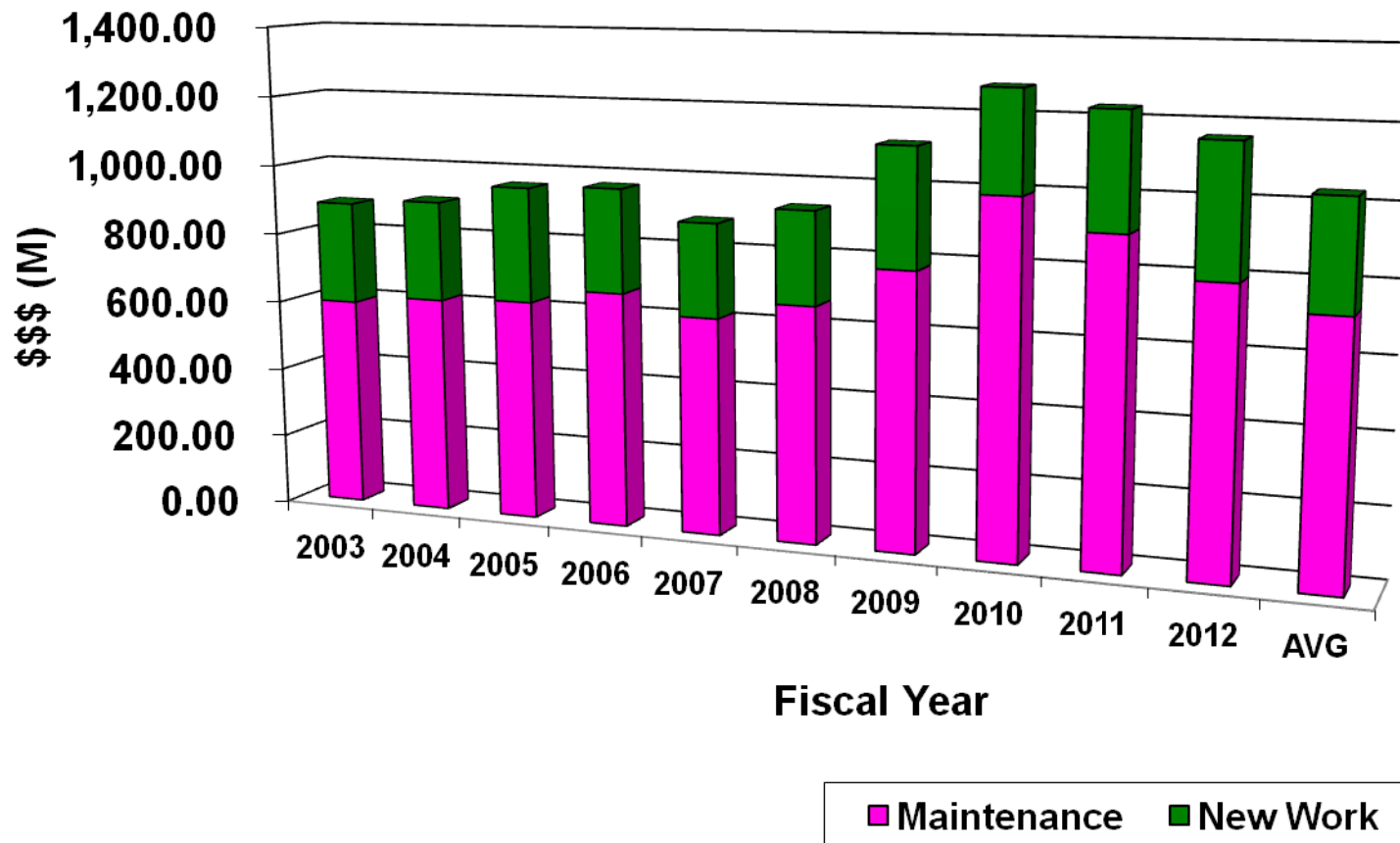
- Total dredging - \$1,220.1 million,
237.5 million cubic yards (\$5.14/CY)
- Maint - \$796.4 million (65.3%),
199.7 million cubic yards (84.1%)
- HSW/Emerg - \$60.9 million (4.9%),
16.0 million cubic yards (6.7%)
- New Work - \$362.7 million (29.7%),
21.8 million cubic yards (9.1%)

