CIRP IPR FY19

COASTAL INLETS RESEARCH
PROGRAM MANAGEMENT

Tanya M. Beck

District PDT Members

John Winkelman

Kathy Griffin
HQ Navigation Business Line Manager

Eddie Wiggins
Technical Director

CHL COASTAL & HYDRAULICS LABORATORY

US Army Corps of Engineers®

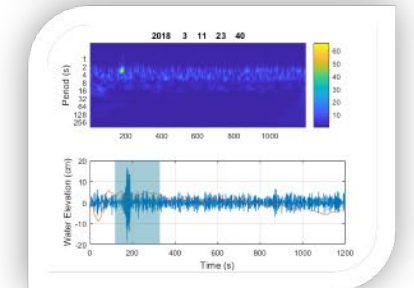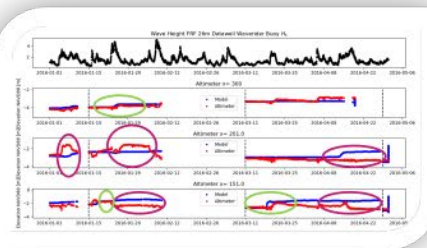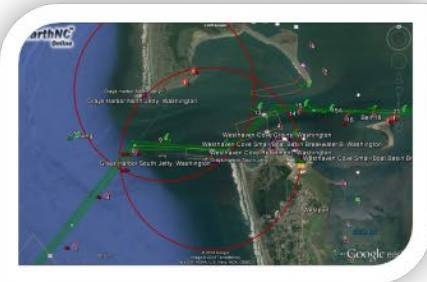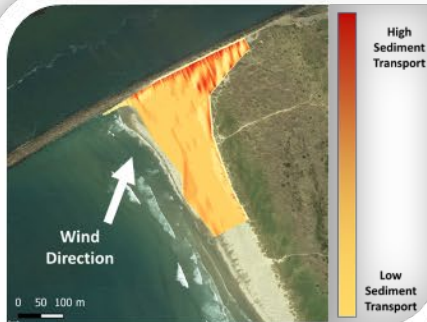**ERDC** ENGINEER RESEARCH & DEVELOPMENT CENTER

DISCOVER | DEVELOP | DELIVER

...ng know...
technology to better predict future channel shoaling.

Providing quantitative and practical predictive tools and data analytics to reduce the cost of dredging for Federal navigation projects and to maintain jetties.

Quantifying potential unintended consequences and identifying necessary mitigation.

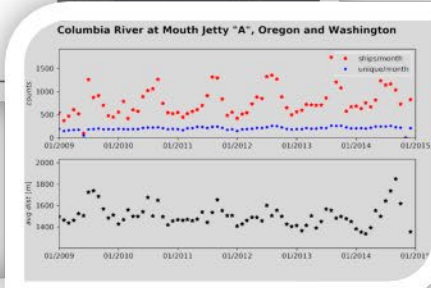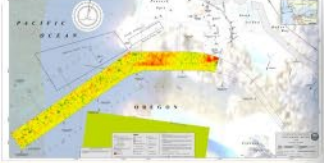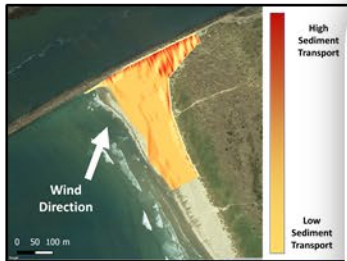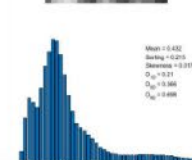Understanding future conditions for coastal navigation and providing engineering guidance.

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FY19 Research

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CIRP Technology

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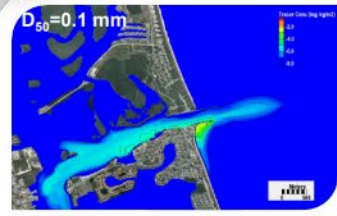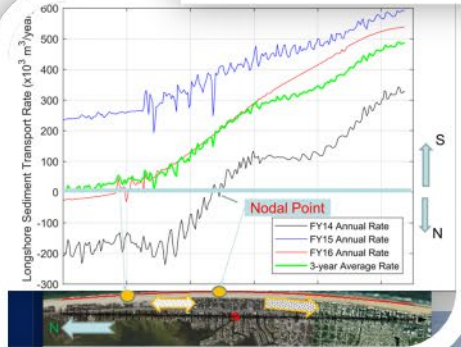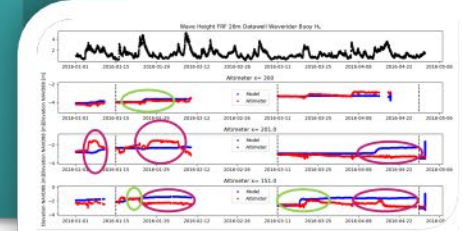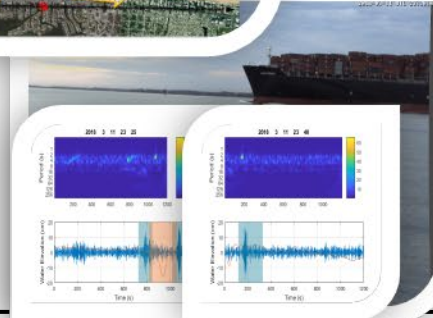
Inlet Reservoir Model

