

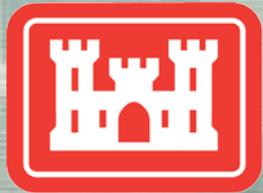
NATIONAL DREDGING QUALITY MANAGEMENT (DQM) PROGRAM

*2012 Galveston District
Dredging Conference*

Galveston, TX

October 23-24 2012

Michael Sessions
Engineer/PM



®



Talking Points

- What is DQM?
- Program Overview
- FY12 in Review and What's Next
- EPA Reporting
- Open Floor/Questions



DQM Support Center: <http://dqm.usace.army.mil>

1-877-840-8024: dqm-support@usace.army.mil



What is DQM?

- National Program - Mobile District
- Automated Dredge Monitoring Supporting the USACE
- Onboard Sensors Monitor Dredge Activities, Operations and Efficiency
- District Support for Preparation of Summary Reports, Plots or Spreadsheet Compilations of Dredge Operations
- Dredging Managers can Monitor Performance to Improve Business Practice, Ensure Environmental Compliance, Provide Dredging Information and Data to Support the National Dredging Mission

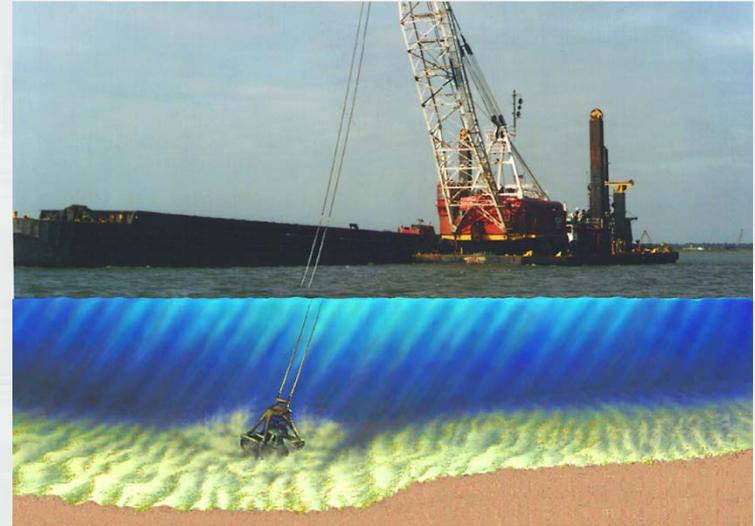


Dredges Monitored

Hoppers



Scows



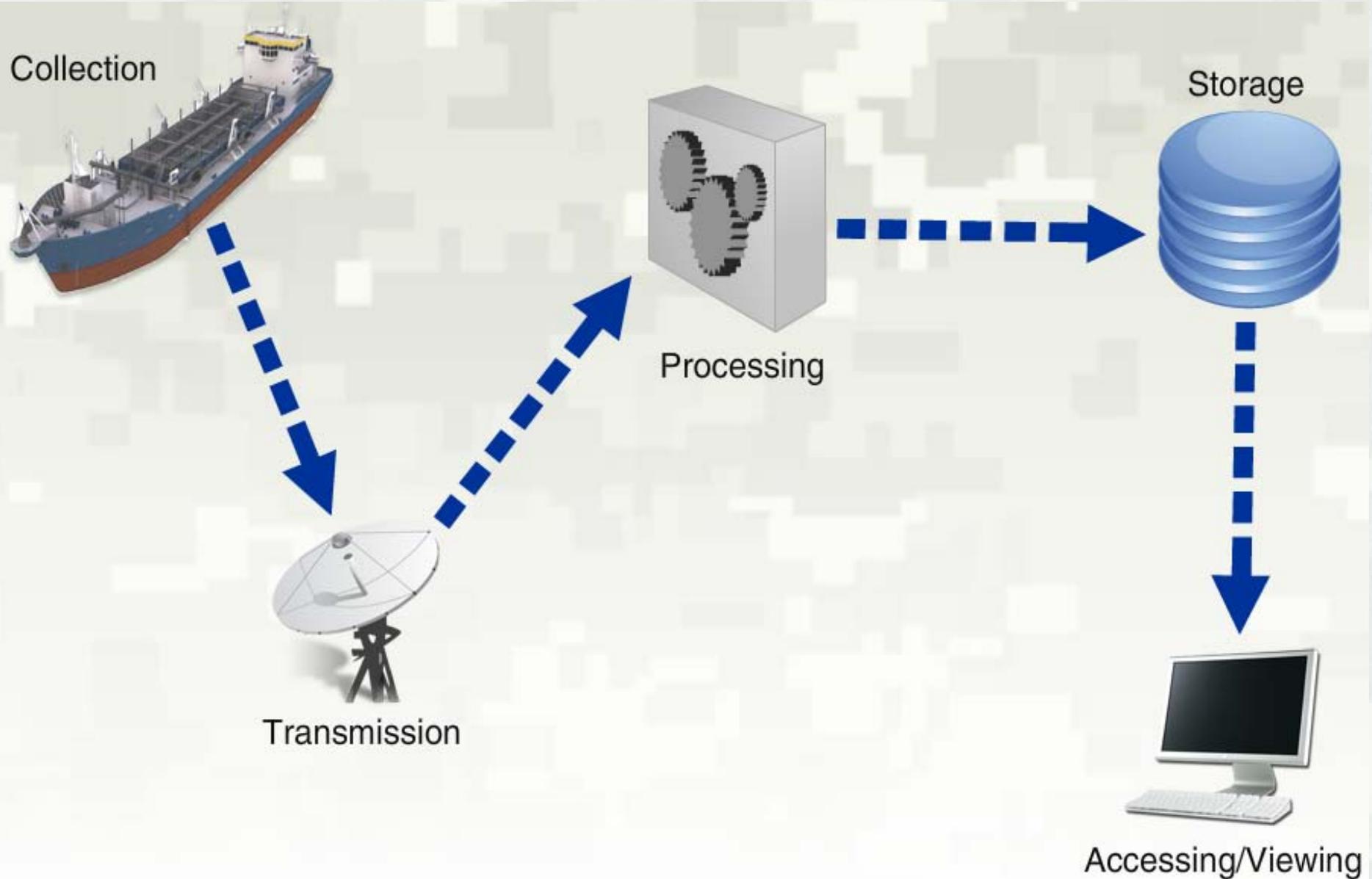
Cutterheads (FY13)



DQM Certification



Data Management Process



FY12 In Review

- V2.5 Beta Release
- Oracle 11g DB Upgrade and Optimization
- New On-Board Software
- Introduction of DQM Products Portal
- Updated DQM Web Site
- Cutterhead PDT and Draft Specs





DREDGING
QUALITY
MANAGEMENT

Below is the list of tools available for viewing and interacting with DQM dredging data. The newest versions of the tools are found under the version 2.5 header.

DQM Console Tools (version 2.0)

- [Online Data Viewer](#)

DQM Console Tools (version 2.5)

Version 2.5 of the DQM Console Tools is now available for a beta release trial period. During this time the version 2.0 tools will remain available. The DQM Center would appreciate your comments or questions during this testing period. Please send them to dqm-support@usace.army.mil.

- [Online Data Viewer](#)
- [Multi-Load Data and Disposal Plots](#)

Last updated 27 September 2012



DQM v2.5 Viewer (beta)



National Dredging Quality Management Program
Online Data Viewer (ver. 2.5.3)

US Army Corps of Engineers
Building Strong® 

Currently Viewing

Plant
Essayons (Hopper)

Project
Columbia River

Contract
GDSNWP-12-G-0001 (NWP)

Data
Cycle 2 (ID: 71019)