National Dredging Program

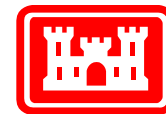


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Dredging Expenditures (\$\$\$) by Maintenance & New Work

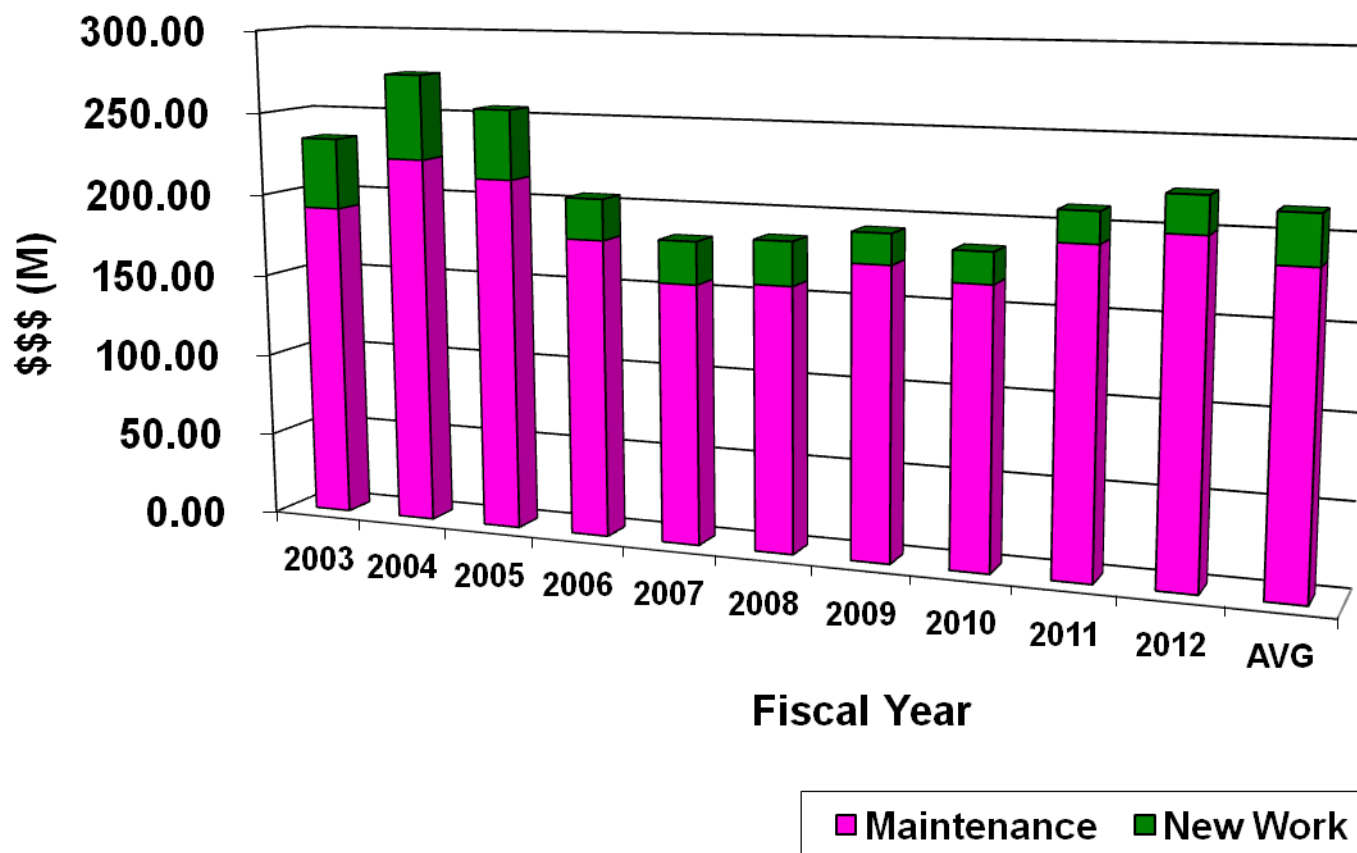


National Dredging Program

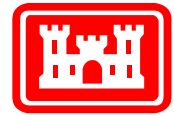


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Dredging Quantities (CY) by Maintenance & New Work



