



Research & Development Overview and the Research Area Review Group

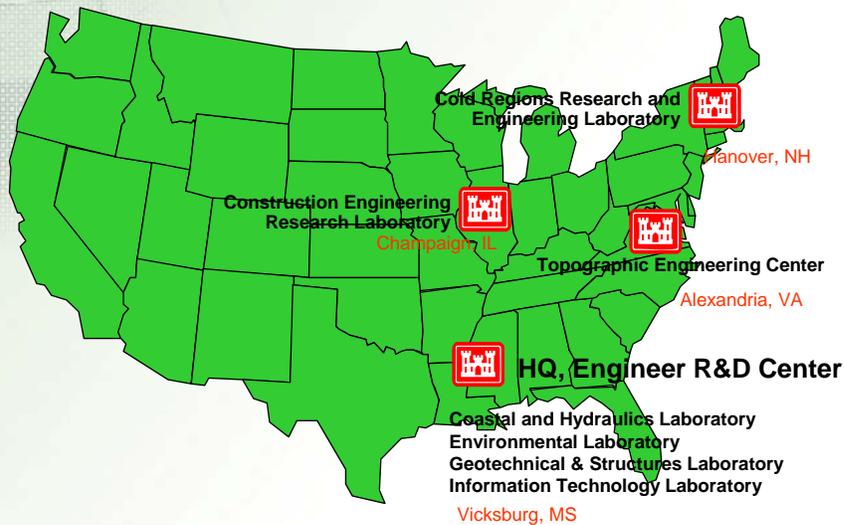
U.S. Army Corps of Engineers
National Dredging Meeting
Wednesday, May 20, 2009

W. Jeff Lillycrop
Technical Director
Engineering Research and Development Center

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Engineer Research & Development Center



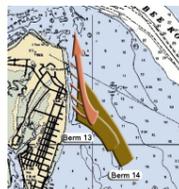
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Dredging Operations Environmental Research



- Environmental Resource Protection
- Operations Technologies
- Dredged Material Management
- Environmental Risk Management



PM: Dr. Todd Bridges
APM: Edmond Russo



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Regional Sediment Management Program

