

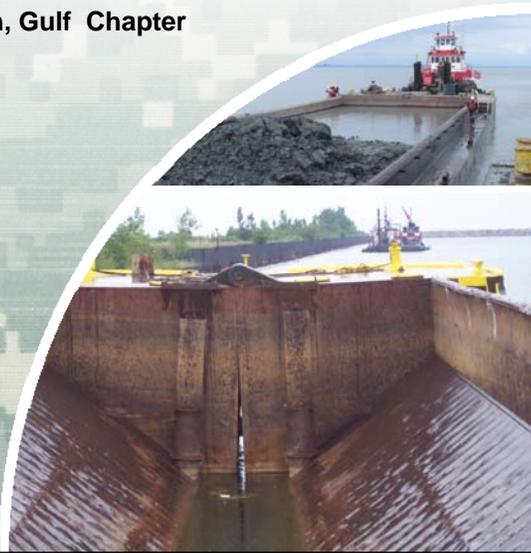
National Dredging Quality Management (DQM) Program

Western Dredging Association, Gulf Chapter
November 3, 2010

Vern Gwin
Program Manager



US Army Corps of Engineers
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Briefing Summary

- Program Overview
- Advancements
- New Capabilities
- EPA Reporting
- V2.0 Tools



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Program Evolution



★
May 2006
V1.0

Mandated R&D
to Operations
MSQL Database
Desktop Client
Tools
Hopper
dredges/Scows



★
March 2009
V1.5

Automated data
import to database
New Web-based
Viewer
Improved data
analysis for QA
Updated Specs



★
Fall 2010
V2.0

Oracle e-standard Database
Web based tools
•Viewer
•Disposal Plot
•Data Export in csv
•Near Real-time data receipt



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Recent Program Advancements

- Industry Partnership and Relationship
 - ▶ Addressed proprietary concerns
 - ▶ Prepared parameter justification list
 - ▶ Discussed technical issues
- Customer Focus - COE Districts Needs
- Technology Exchange with Dutch MARS Program
- Generated specialized report formats
 - ▶ EPA
 - ▶ Turtle Take Analysis



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Program Advancements (cont'd)

- Implemented V1.5
 - ▶ Web-based Viewer
 - ▶ Hopper Dredge Automated Backup Script
 - ▶ All plant reporting in geographic coordinates & GMT
- Development of V2.0
 - ▶ Customer input and testing
 - ▶ Purchased new server and set up new Oracle database
 - ▶ Expanded capabilities of web-based viewer
 - ▶ Automated production of Disposal Plot pdf's
 - ▶ Simplified user data export to csv . file
 - ▶ Developing logic for automatic cycle and dredge state determination



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Telemetry

Improving the timeliness to
the Dredging Manager

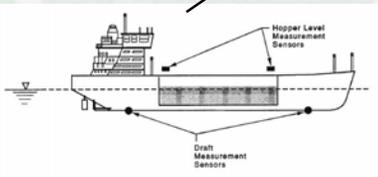


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Near Real-Time Hopper Dredge Data Transmittal



DQM
Center



Dredging Manager



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Database

Flexibility for the future



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V2.0 Database

- E-Standard Oracle database - Speed
- Flexibility for future tools, capabilities, ect.
- Raw data storage only
- Automated e-mail alerts
- Calculated cycle analysis
- Enhanced web-based data processing capabilities



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Tools for the Modern Dredging Manager

Web Based Real-time Access

- Disposal Plots
- Data Export
- Web-Based Viewer



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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

Load	Date/Time	Start	Load	X Pos	Y Pos	Volume	Date/Time	Stop	X Pos	Y Pos	Volume	A Volume
169	03/25/2010 06:57:29	-78.0214	33.71211	2855.4	302610.710	-78.0229	33.7074	1123.6	1431.6			
170	03/25/2010 11:50	-78.0204	33.70266	2815.4	302610.159	-78.0207	33.7081	1123.4	1400			
171	03/25/2010 11:50	-78.0208	33.70540	1123.4	302610.1842	-78.0206	33.7082	1347	-123.6			
172	03/25/2010 15:42	-78.0208	33.70586	1347	302610.1843	-78.0206	33.7083	1044.1	152.9			

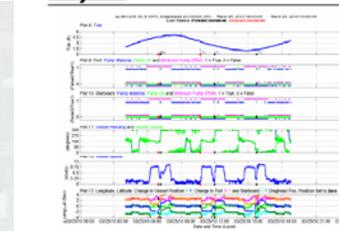
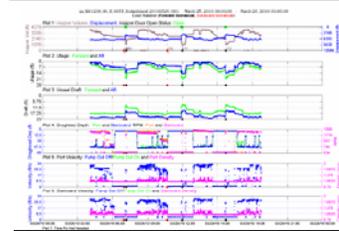
RESULTS OF VISUAL CHECK

Field _____ **Status** _____

No apparent issues.