Dredging of Channels & Waterways



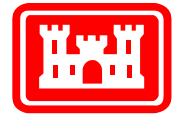
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HOW DO WE DREDGE ?

Dredging is accomplished by:

- Corps (Government owned) Dredges
- Private Industry Dredges

Hydraulic Pipeline Dredge



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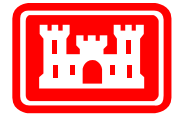
U.S. Hopper Dredge YAQUINA



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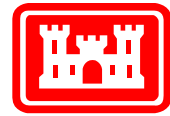
Bucket Dredge



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National Dredging Program



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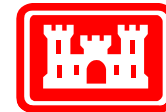
DREDGING FY 12

- Total dredging -\$1,220.1 million,
237.5 million cubic yards
- Corps - \$150.6 million (12.4%),
48.2 million cubic yards (20.2%)
- Industry - \$1,067.8 million (87.5%),
189.2 million cubic yards (79.7%)

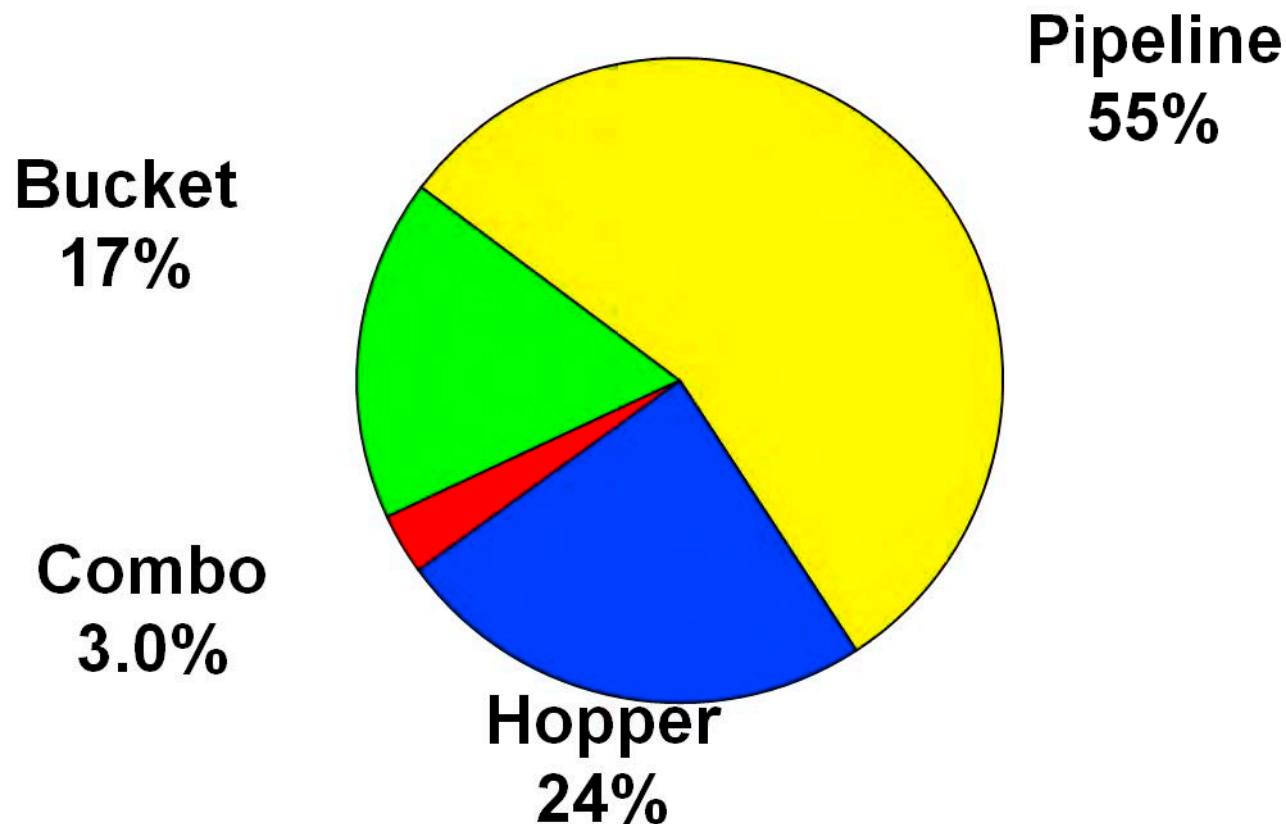
Corps = \$3.12/cy

Industry = \$5.64/cy

Dredging Performance By Type of Equipment (\$\$\$)

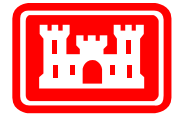


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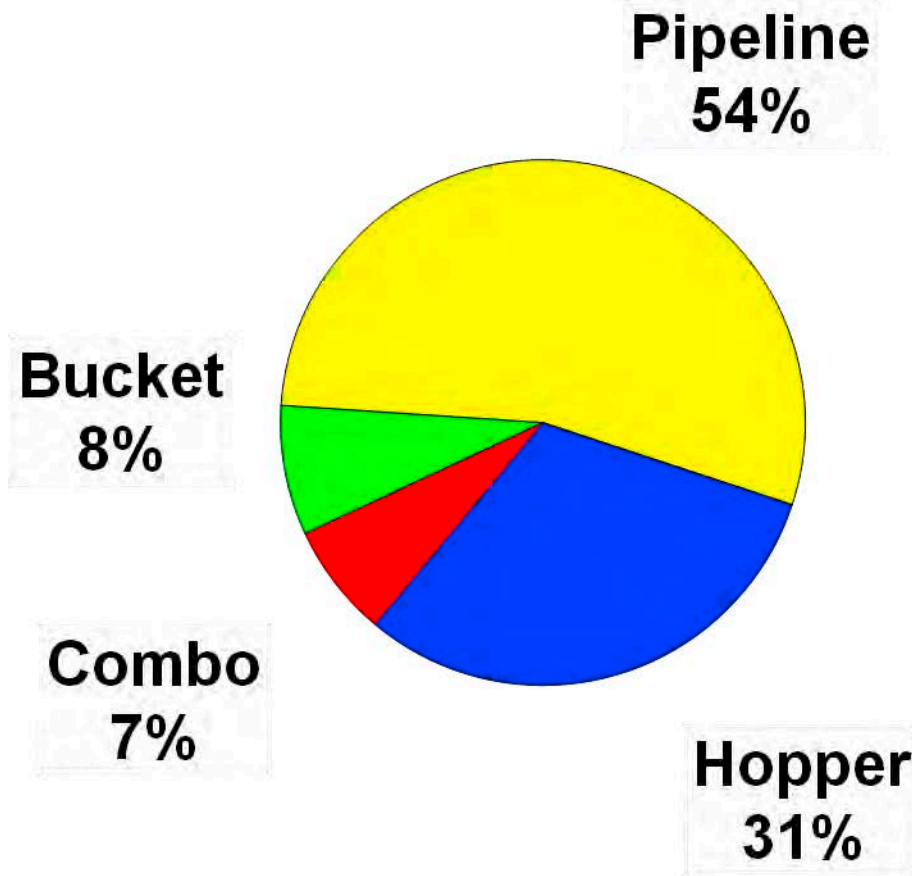


FY 2012 Winning Bids
Total = \$766,415,356

Dredging Performance By Type of Equipment (CY)