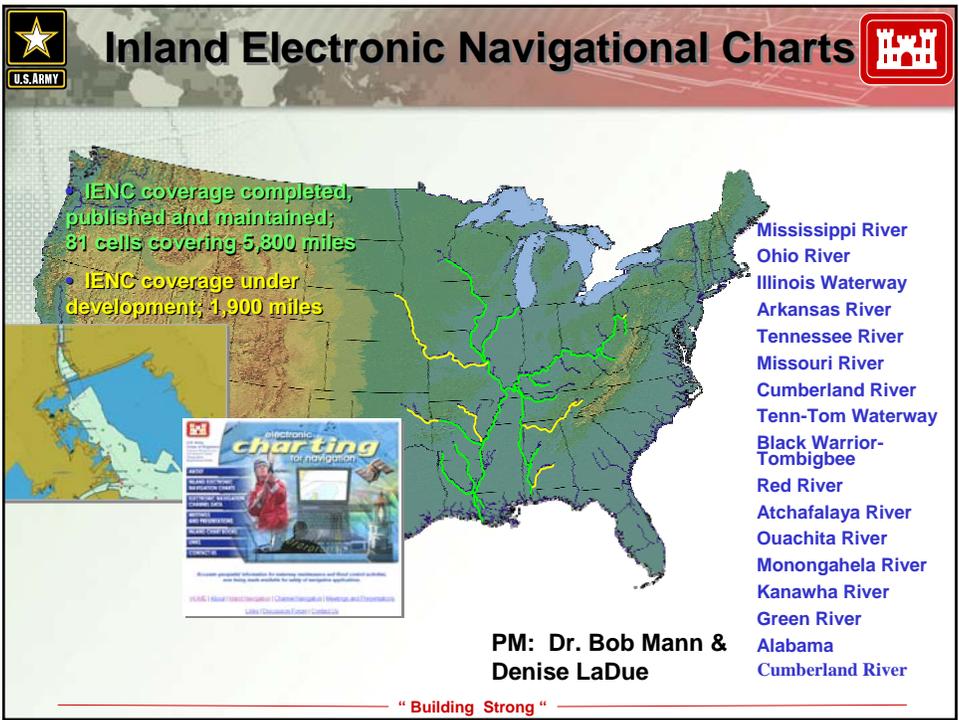
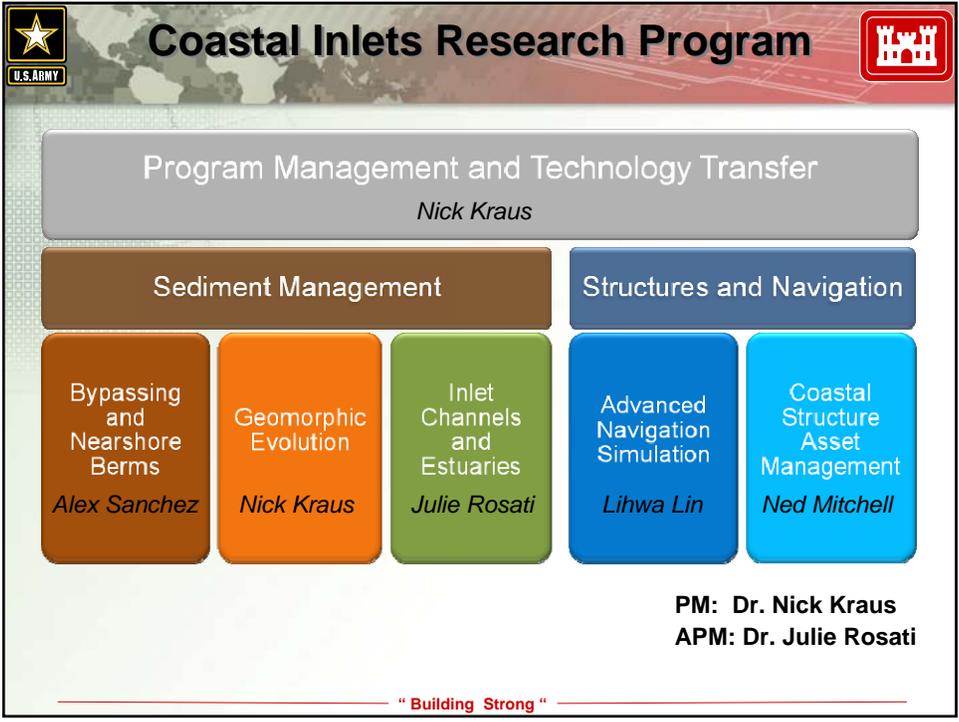


Improving sediment management practices through a system-based approach



PM: Dr. Jeff Waters

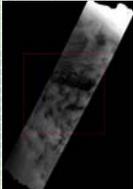
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Coastal Zone Mapping and Imaging Lidar

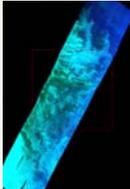




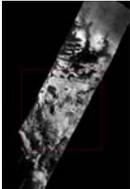
depth



seafloor reflectance



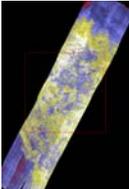
RGB



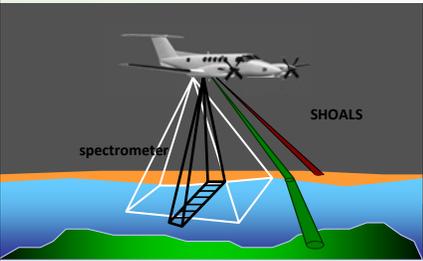
attenuation



chlorophyll



CDOM





bottom classification

FY08/09 detailed design
 FY09/10 fabrication
 FY10/11 field test and deploy
 for National Coastal
 Mapping Program



PM: Jennifer Wozencraft

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Navigation Economic Technologies





www.CorpsNets.us

PM: Keith Hofseth

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Navigation Systems



Inland Navigation



Structures



PM: Eddie Wiggins



Deep Draft Navigation

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Monitoring Completed Navigation Projects

