



IDIQ for Huntington District Corps of Engineers

WEST Consultants is completing an IDIQ contract for hydrology and hydraulics with the Huntington District. Task orders have included a (1) a sedimentation study, using HEC-6, for Marlinton, (2) HEC-RAS classes, taught in Spanish, in Nicaragua and the Dominican Republic, (3) a comprehensive study of the Kanawha River basin, using HEC-RAS, HEC-HMS, UNET and GEO-RAS, (4) updating the Paintsville water supply model, using STELLA software, (5) developing a water quality model of the Winfield Pool of the Kanawha River, using CE-QUAL-W2 (6) assessing sedimentation of Dillon Lake, Ohio, (7) analyzing hydraulic, sediment transport, geomorphic, and stable channel aspects of the Lower Mud River Local Protection Project at Milton, WV and (8) investigating probable maximum storm centering policies using the watershed above Dover Reservoir, Ohio, as a case study.

For the Kanawha Basin study, the District had a number of individual and older HEC-1, HEC-2 and UNET models of parts of the system. We were asked to merge them into single watershed (HEC-HMS) and river flow (unsteady HEC-RAS) models, and to geo-reference the geometry. The models were preliminarily calibrated to existing data.

A STELLA model had been developed of the Paintsville water supply system. The model was updated to include additional sources, and to consider releases for whitewater rafting. The study also included a review of whether this was the “best” approach to developing water supply models.

The Winfield Pool, on the Kanawha River, included Charleston, West Virginia. The pool experiences a number of water quality issues, including high temperature and algal blooms. Using the Corps model, CE-QUAL-W2, we developed a comprehensive, laterally-averaged model of the pool that currently includes hydrodynamics and temperature. The model is being calibrated to observed temperature conditions, and will later be extended to include comprehensive water quality processes to simulate nutrient loads and algal bloom dynamics. Eventually, this model will be linked to models of adjacent pools to develop a model of the entire controlled reach of the Kanawha River.

Project Owner:

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Completion Date:

In progress



Coal River. Winfield Pool



Kanawha River at Charleston. WV



Marlinton Sediment Site