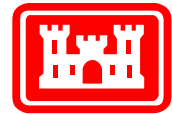


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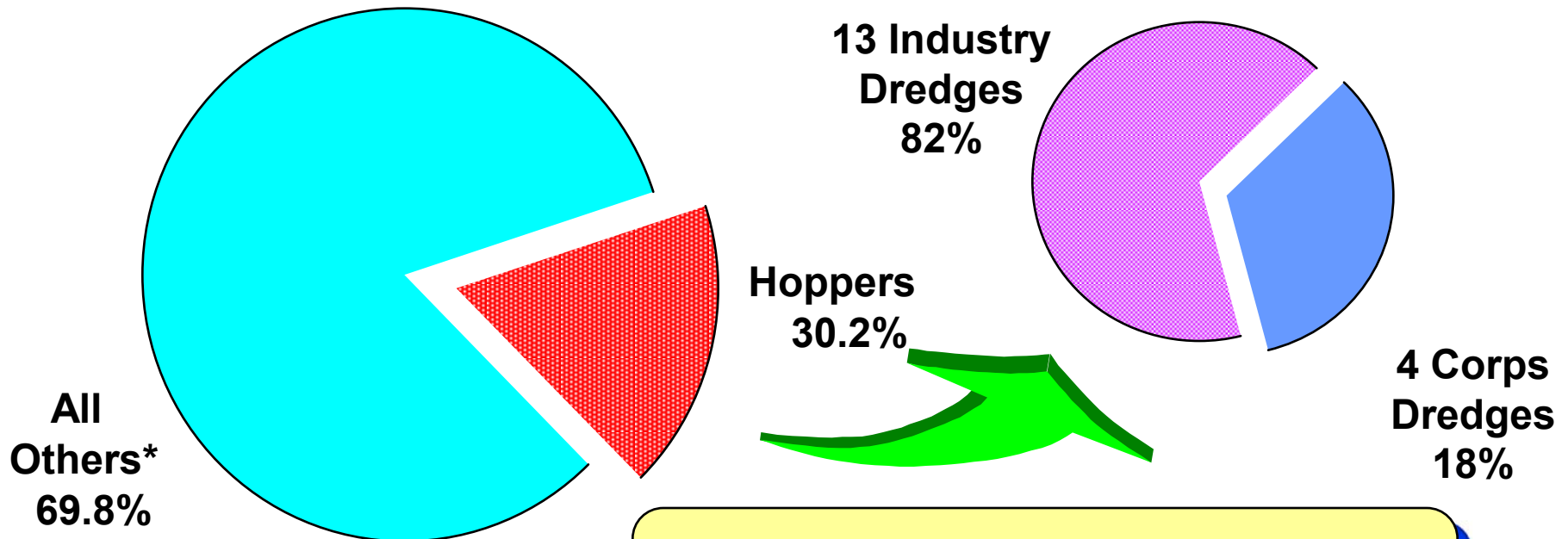
FY 2012 Winning Bid Quantity
Total = 151,645,335 CY

Dredging “Requirement”



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**Corps Total Dredging Requirement
~ \$1,220.1 M; 237.5 MCY (FY 12)**



