National Dredging Quality Management (DQM) Program

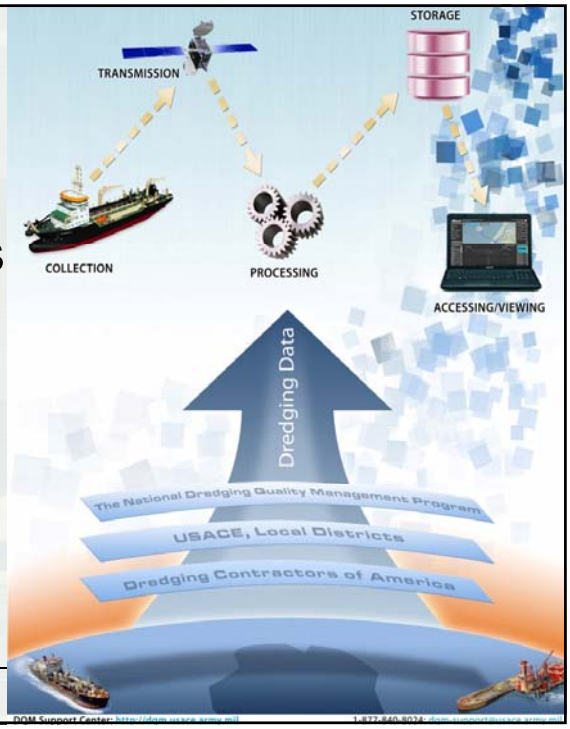
National Dredging Meeting
Washington DC
May 2011

DREDGING QUALITY MANAGEMENT

Briefing

- Program Status
- Advancements
- Future

DREDGING QUALITY MANAGEMENT



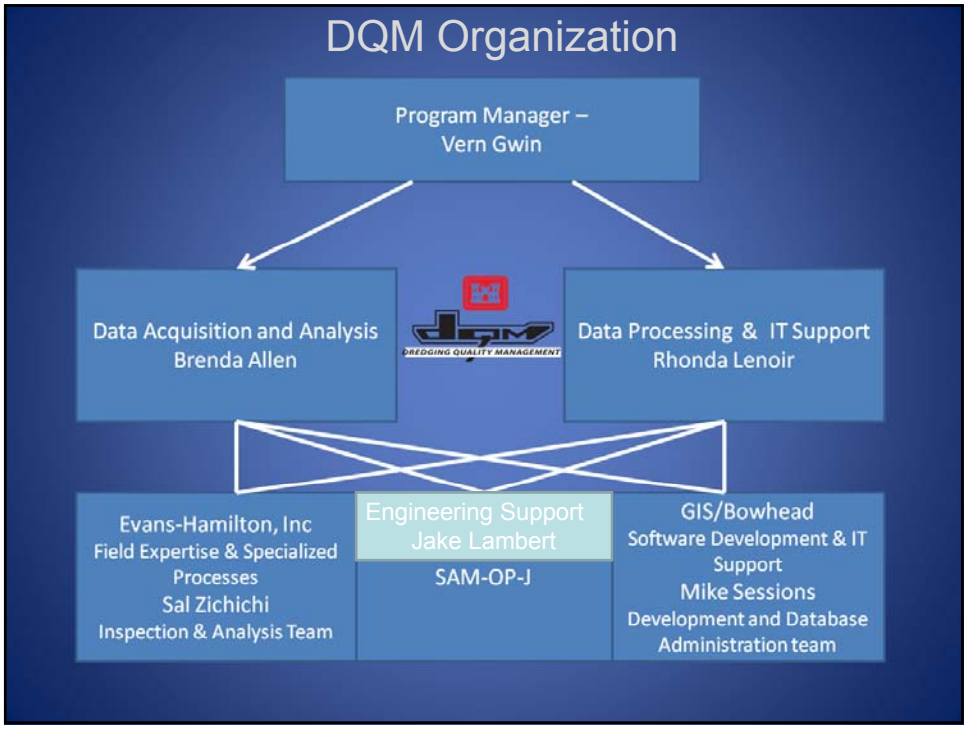
Annual Goals

- Integrate Customer input in tool scoping
- Improve the Timeliness of the Data
- Improve Customer Support
- Improve the Dependability of the System
- Improve Partnership with Industry
- Improve Quality of the data

Program Status

Since May 2010…..