WaveNet & TideNet

Coastal Inlets Research Pro

SBAS

GenCade

CMS Coastal Modeling System

Sediment Mobility Tool

Bottom Boundary Layer Tool

CPT - Channel Portfolio Tool

Vessel Wake Analysis Tool

CSAT - Channel Shoaling Analysis Tool
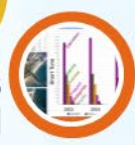
CSMART - Coastal Structures Management, Analysis, and Ranking Tool

& Research Partners

Upcoming

Technical Discussion Series

Morphology Change Modeling for Crab, North Carolina Using the Coastal Modeling System (CMS)

30 July 2019
1300 - 1500 Eastern

Recent Events

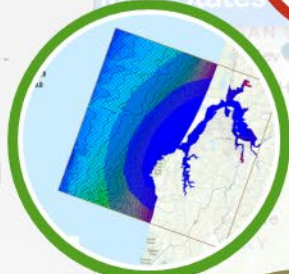Coastal Modeling System (CMS v5.1) basics using the Surface-water Modeling System (SMS 13.0)
May, 2019
1300 - 1500 Eastern

CIRP Happenings

Check out the latest and greatest ongoing

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CIRP Website
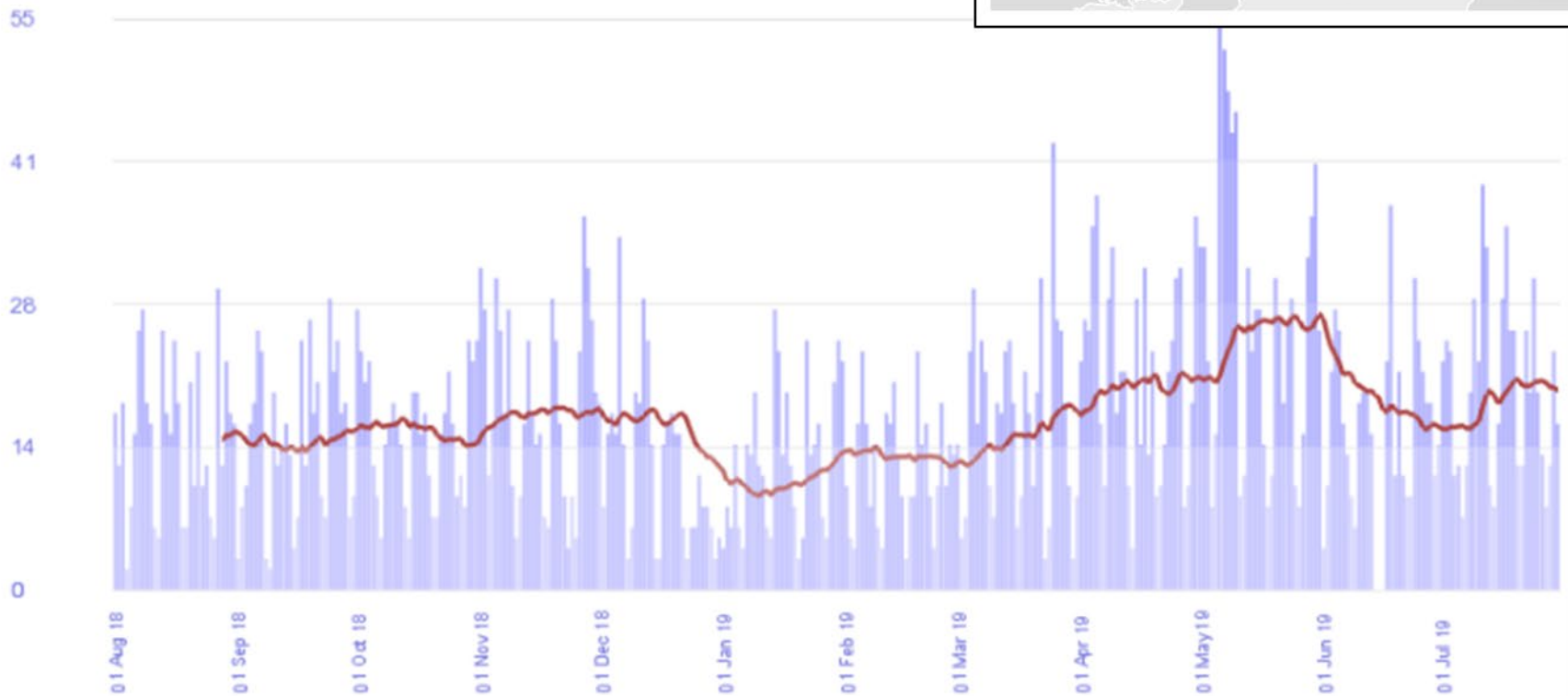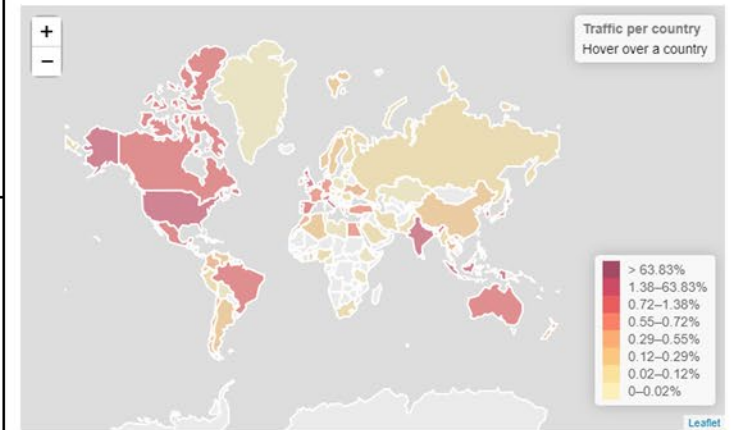
Technology Transfer
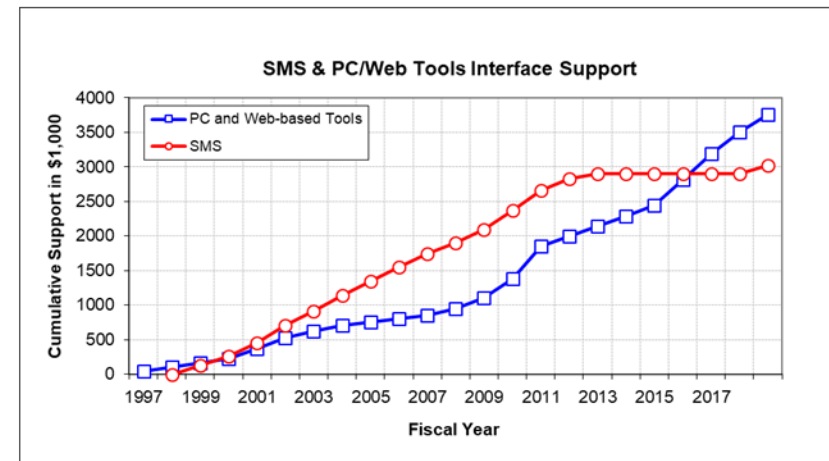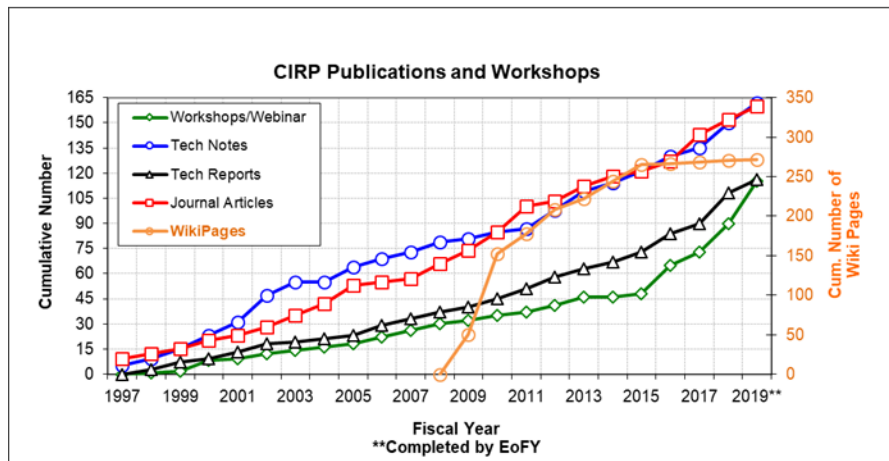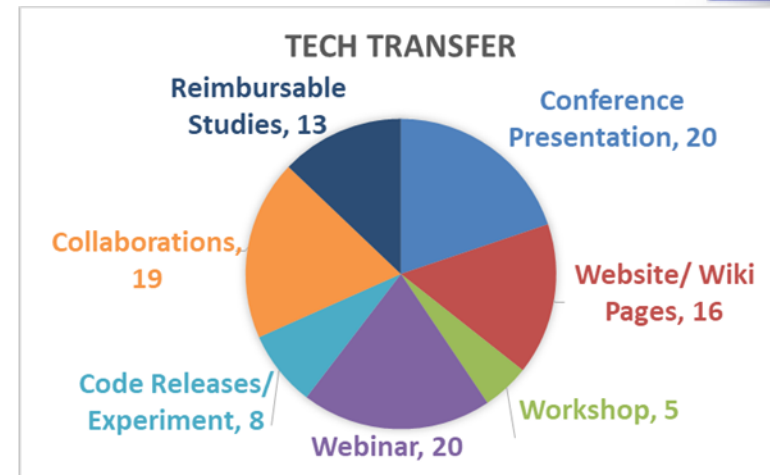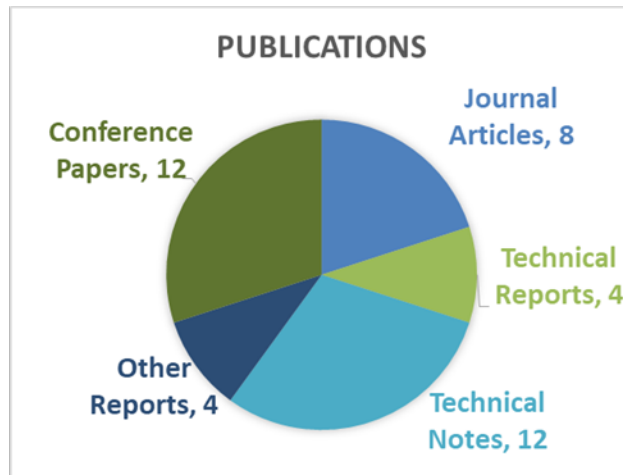
FY19 Program Summary