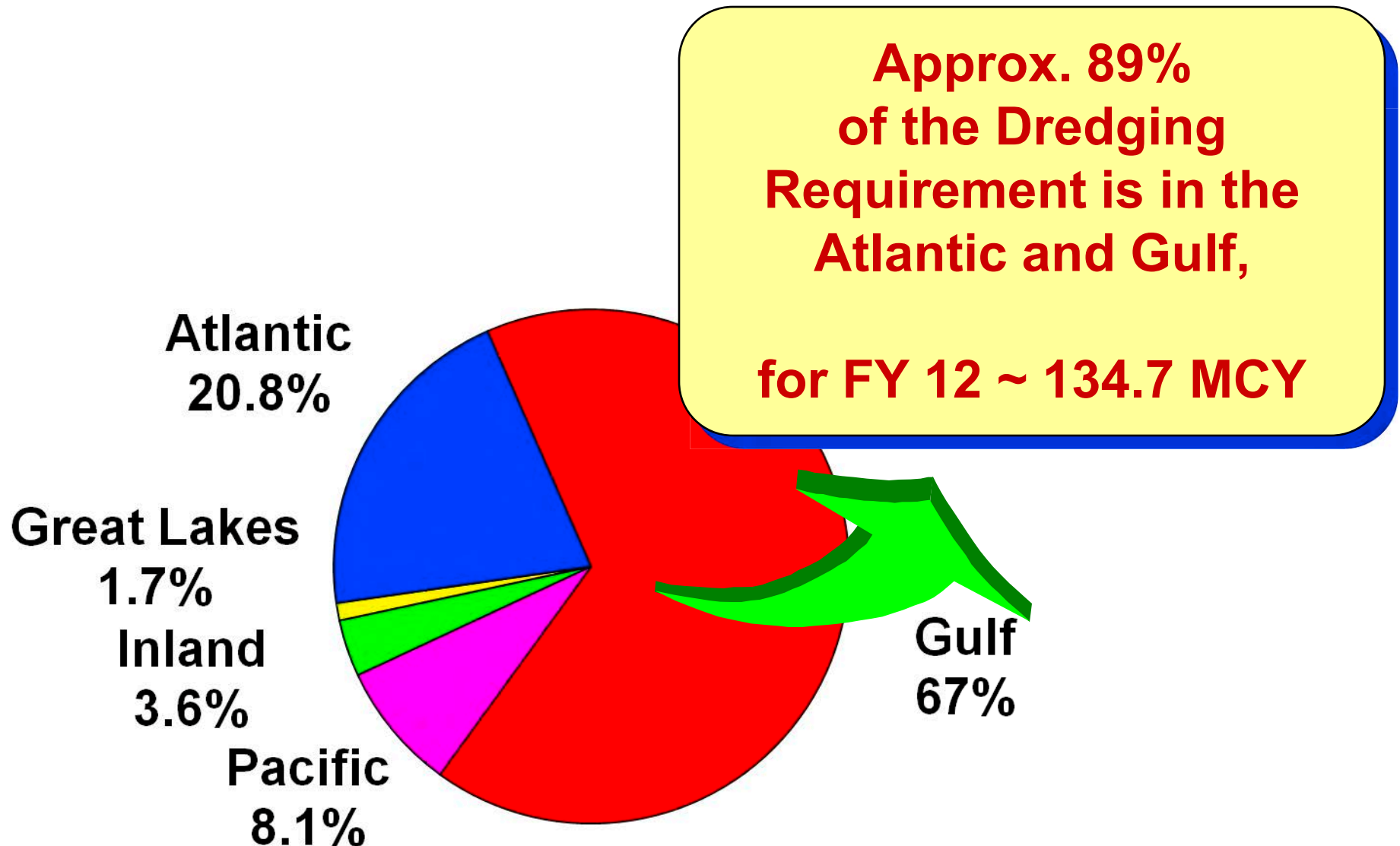
*Bucket, pipeline, dustpan,
sidescaster, special purpose

**Total Hopper Requirement
~ \$372.7M; 71.7 MCY (FY 12)
~\$5.20/cy**

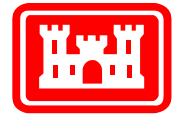
Dredging “Requirement” By Region



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BEACH NOURISHMENT

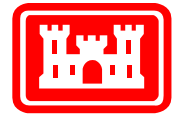


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in FY 2012
\$71.9 M, 6.5 MCY



FY03-12
\$113.6 M, 12.5MCY
(average contracts awarded)



