



Coastal Modeling System: *Coastal Modeling System (CMS) Technology Transfer*

Need The CMS is the premier coastal model and the flag-ship product of the Coastal Inlets Research Program (CIRP). New processes, features, and improvements are made continuously to both the CMS models and the Surface-water Modeling System (SMS), the graphical user interface (GUI) developed for the CMS. Technical transfer is essential for the long-term successful integration of the CMS into applied engineering studies within the USACE. It is through technical transfer that new users are introduced to the CMS/SMS and existing users can maintain adequate knowledge and learn about new features.

- Approach**
- Develop and maintain the CIRPWiki website. Post new CMS verification and validation cases and update the technical reference section of the documentation portal, the glossary, the user guide section, and also SMS GUI.
 - Develop and maintain the CMS User Manual.
 - Conduct CMS/SMS Webinars and describe new development of the CMS/SMS.
 - Conduct DOTS CMS/SMS trainings.
 - Conduct onsite CMS workshops. Introduce CMS basics, theories, applications, updates, new features, linkage to other models, new versions of SMS.

Technical Advancements This work aims to continue development and testing of the advanced modeling tool which can be used to address fundamental scientific questions and support practical engineering applications. This work will ultimately provide significant value towards District needs in understanding coastal wave, hydrodynamic, and sediment transport processes. The incorporation of new physical and engineering design processes into the model will enable the utility of the process-based model to be further extended for managed coastal systems.

Leveraging Opportunities Technology transfer of the CMS is coordinated and leveraged with other Direct R&D funded technology products utilizing the SMS program, including the Particle Tracking Model (PTM).

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