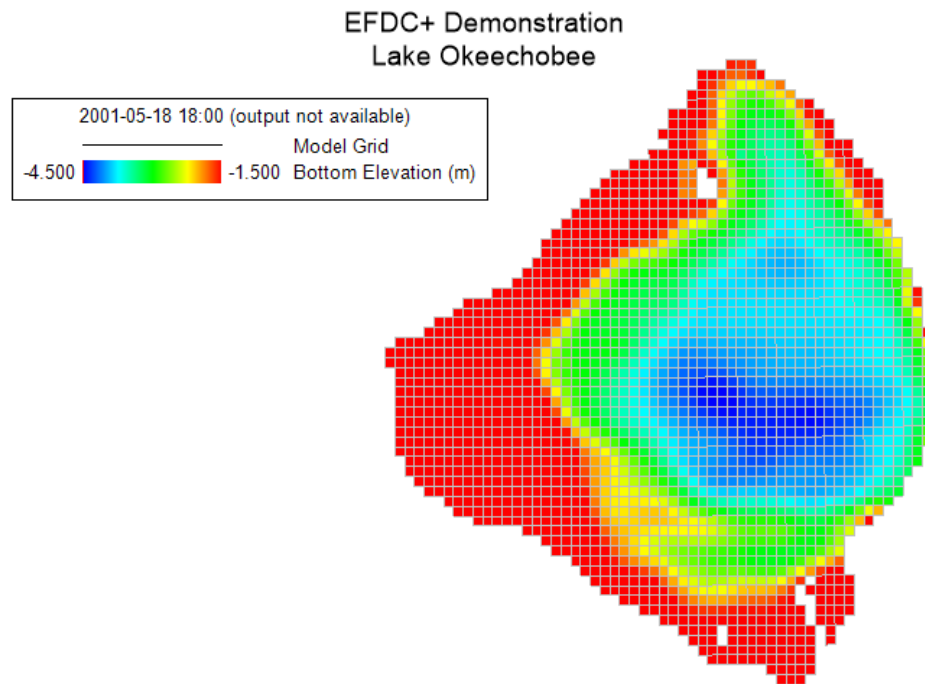Read Me:

Model Name: DM-02_Lake_Okeechobee_Example

Objective: Use EFDC+ Explorer (EE) and EFDC+ to simulate hydrodynamics in Lake Okeechobee.

Model Grid: 2,121 horizontal grid cells and 5 vertical layers.

Figure 1 Model Domain of DM-02_Lake_Okeechobee.

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.

Grid: This folder contains the grid for building the model

- Lake_Okeechobee.cvl: CVL grid format, EE uses this grid type for building model
- Lake_Okeechobee.kml: This file can be opened with Google Earth

Maps-Images: This folder contains the maps / images of the study area. The formats of the maps / images can be *.geo (geo-referenced file), *.jgw, *.jpg etc.

- Okeechobee.geo
- Okeechobee.jpg

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

Modules Activated: Hydrodynamics, temperature, dye.

Description: Dye is released from a flow boundary configured at cell location I = 41, J =63, while water temperature time series are configured at several different flow boundaries. For the wind conditions currently set an eddy forms in the lake.

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, it shouldn't be considered final as the model can be modified / refined to obtain improved results.

Files in Data Folder:

Bathymetry:
- Elevation_NAVD88_UTM_NAD83.DAT
- Elevation_NGVD29_UTM_NAD83.DAT
- Lake Okeechobee_Bathymetry_Summary.pdf

Boundaries:
- Temp.dat
- Dye.dat
- QSER_1.dat
- QSER_2.dat
- QSER_3.dat
- QSER_4.dat
- QSER_5.dat
- QSER_6.dat
- QSER_7.dat

- QSER_9.dat
- QSER_10.dat

References:

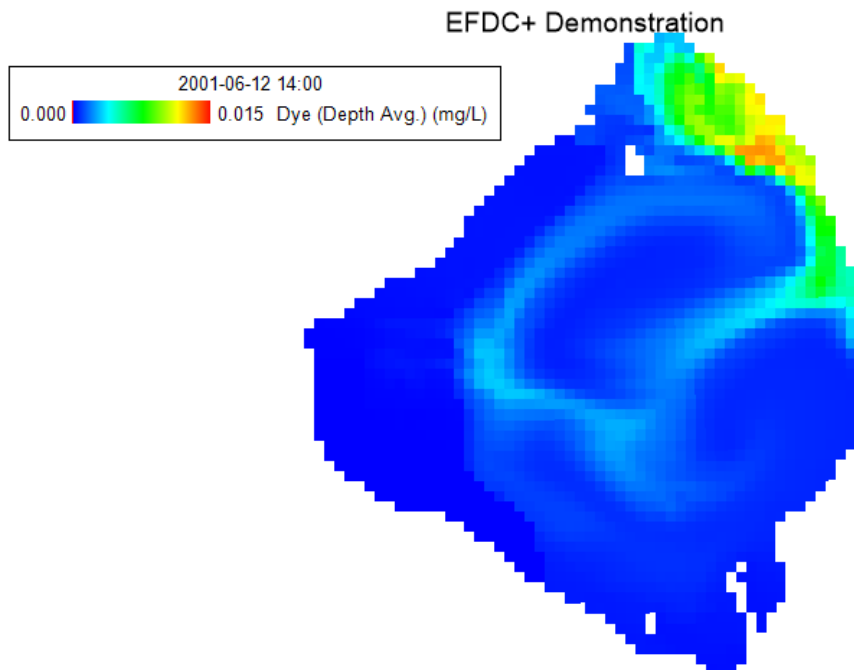Ji, Zhen-Gang. 2008. *Hydrodynamics and Water Quality: Modeling Rivers, Lakes, and Estuaries.* John Wiley and Sons

Model Result:

Figure 2 2DH view of dye from DM-02_Lake Okeechobee.