Start
10/01/2011 22:23:21 GMT

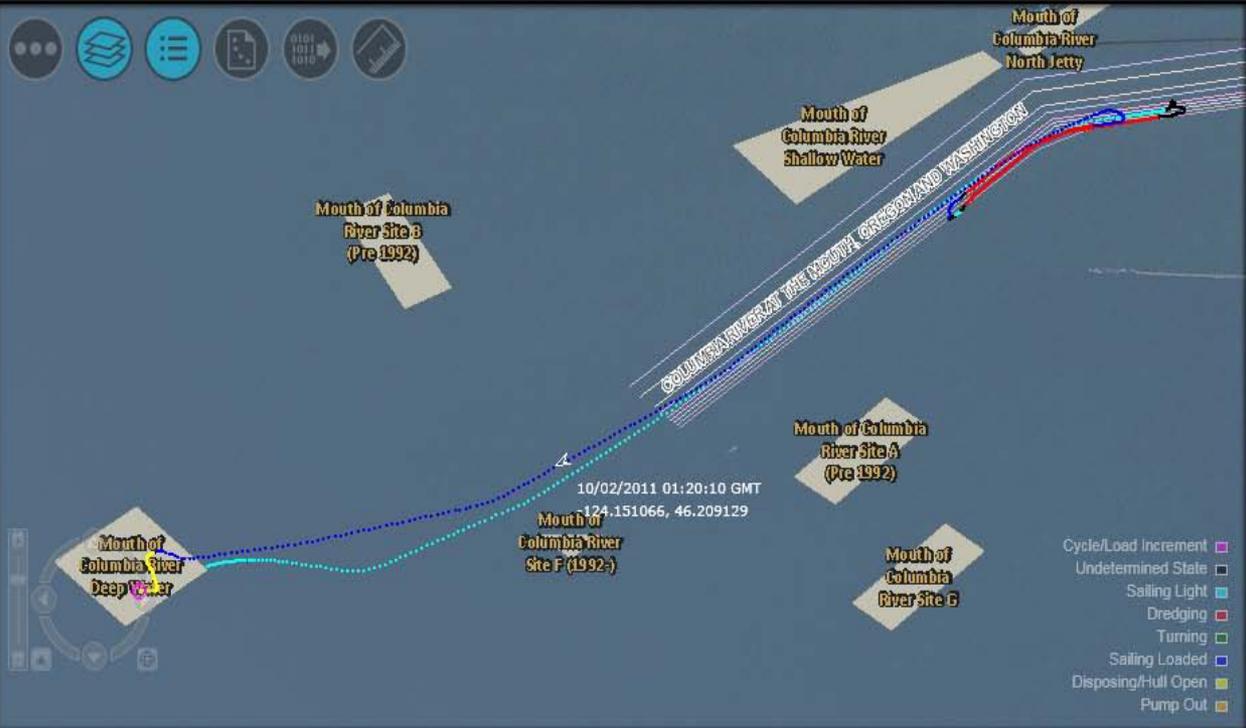
End
10/02/2011 01:52:54 GMT

Points
2639

Prev/Next Cycle

<< >>

Point Info



10/02/2011 01:20:10 GMT
124.151066, 46.209129

Layer Opacity

Basemap: Imagery

Basemap: Vector

NOAA Charts

Channel Framework

Disposal Areas

Graph Controls

DraftAft

UllageFore

UllageAft

HullOpen

Ctrl-Click to select a single graph
Click-and-Drag to move graphs
Shift-Drag to stretch graphs



UllageAft: 6.25 ft

Multi-Load Data Export (beta)

Make a choice:

Load Cycle

District

Contract Number

Dredge Name

Project Area

Coordinate System

Time Zone

Parameters	Selected
PlantType	LoadNumber
PlantName	Date/Time
DistrictIdentifier	Northing/Lat
ContractName	Easting/Long
ProjectArea	DraftFore
Speed	Displacement
Course	DraftAft
Heading	
Tide	
UllageFore	
UllageAft	
Volume	
Hull Status	
PumpOut	
Port Easting/Port Lon	
Port Northing/Port La	
PortDepth	
PortPumpRPM	



Start Date

End Date

Export Type

Email Address

Use the shift key to select multiple parameters. Hold the shift key while dragging parameters to the selected pane. Items can also be reordered by dragging and dropping within the selected items pane.



Sample Data Export (CDP Output)