- DQM V2.0 Development Completed
- Beta Testing Completed - V2.0 Tools, On-Board Software, Database - Summer 2010
- DQM V2.0 Officially Launched - Fall 2010
- Training to Districts Fall 2010 – Spring 2011
- New DQM Website
- Industry Communication at WEDA meetings
- Evaluation of Scow Real-time Data Transmission
- Initiated V2.1/2.2 Development - Spring 2011



Program Advancements

-All Web Based Environment: Tools, Website

-State of the Art Oracle Database

-Near Real-time Telemetry from Hoppers

-Improved Specs: Measurable Increase in Data Quality, Reduced Inspection Time

-Partnerships: Industry, Districts, EPA, BOEMRE

New DQM Website

DQM TOOLS

The DQM Viewer is the latest and greatest addition to the USACE dredging tools collection, providing an interactive Silverlight application for selecting dredging projects, graphing load data, managing and requesting disposal plot information, as well as providing data exports.

Selecting a Load

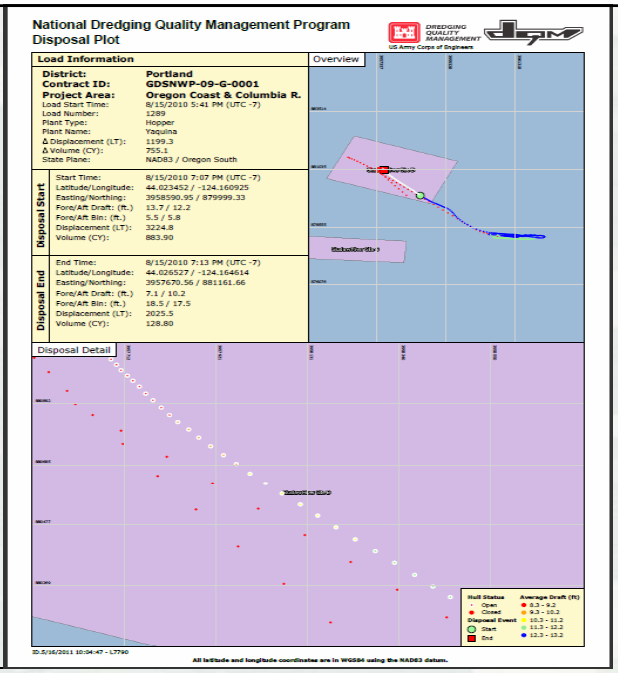
Viewing a load with graphs

Disposal Plot

COMING SOON

- Email alerts for compliance issues
- Viewing/exporting multiple loads
- Dredge plots

V2.0 Disposal Plot



National Dredging Quality Management Program
Disposal Plot

DREDGING QUALITY MANAGEMENT
US Army Corps of Engineers

Load Information

District:	Portland
Contract ID:	GDSNWP-09-G-0001
Project Area:	Oregon Coast & Columbia R.
Load Start Time:	8/15/2010 5:41 PM (UTC -7)
Load Number:	1289
Plant Type:	Hopper
Plant Name:	Yaquina
Δ Displacement (LT):	1199.3
Δ Volume (CY):	755.1
State Plane:	NAD83 / Oregon South

Overview

Disposal Start

Start Time:	8/15/2010 7:07 PM (UTC -7)
Latitude/Longitude:	44.023452 / -124.160925
Easting/Northing:	395859.95 / 879999.33
Fore/Aft Draft: (ft.)	13.7 / 12.2
Fore/Aft Bin: (ft.)	5.5 / 5.8
Displacement (LT):	3224.8
Volume (CY):	883.90

Disposal End

End Time:	8/15/2010 7:13 PM (UTC -7)
Latitude/Longitude:	44.026527 / -124.164614
Easting/Northing:	395670.56 / 881161.66
Fore/Aft Draft: (ft.)	7.1 / 10.2
Fore/Aft Bin: (ft.)	18.5 / 17.5
Displacement (LT):	2025.5
Volume (CY):	128.80

Disposal Detail

Hull Status: Open, Closed
Average Draft (ft): 8.2 - 9.2, 9.3 - 10.2, 10.3 - 11.2, 11.3 - 12.2, 12.3 - 13.2
Disposal Event: Start, End