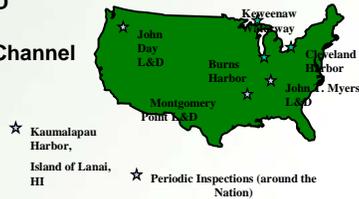


Monitor completed Coastal and Inland Navigation projects to test and evaluate innovative design approaches

- Strengthen design criteria and methodology
- Improve construction practices and cost effectiveness
- Enhance Operation and Maintenance techniques

★ Marmet L&D

★ Galveston Channel

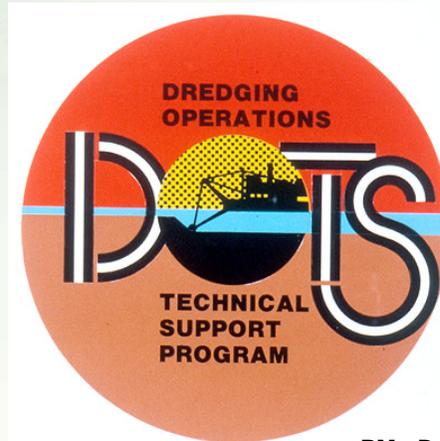


PM: Dr. Lyn Hales

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Dredging Operations Technical Support



PM: Dr. Doug Clarke

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R&D Program Development Process



OBJECTIVE:

- Obtain field & headquarters input & guidance for R&D
- Synchronize R&D program development with Corps budget sequence
- Reinforce / Invigorate linkages between R&D and USACE Technical Competence

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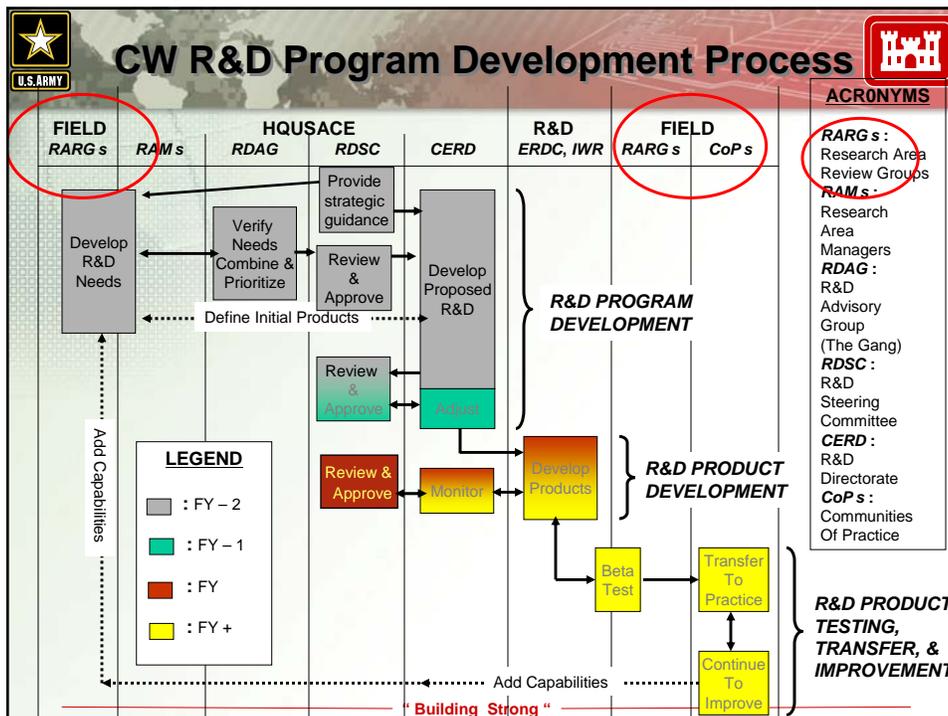
R&D Program Development Process Roles and Responsibilities



Per HQUSACE EC:

1. HQ establishes strategic goals
2. **Field develops and ranks research needs and requirements**
3. HQ prioritizes requirements
4. ERDC/IWR develops plan for addressing needs via R&D projects
5. CERD develops R&D program to maximize output potential
6. ERDC/IWR execute R&D
7. **Field & HQ review, approve, guide, and incorporate products into practice.**