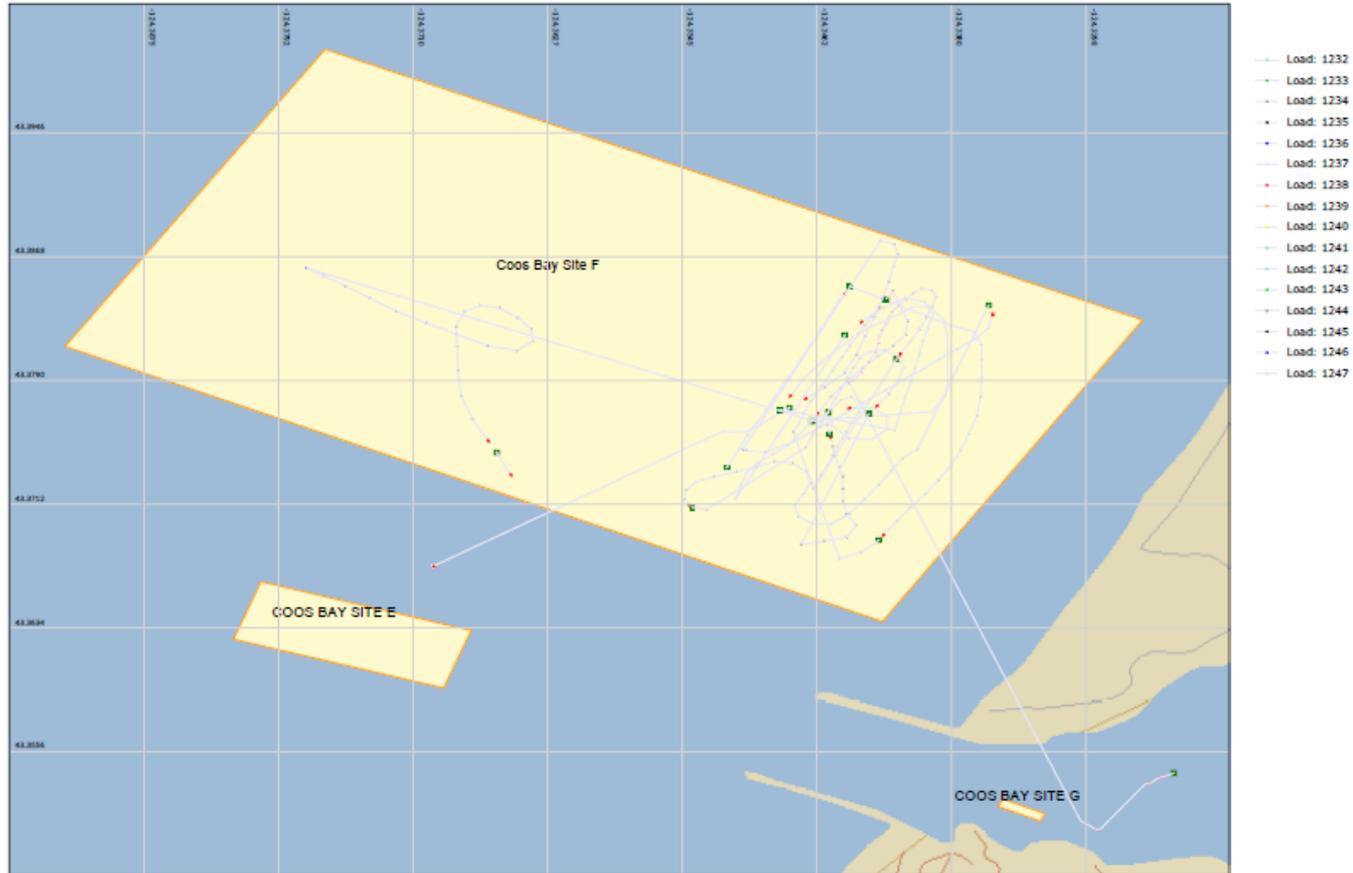


US Army Corps of Engineers
 Phone: (877)840-8024
 Email: DQM-Support@usace.army.mil

Cumulative Disposal Plot

Plant: Essayons
 7-Day Tracking: 8/26/2012 - 9/1/2012

Project: Coos Bay
 Contract: GDSNWP-12-G-0001



All latitude and longitude coordinates are in WGS84 using NAD83 datum or Geographic.





US Army Corps of Engineers



Home | About Us | Certifications/Inspections | Dredging Status | Specifications | Tools | Education |  menu

DQM Home

- About DQM
 - About DQM Home
 - Benefits
 - Authorization
 - Roles/Responsibilities
 - Contact Us/Support Center

National Dredging Quality Management Program

The National Dredging Quality Management (DQM) Program is the USACE's next generation automated dredging monitoring system and analysis tools for the modern USACE dredging manager. The mission of the National DQM Program is to provide the USACE dredging manager with a nationally standardized low cost remote monitoring and documentation system. This system provides the Corps with timely data access, multiple reporting formats, full technical support, including dredge certifications, data quality control, database management, and support for the DQM operating system. On board the dredge, sensors continually monitor dredge activities, operations, and efficiency. Information from these sensors is routed to the National DQM Support Center for data processing, storage and publishing. The DQM web-based tools can be utilized to view project operations, produce disposal plots and data export of dredge operations.