ID:5/16/2011 10:04:47 - L7790

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

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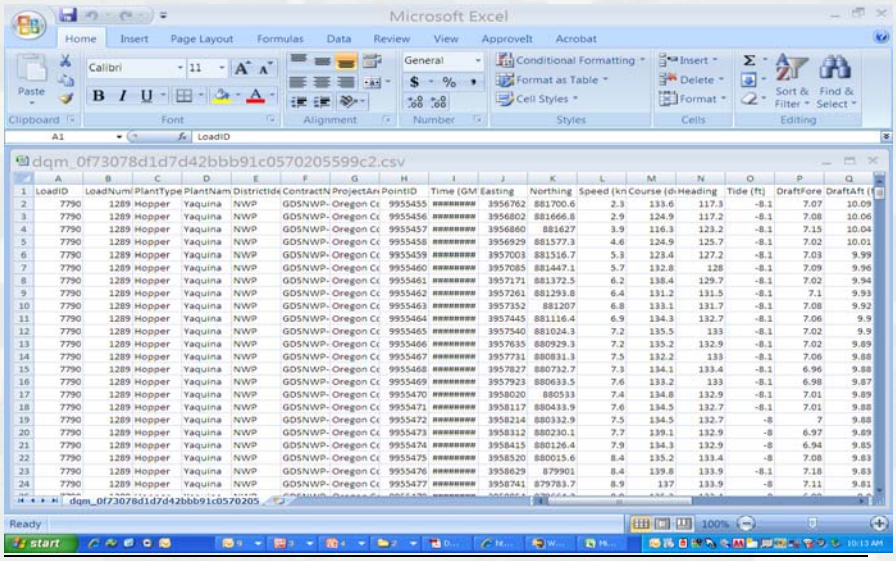
DQM Data Export



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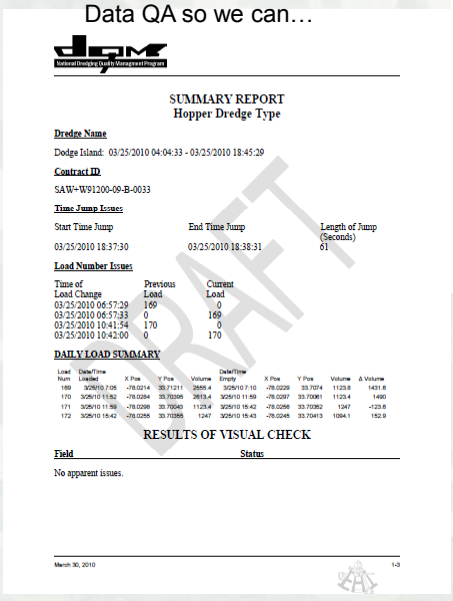
Data QA so we can…



SUMMARY REPORT
Hopper Dredge Type

Dredge Name

Dodge Island: 03/25/2010 04:04:33 - 03/25/2010 18:45:29

Contract ID

SAW-W91200-09-B-0033

Time Jump Issues

Start Time Jump	End Time Jump	Length of Jump (Seconds)
03/25/2010 18:37:30	03/25/2010 18:38:31	61

Load Number Issues

Time of Load Change	Previous Load	Current Load
03/25/2010 06:57:29	169	0
03/25/2010 06:57:33	0	169
03/25/2010 10:41:54	170	0
03/25/2010 10:42:00	0	170

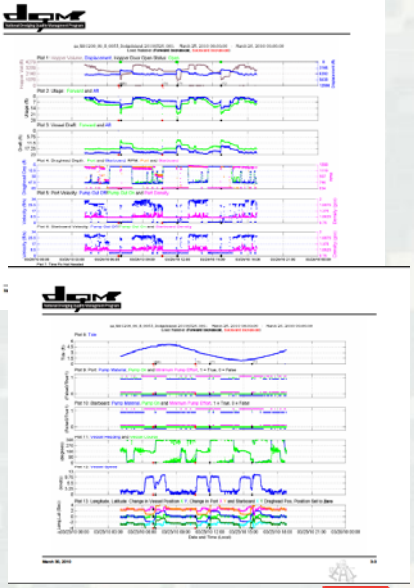
DAILY LOAD SUMMARY

RESULTS OF VISUAL CHECK

Field	Status
No apparent issues.	