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Dredging Information

- **Waterborne Information**

<http://www.iwr.usace.army.mil/ndc/>

- **Dredging Program Information, DIS, CCA**

<http://www.ndc.iwr.usace.army.mil/dredge/dredge.htm>

- **Dredging Quality Management**

<http://dqm.usace.army.mil/>



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Navigation Information

- **Waterborne & Navigation Information**
<http://www.iwr.usace.army.mil/ndc>
- **Navigation Gateway**
<http://operations.usace.army.mil/navigation.cfm>
- **Operation & Maintenance Business Information Link Plus (OMBIL+)**
<https://ombil.usace.army.mil/>
- **Regional Sediment Management (RSM)**
<http://rsm.usace.army.mil/>

Dredge Fleet

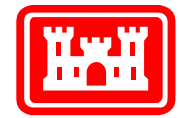


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- **Corps Owned Dredges**
 - Authorized by PL 95-269
 - 4 Hoppers
 - 6 Non-hoppers
 - Revolving Fund Owned (PRIP)

 - **Industry Owned Dredges**
 - 13 Hoppers*
 - Non-hoppers
- * subject to ownership/availability

Industry Hopper Dredge Fleet (13 Active Dredges)



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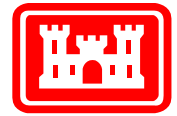
<u>Dredge</u>	<u>Size (CY)</u>
Lindholm	4150
Dodge Island, Padre Island	3600
Atchafalaya	1300
Westport	1800
Bayport	5000
Newport	4000
Columbia	4000
R.N. Weeks	4000
Liberty Island	6550
Terrapin Island	6400
Stuyvesant#	11,200
Glenn Edwards	12,000
Long Island*	16,000

* Idle since 10 Dec 98

** Manhattan Island, Sugar Island, Northerly Island sent overseas- 2007

Change of ownership/status

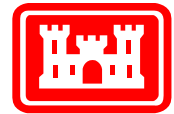
3 Corps Hopper Dredges



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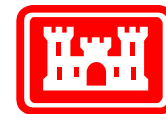
CORPS MINIMUM FLEET



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	DREDGE	YEAR BUILT	DISTRICT ASSIGNED	WORK SITES
Hopper Dredges	ESSAYONS	1983	Portland	West Coast
	YAQUINA	1980	Portland	West Coast
	McFARLAND*	1966	Philadelphia	East & Gulf Coasts
	WHEELER*	1982	New Orleans	Gulf Coast
	•Ready Reserve			
Special Purpose	CURRITUCK	1977	Wilmington	small East Coast Inlets
	MURDEN	2011	Wilmington	small East Coast Inlets

U.S. Special Purpose Dredge MURDEN

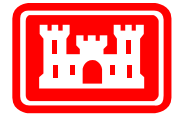


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Corps newest minimum fleet dredge
Dredge MURDEN (Wilmington District)
At pre-launch, Sept 20, 2011, Conrad Industries, Morgan City , LA

CORPS MINIMUM FLEET



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	DREDGE	YEAR BUILT	DISTRICT ASSIGNED	WORK SITES
Pipeline	GOETZ	2005	St. Paul	Upr Miss Rvr
	HURLEY	1993	Memphis	Miss Rvr
Dustpan	JADWIN	1986*	Vicksburg	Miss Rvr
	POTTER	2002*	St. Louis	Miss Rvr
	*year repowered			
Sidecaster	MERRITT	1964	Wilmington	small East Coast Inlets

U.S. Pipeline Cutterhead Dredge GOETZ & Attendant Plant



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Corps new minimum fleet dredge, Dredge GOETZ, M/V WARREN, and
QB TAGGETZ (St. Paul District)

”Classification” of Hopper Dredges



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- **Small = 0 - 3,000 CY**
- **Medium = 3,000 - 6,000 CY**
- **Large = 6,000 - 12,000 CY**
- **X-Large = 12,000 ~ 20,000 CY**
- **Jumbo > 20,000 CY**
Jan De Nul's,
VASCO DE GAMA = 33,000 CY

17 Hopper Dredges

(13 Industry Dredges/5 Companies; 4 Corps Dredges)

