

Read Me:

Model Name: DM-21_HabitatRiver Model

Objective: Use EFDC+ Explorer (EE) and EFDC+ to simulate hydrodynamics of HabitatRiver. Use Habitat Analysis feature of EE post - processing tool to analyze critical limits and suitability index of model parameters of water depth, velocity to two species of fish, muskellunge and burbot.

Model Grid: 5898 horizontal grid cells, 4 vertical layer in water column.

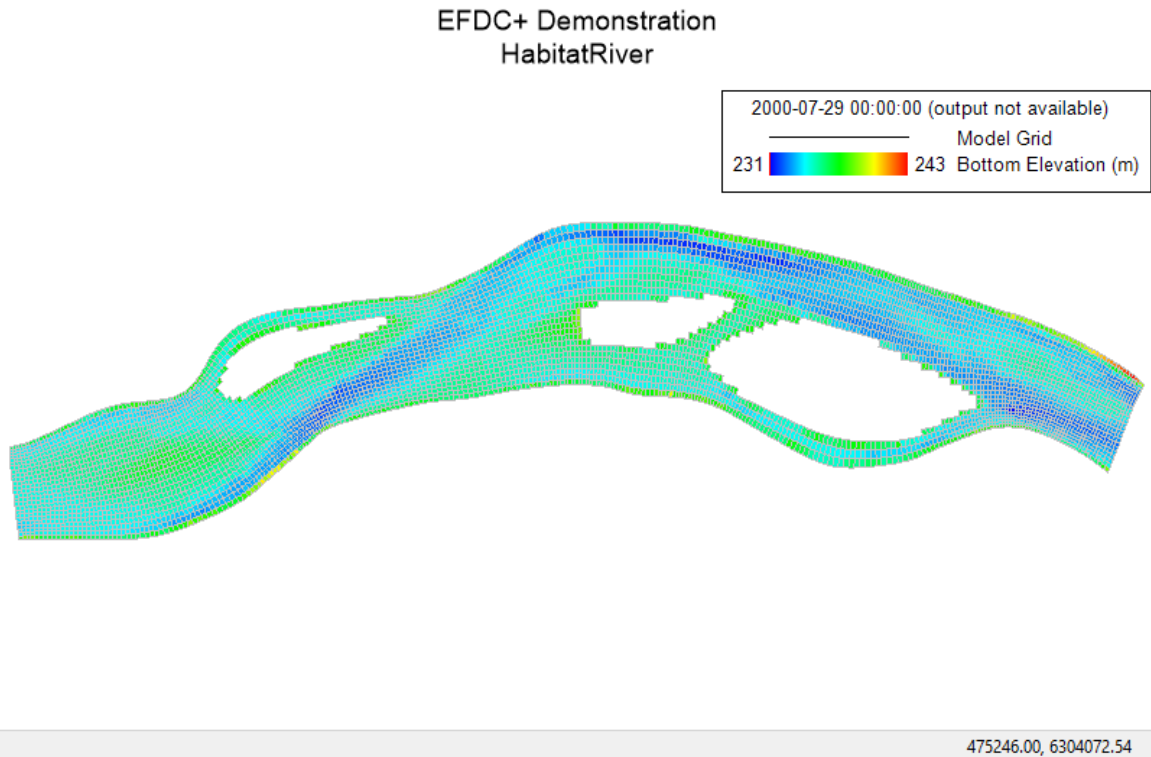


Figure 1 Model Domain of DM-21_HabitatRiver.

Folder Structure:

Data: This folder contains data that can be used with the model. These data can be measured data or output from model or derived from analytical equations.

Model: EFDC model that can be loaded in EE to pre- and post-process.

Test_record file: This file is just a record file that informs which EFDC+ executable was used to run the model.

Modules Activated: Hydrodynamics

Description: This model is designed to test the habitat model in EEMS. It demonstrates how water depth and velocity to impact two species of fish, muskellunge and burbot. The model uses IFIM method to determine how well each habitat variable meets the habitat requirements of the species by life stage.

Disclaimer: The model is provided to our users to demonstrate that EFDC_Explorer and EFDC+ can be used to better understand how to build this kind of model. The model is running as expected; however, shouldn't be considered final as the model can be modified / refined to obtain improved results.

Files in Data Folder:**Bathymetry**

- Bottom Elevation.dat

Boundaries

- US_Flow.dat
- DS_Rating Curve.dat

Habitat

- HabitatRiver_Model_Example_(2024_09_13).pdf
- HabitatAnalysisData.xlsx

Model result:

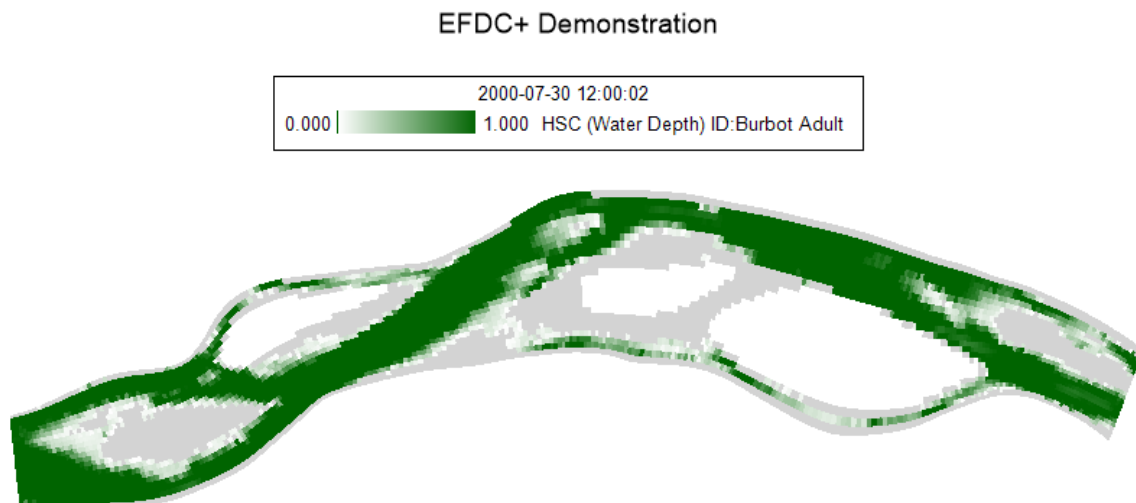


Figure 2 2DH view of HSC for Burbot Adult from DM-21_HabitatRiver.