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U.S. ARMY **Process Begins with Statements of Need**

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Communities of Practice

- USACE CoPs
 - Operations & Regulatory
 - Flood Risk Management
 - Hydropower
 - Inland Navigation Infrastructure
 - Natural Resources Management
 - Navigation
 - Operations Project Managers
 - Regulatory
 - Safety

Business Processes

- Headquarters
- Acquisition
- Administration
- Budget
- Communication & Marketing
- Environment

Google OPS & Reg Gateway

Navigation Notes

Welcome to the Navigation Community

The USACE Navigation Mission
To provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of commerce, inland security needs, and recreation.

- [Navigation R&D Statements of Need](#)

<http://operations.usace.army.mil/Navigation>

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U.S. ARMY **RARG Members**

SAM Todd Boatman
NWP Sheryl Carrubba
LRH John Clarkson
MVN Ed Creef
SPD George Domurat
LRP Andy Harkness
SWG Joe Hrametz
NAE Tom Fredette
LRP Rich Lockwood
MVR Kenn Shoemaker
MVS Jeff Stamper
NWS Stephanie Stirling
NAN John Tabolaro
LRH David Weekly

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48° 57' 33.80" N 95° 15' 55.74" W

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FY12 Rankings



SON	RARG1	RARG2	RARG3	RARG4	RARG5	RARG6	RARG7	RARG8	RARG9	Cumulative Score	Avg	Rank
2009-N-1	3	4	4.5	3	4	1	4	1	3	27.5	3.05555	12
2009-N-2	1	2	0.8	0	0	0	1	0	1	5.75	0.63888	19
2009-N-3	0	0	0.5	0	1	0	1	0	1	3.45	0.38333	20
2009-N-4	3	4	4.0	3	5	3	4	3	4	32.95	3.66111	6
2009-N-5	3	5	2.7	4	3	4	3	4	4	32.65	3.62777	7
2009-N-6	4	3	2.6	4	4	4	3	2	5	27.6	2.97777	8
2009-N-7	3	4	2.4	2	1	3	3	3	5	26.35	2.92777	13
2009-N-8	3	2	2.1	4	5	4	3	5	5	33.05	3.67222	5
2009-N-9	4	3	2.0	4	4	3	2	4	4	25.95	2.88333	11
2009-N-10	4	3	1.9	4	4	3	3	3	4	29.9	3.32222	9
2009-N-11	3	4	5.0	4	4	5	4	4	5	42.1	4.66666	2
2009-N-12	2	4	1.9	1	1	0	2	5	5	37.95	4.21666	3
2009-N-13	2	4	4.1	3	5	4	5	3	5	21.85	2.42777	16
2009-N-14	2	2	2.3	1	2	3	1	3	3	35.05	3.89444	4
2009-N-15	3	2	2.2	2	3	1	2	4	3	16.3	1.80555	17
2009-N-16	2	2	2.2	0	0	0	0	1	5	22.15	2.46111	15
2009-N-17	2	2	2.8	4	0	1	3	5	3	12.2	1.35555	18
2009-N-18	5	4	4.6	4	5	5	5	3	5	22.75	2.52777	14
2007-N-6	4	3	2.8	3	5	4	3	2	5	40.55	4.50555	1
2007-N-7	4	3	2.9	4	5	4	4	3	5	26.8	2.97777	9
2007-N-7	4	3	2.9	4	5	4	4	3	5	29.9	3.32777	10

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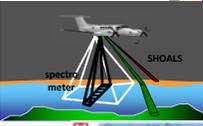


Navigation R&D



- Dredging Operations and Environmental Research
- Regional Sediment Management Demo
- Monitoring Completed Navigation Projects
- Navigation Systems
- Coastal Inlets Research Program
- Inland Electronic Navigation Charts
- Coastal Zone Mapping and Imaging Lidar
- Navigation Economic Technologies
- Dredging Operations Technical Support





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 **Process Begins with Statements of Need** 

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Local intranet

<http://operations.usace.army.mil/Navigation>

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 **Navigation R&D** 

Thank You

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