March 30, 2010 1-3

DRAFT



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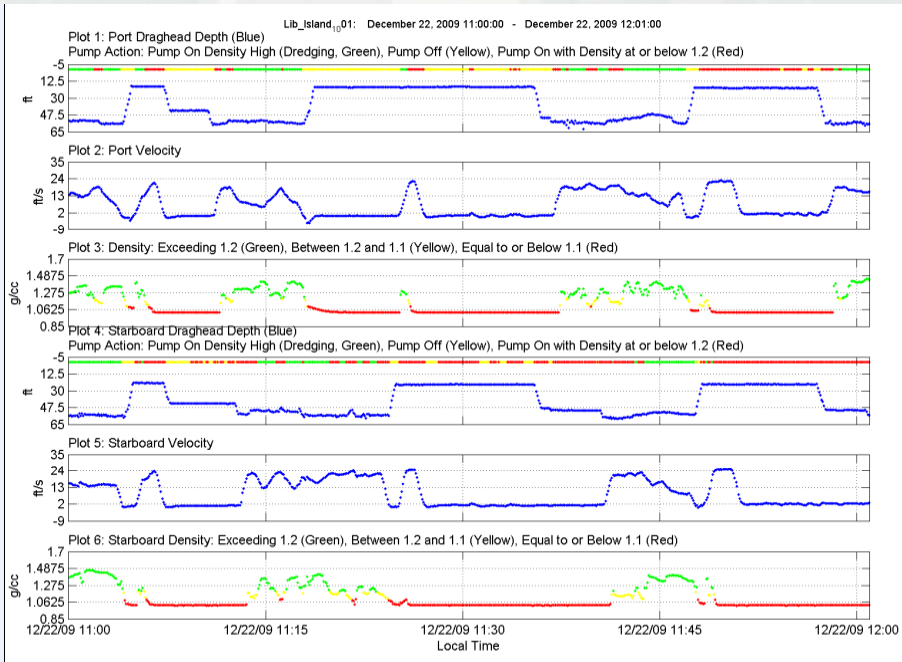

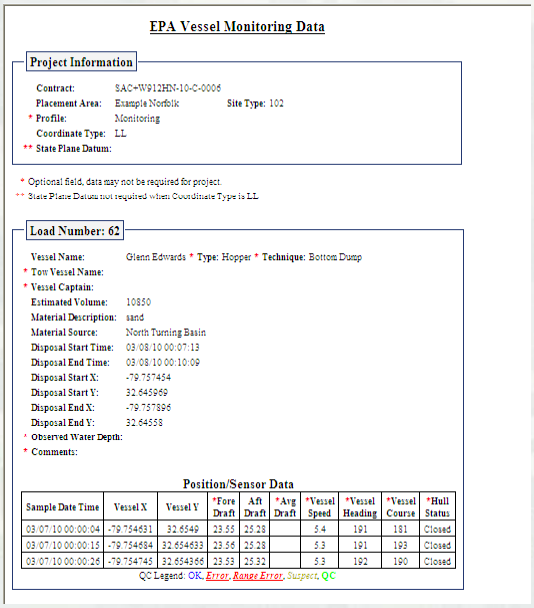

EPA Vessel Monitoring Data

Project Information

Contract: SAC-W912HN-10-C-0006
Placement Area: Example Norfolk Site Type: 102
* Profile: Monitoring
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: 62

Vessel Name: Glenn Edwards * Type: Hopper * Technique: Bottom Dump
* Tow Vessel Name:
* Vessel Captain:
Estimated Volume: 10850
Material Description: sand
Material Source: North Turning Basin
Disposal Start Time: 03/08/10 00:07:13
Disposal End Time: 03/08/10 00:10:09
Disposal Start X: -79.757454
Disposal Start Y: 32.645969
Disposal End X: -79.757896
Disposal End Y: 32.64558
* 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
03/07/10 00:00:04	-79.754631	32.6549	23.55	25.28		5.4	191	181	Closed
03/07/10 00:00:15	-79.754684	32.654633	23.56	25.28		5.3	191	193	Closed
03/07/10 00:00:26	-79.754745	32.654366	23.53	25.32		5.3	192	190	Closed

QC Legend: OK, Error, Range Error, Suspect, QC

Standardized EPA Reporting

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Future (DQM DREDGING QUALITY MANAGEMENT)^2

- V2.1 Dredging Analysis Tool
  - Multiple Load Disposal Plots
  - Email Alerts
  - Multiple Load Export Capability
  - Customized Export Capability
  - Dredge Plots
  - Internal Database improvements
- Near-Real Time Scow Data
- Pipeline Evaluation

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Future (DQM DREDGING QUALITY MANAGEMENT)^2

- V2.2 – Matlab Cycle Analysis, Dredge State
  - EPA and BOEMRE Reports web accessed
  - GIS Integration
  - Turtle Plots web accessed
- QA reports web accessed
- DQM Payment Estimates - Real-time Status
- National DQM Technical Advisory Team
  - Address need for Additional Parameters, Specs
  - Work with Industry on Tech Issues
  - Develop Scope for next Generation Tools

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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.

http://dqm.usace.army.mil

1-877-840-8024