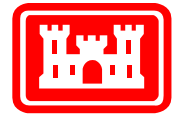


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CLASS	INDUSTRY, OWNER	CORPS, DISTRICT
MEDIUM HOPPER	<i>Columbia, Dutra Dredging</i> <i>Lindholm, Weeks Marine</i> <i>R.N. Weeks, Weeks Marine</i> <i>Bayport, Manson</i> <i>Newport, Manson</i> <i>Dodge Island, GLD&D</i> <i>Padre Island, GLD&D</i>	<i>McFarland,</i> Philadelphia

17 Hopper Dredges

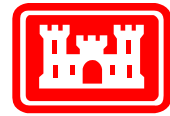
(13 Industry Dredges/5 Companies; 4 Corps Dredges)



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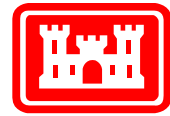
CLASS	INDUSTRY, OWNER	CORPS, DISTRICT
LARGE HOPPER	<i>Terrapin Island, GLD&D</i> <i>Liberty Island, GLD&D</i> <i>Stuyvesant, Dutra Dredging</i> <i>Glenn Edwards, Manson</i>	<i>Wheeler, New Orleans</i> <i>Essayons, Portland</i>
SMALL HOPPER	<i>Westport, Manson</i> <i>Atchafalaya, Cashman</i>	<i>Yaquina, Portland</i>

Dredging R&D Activities



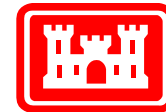
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- DOTS (Dredging Operations Technical Support) - direct environmental & engineering technical support
 - <http://el.erdc.usace.army.mil/dots/dots.html>
 - Cynthia Banks, Program Manager
- DOER (Dredging Operations and Environmental Research) - cost effective technologies to satisfy operational & environmental requirements for dredging
 - <http://el.erdc.usace.army.mil/dots/doer/doer.html>
 - Dr. Todd Bridges, Program Manager
- CCS (Center for Contaminated Sediments) - clearinghouse for technology and expertise concerned with contaminated sediments
 - <http://el.erdc.usace.army.mil/dots/ccs>
 - Dr. Todd Bridges, Director
- DIG (Dredging Innovations Group) - provides innovative solutions for the Corps Dredging Program
 - Jennifer Gerhardt-Smith, Program Manager



Operational R&D activities

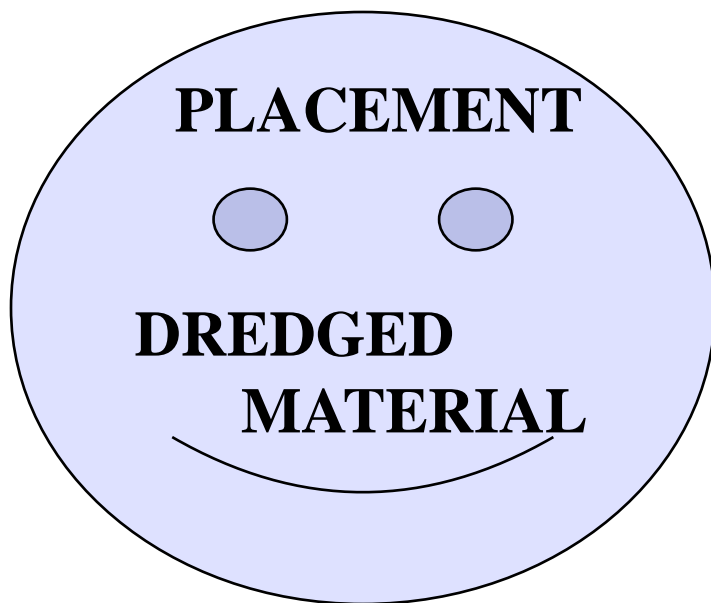
- **National Coastal Mapping Program**
formerly SHOALS airborne laser
hydrographic system
- **Dredging Quality Management**
(Silent Inspector)

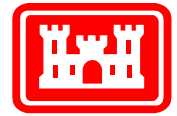


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Dredging

Do's & Don'ts





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Questions ???