What's New

DQM v2.5 (beta) What's New
List of features contained within the DQM v2.5 (beta) release ... [view more](#) »
Posted: 10/4/2012

***NEW* DQM Viewer, v2.5(beta), Has Been Released!**
release date: Sept 27, 2012 ... [view more](#) »
Posted: 9/28/2012

DQM Monitors Cutterhead
DQM evaluates cutterhead projects thru Dec 2012. ... [view more](#) »
Posted: 5/31/2012



Process for EPA Report Preparation

- 1) District Requests DQM to prepare weekly reports for specific project(s)
- 2) DQM Runs Data through a MATLAB program to reformat into EPA standardized format (Weekly)
- 3) DQM performs quick QA check for any obvious issues (load #ing, disposal times, etc)



EPA Report

EPA Vessel Monitoring Data

Project Information

Contract: XXXXXX
 Placement Area: Fernandina Site Type: 102
 * Profile:
 Coordinate Type: LL
 ** State Plane Datum:

* Optional field, data may not be required for project.

** State Plane Datum not required when Coordinate Type is LL

Load Number: 63

Vessel Name: XXXXXX * Type: Hopper * Technique: Bottom Dump
 * Tow Vessel Name:
 * Vessel Captain:
 Estimated Volume: 6315
 Material Description: sand and silt
 Material Source: Turning Basin
 Disposal Start Time: 05/18/11 13:45:58
 Disposal End Time: 05/18/11 14:12:49
 Disposal Start X: -81.275539
 Disposal Start Y: 30.546944
 Disposal End X: -81.24929
 Disposal End Y: 30.565082
 * Observed Water Depth:
 * Comments:

Position/Sensor Data

Sample Date Time	Vessel X	Vessel Y	*Fore Draft	Aft Draft	*Avg Draft	*Vessel Speed	*Vessel Heading	*Vessel Course	*Hull Status
05/18/11 13:33:32	-81.296258	30.530604	12.34	21.42	16.9	3.5	46	50	Closed
05/18/11 13:34:37	-81.295206	30.531391	13.41	21.95	17.7	4.5	47	50	Closed
05/18/11 13:35:42	-81.293691	30.532519	14.64	22.27	18.5	6.6	46	50	Closed

- Automatically fills in contract number/name, dredge plant and load number
- Disposal times/locations based on dredge state analysis of sensors
- Estimated volume based on ullage change during disposal event (Zero-ed Out)
- Position/Sensor Data
 - Hopper: Every minute outside DA, every 10 sec during disposal event
 - Scow: Every 4-6 minutes transit, every 6 sec in DA, every hour stationary
- Default values/manual inputs DA, site type, material



Process for EPA Report Preparation (cont'd)

- 4) DQM submits the data (.html file format) to the District for review and submittal prior to providing to EPA
- 5) District Submits to EPA

