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Application: Coastal Structures Condition Assessment and Standardized Reporting Application (CoSCA)

- Description
 - ESRI ArcMap Toolbar and backend enterprise database(s)
 - Integrates data from various sources to aid inspections and calculate a condition index
 - Standardizes coastal structure condition assessments from inspection and survey data
 - *Special Function:*
 - 3D wire-frame data model is used as baseline for volume calculations
- What will it help us do?
 - Assessed condition is no longer subjective. Index is **generated** from calculations

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Data Input Requirements

• W

STRUCTURAL RATING FOR RUBBLE BREAKWATERS AND JETTIES Page ____ of ____

PROJECT NAME: _____ Reach: _____

STRUCTURE NAME: _____ Sta. From _____ To _____

INSPECTION TEAM: _____ DATE: _____ TIME: _____

NAME: _____ OFFICE SYMBOL: _____ PHONE: _____ Begin _____ End _____

WAVE HEIGHT (ft) _____ WAVE ACTION ON STRUCTURE: _____ TIDE LEVEL: _____ WEATHER DAY OF INSPECTION: _____

DAY OF INSPECTION: _____ A: Overtopping A: High B: Medium _____

_____ B: Non-overtopping C: Low _____ B: Rain _____

_____ Stage: _____ feet C: Fog _____

_____ D: Storming _____

TYPE OF INSPECTION: WALKING BOATING OTHER _____ (CIRCLE)

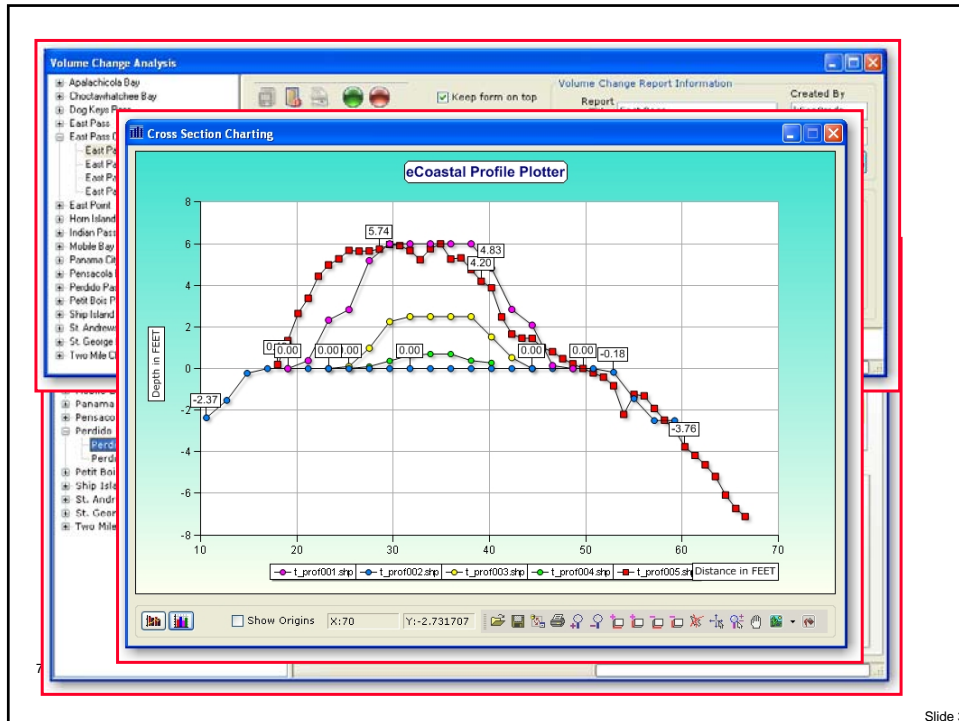
RATING CATEGORIES: Rate all items (Circle applicable lettered items)	CREST / CAP CR			SEASIDE (or HEAD) SE			CHANNEL / HARBOR SIDE CH		
	Rating 1-6	Damage Length	Comment Numbers	Rating 1-6	Damage Length	Comment Numbers	Rating 1-6	Damage Length	Comment Numbers
Breach: (A) Displaced Cap/Armor (B) Settling Cap/Armor									
Core (or Underlay) Exposure/Loss									
Armor Loss: (A) Displaced (B) Settling (C) Bridging									
Loss of Armor Contact/ Armor Interlock									
Armor Quality Defects:									

3D Wire-frame

ata line

Inspection Form

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Application User

- Who are the application users? How might they use the tool?
 - Where are they in the organization Division/branch?
 - Operations Division/Navigation Branch/Area Office (inspections)
 - Engineering Division/Structures Branch (analysis)
 - What level are they (Tech, Eng, Mgr)?
 - Technicians can provide the data entry for inspections (HAMMER)
 - Engineers can work through the data analysis to determine damage
 - Managers can view calculated results in posted condition reports and use information for budgeting
 - What skills or training is required?
 - Basic GIS skills
 - Self-paced training will be provided

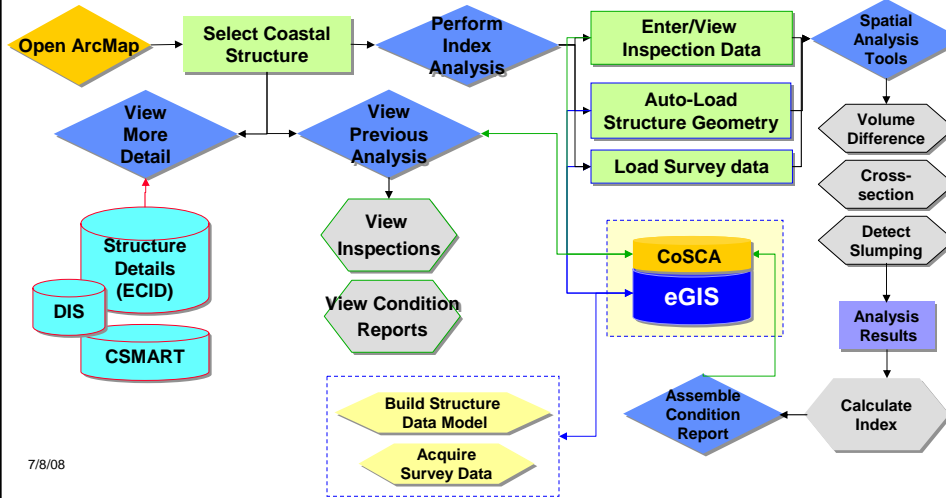
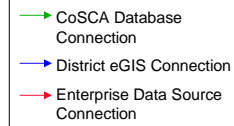
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Work Flow



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Tech Support Plan

- CoSCA is part of the eCoastal program.
 - eCoastal provides yearly training on available tools & applications
 - eCoastal website (<http://eCoastal.usace.army.mil>) provides web presence for distribution of tools, documentation, and user feedback.

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Biggest Challenges

- What's the best way to package and deploy the tool?
 - Distribute application via download or DVD to the District Commander, Chief of Ops, Coastal Engineer, or District eGIS organization
- What are the ERDC challenges in moving ahead?
 - Will each District support an enterprise architecture or must the application come with stand-alone capability...adds significant cost and does not support USACE eGIS goals
- What are the district challenges in the use of this application?
 - SDS-compliant eGIS database with populated feature classes
 - Wire-frame data model of each coastal structure needs to be created to use analysis portions of CoSCA.
 - Survey data
 - Access to NCMP data
 - Architecture to support web services
 - Inspections needs to be entered into the CoSCA/eGIS database.

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