

Upcoming CMS Features and Field Needs



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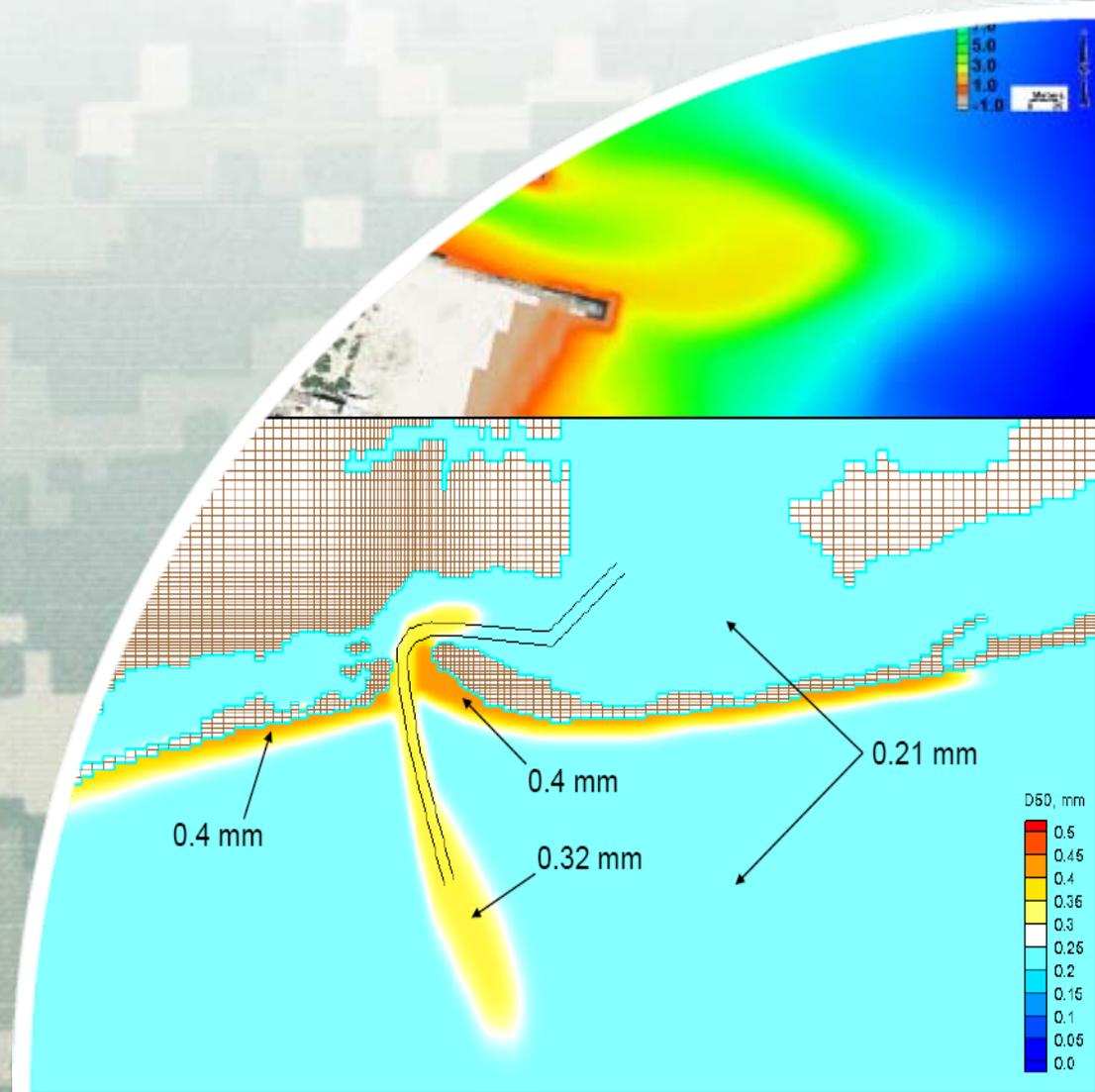
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Upcoming CMS Features, short term (FY10)



- Easier and faster calculation of long-term morphology change (CMS-FLOW2D)
 - ▶ Goal: Implicit CMS – 1 year calculation in 1 day!
 - ▶ NET = Non-Equilibrium Transport (guidance)
 - ▶ Easy access to multiple processors on a PC (explicit, implicit; guidance)
 - ▶ Multiple grain sizes; hiding, exposure, armoring
- Additional and improved features at structures (CMS-Wave)
 - ▶ Transmission, reflection, runup, overtopping, overwash, overland flow, non-linear wave-wave interactions (guidance)
- Telescoping grids for all CMS modules in the SMS



Upcoming CMS Features, mid term (late FY10 – FY11)



- Representation of shoreline change at jetties (beta, explicit)
 - ▶ Swash zone transport processes and shoreline change
- Representation of wave asymmetry, undertow, bottom layer for cross-shore transport in CMS2D
- CMS3D (explicit, implicit)
 - ▶ Cohesive sediment processes
 - ▶ Salinity transport
 - ▶ Wave asymmetry, undertow, bottom streaming, bottom boundary layer processes
- Guidance for when 3D is necessary as opposed to 2D
- Sediment budgets from CMS calculations



Upcoming CMS Features, long term (FY11-FY12)



- 3D Calculations in production mode
 - ▶ 3D Graphics in SMS
 - ▶ Regional 2D-3D Calculations
 - 3D calculations nested within regional 2D grids
- Porting CMS capability to the HPC
 - ▶ Set up in SMS on PC
 - ▶ EZ-Link upload to HPC
 - ▶ EZ download results to SMS on PC for review, visualization, and reporting
- Calculation of Subaerial Beach Change
 - ▶ Regional sediment budget calculations including LST, XShore, breaching, subaerial and subaqueous morphologic change



User Needs Here's your chance!



Please provide input on needs for your projects

1. ___
2. ___
3. ___
4. ___
5. ___



**Grays Harbor, WA
N Jetty rehab, 1939**