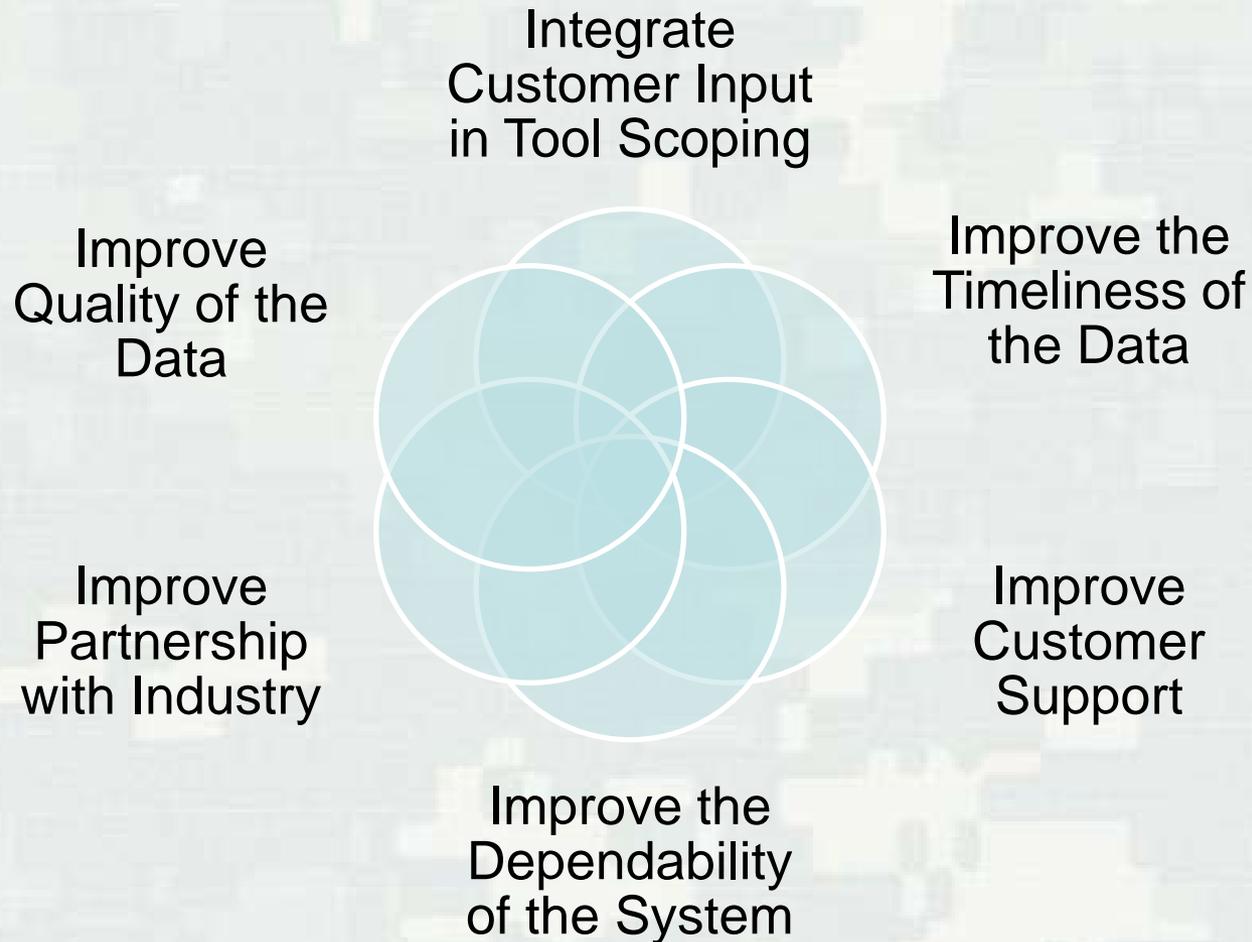


DQM....What's Next??

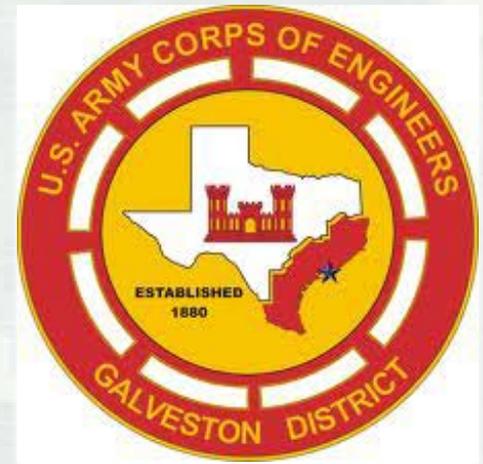
- Cutterhead Monitoring (FY13)
- Near Real-time Scow Transmission (FY13)
- Role-based, DQM Products Security (FY13/14)



DQM Goals



- Thanks Galveston District.... for a great meeting and being a wonderful host!





THE NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM

The DQM Program is a partnership between the Corps and the dredging industry for automated monitoring of dredge activities.

Onboard sensors provide near-real-time data that allows for immediate response to emerging situations.

Districts can use the web-based DQM software to view, analyze, report on, and export dredging data.

The data can be used to improve business practice, ensure environmental compliance, and increase our understanding of dredging science and technology.