March 30, 2010

1-3



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EPA Vessel Monitoring Data

Project Information

Contract: SAC-W912HD-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
Ton 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: 32.654909
Disposal End X: -79.757595
Disposal End Y: 32.654938
Observed Water Depth:
Comments:

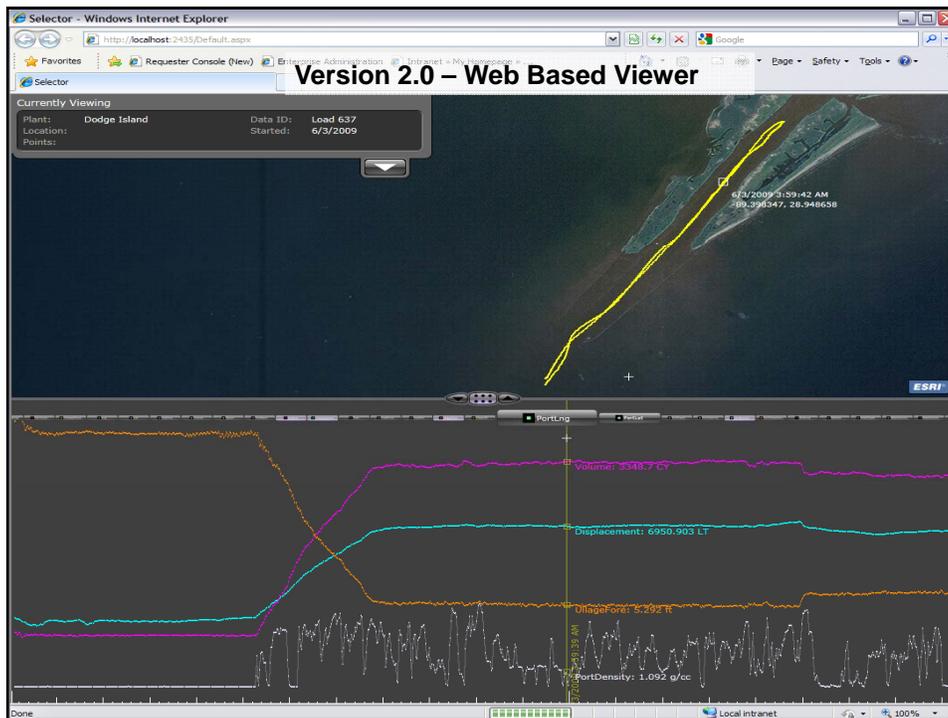
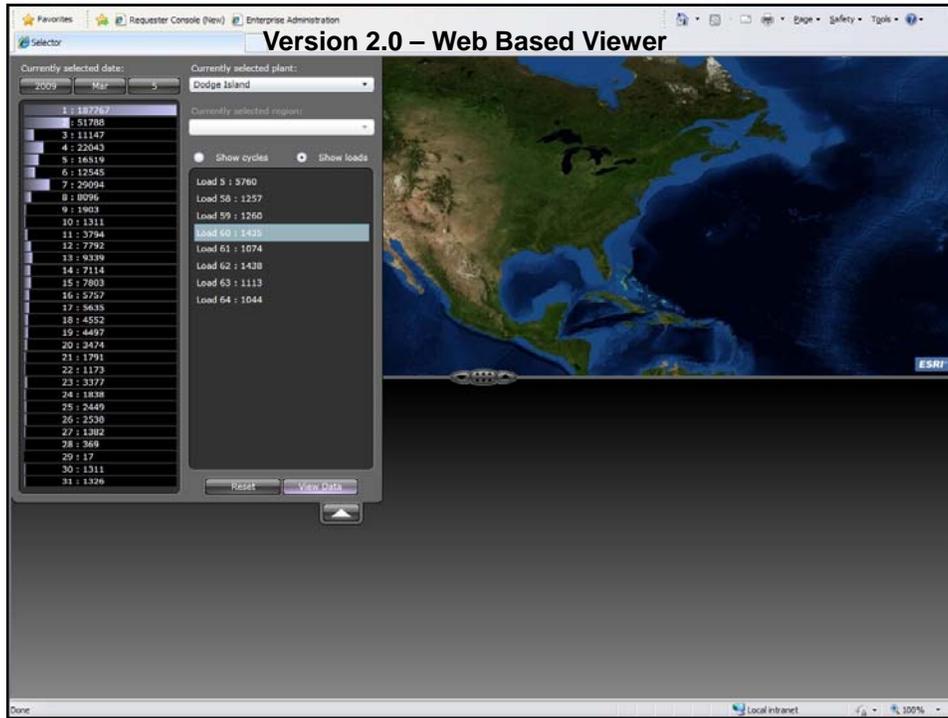
Position/Sensor Data

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	23.23		5.4	191	181	Closed
03/07/10 00:00:15	-79.754684	32.654933	23.56	23.23		5.3	191	193	Closed
03/07/10 00:00:26	-79.754745	32.654956	23.53	23.32		5.3	192	190	Closed

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



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Summary

- Total New System, V2.0
 - ▶ Real-Time Hopper Data
 - ▶ Oracle Database
 - ▶ All new Web based tools
 - ▶ Two-way hopper communicaton
- EPA/MMS Data Reports
- Future – TDS/Cycle Analysis



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National Dredging Quality Management Program



DREDGING QUALITY MANAGEMENT

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