Mid-point Review Webinars

Work Unit	Title	Researcher(s)
Coastal Modeling System	Nearshore Processes (F&C/CODS/CIRP)	Johnson/Cohn
	Inlet and Nearshore Validation W/FRF Datasets	Johnson/Li
	Disaggregation of mixed sediment in near-bed transport	Smith
	CMTB & Optical Current Validation	Spicer
	CMS Tech Transfer	Li/Brown
	SMS GUI Development	Brown
	Modeling with Variable Winds	Lin/Demirbilek
	WaveNet & TideNet	Lin/Demirbilek
	CORSED (DOER/RSM/CIRP)	Gailani/Ding
Inlet Engineering Toolbox	Tools for Simulating Coastal Foredune Evolution Near Inlets	Brodie/Co...
	Engineering tools to predict vessel wake induced channel erosion	Styles
	GenCade Model Improvements and Documentation	Styles
Inlet Geomorphic	Nearshore Berms	
	Morphologic Modeling of Tidal Inlets	
CNPM	Coastal Navigation Portfolio Management	
Program Mngt	CIRP Administration & Tech Transfer	

FY19 HH&C Proponents
Weston Cross, Colleen O'Connell LRB
John Wethington LRC
Katherine Labuhn LRE
Monica Chasten, Jeff Gebert NAP
Holly Carpenter SAC
Jason Engle, Kevin Hodgens, Kelly Legault, Drew Condon SAJ
Elizabeth Godsey, Richard Allen SAM
Rob Thomas, Shahidul Islam SWG
Rod Moritz, Jarod Norton NWP
Jessica Podoski, Tom Smith POH
Craig Conner SPN
Ann Sturm SPD
Dylan Davis SAD

$2.7M
15 Statements of Need
35 ERDC Researchers & 20+ Field Proponents

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Summary

FY19

- **Advancing CSAT and AIS Vessel Navigation analytics**
- **Upgrades and validation to the CMS/CSHORE and GenCade**
- **Testing new aeolian transport code and remote sensing**
- **Nearshore Nourishment & Citizen Science**
- **Long-term Modeling to Optimize Dredging & Placement**
- **Tech Transfer – Workshops and webinars at all levels (Engineer, Divisions, HQ)**

FY20

- **Received $3.24M in research proposals**
- **Budget of $2.46M**
- **Continued advancement of CIRP technology**
- **Integration to District/Division/BLM – Problem Solving!**
- **Cross-program Coordination**

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