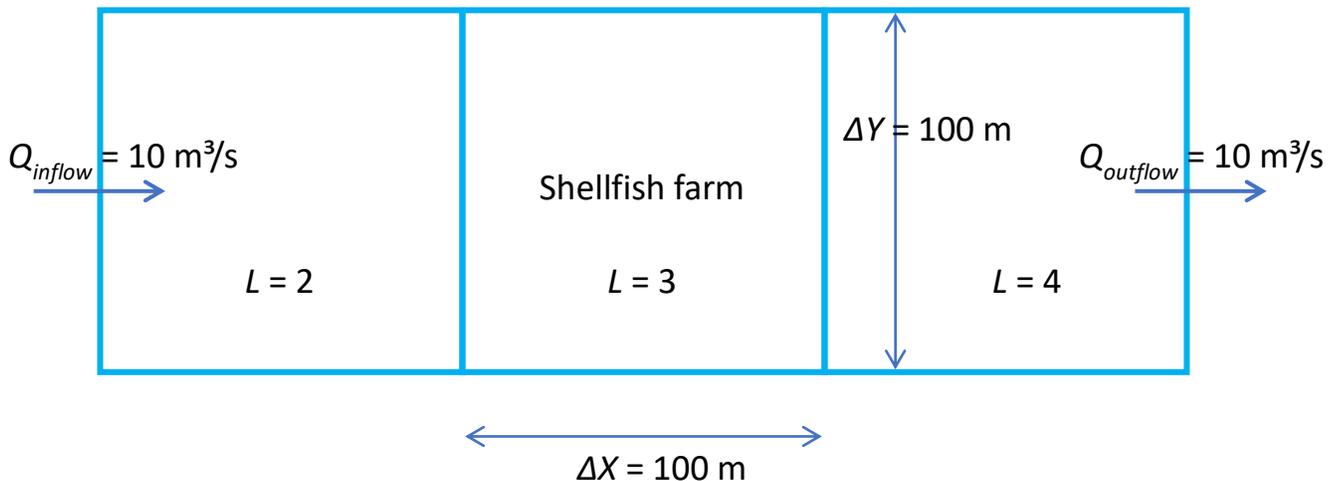


Read me:

**Model name:** TC-12\_Shellfish Farm\_Test\_Case

**Objective:** Use EFDC+ Explorer (EE) and EFDC+ to replicate the Kobayashi et al., (1997) test cases for shellfish growth in interaction with water quality described in the paper “A population dynamics model for the Japanese oyster, *Crassostrea Gigas*”. The goal is to better understand the impact of water quality to the growth of the oyster.

**Model grid:** 03 horizontal grid cells and one vertical layer.



**Figure 1. Model Domain of TC-12 Shellfish Farm.**

**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, Salinity, Temperature, Water Quality, Shellfish Farm

**Disclaimer:** The model is provided to our users to demonstrate how EFDC\_Explorer and EFDC+ can be used to simulate how the water quality impact to the growth of oyster.

**Citation for the paper:**

Kobayashi, M., E.E. Hofmann, E.N. Powell, J.M. Klinck, K. Kusaka (1997). A population dynamics model for the Japanese oyster, *Crassostrea Gigas*. *Aquaculture*. Vol. 149, Iss. 3–4, p. 285-321.

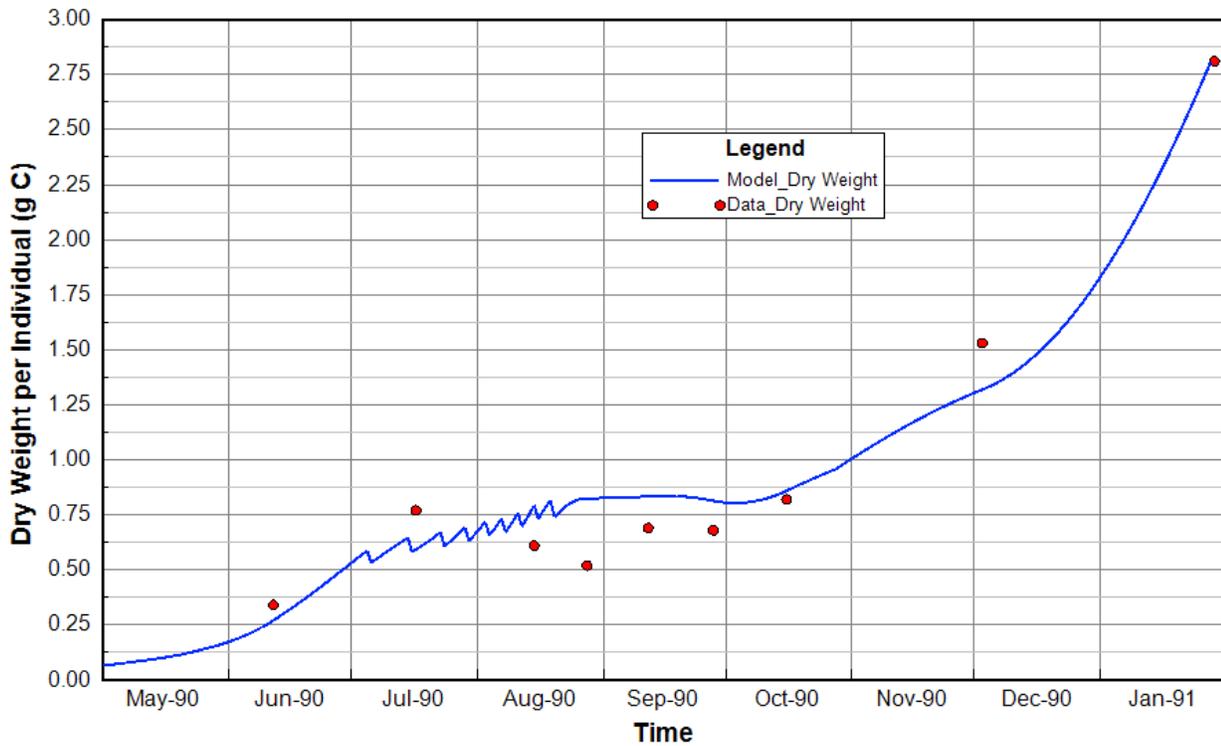
Cerco, C.F. and M.R. Noel (2007). Can Oyster Restoration Reverse Cultural Eutrophication in Chesapeake Bay? *Estuaries and Coasts*. Vol. 30, No. 2, p. 331–343.

**Files in Data Folder:**

- Data\_ChI-a.dat
- Data\_Dry weight.dat
- Data\_Salinity.dat
- Data\_Shell Length.dat
- Data\_Temperature.dat

**Data sources:** The data provided in the “Data” folder are derived from the journal paper mentioned above.

**Model results:**



**Figure 2. Dry weight comparison.**

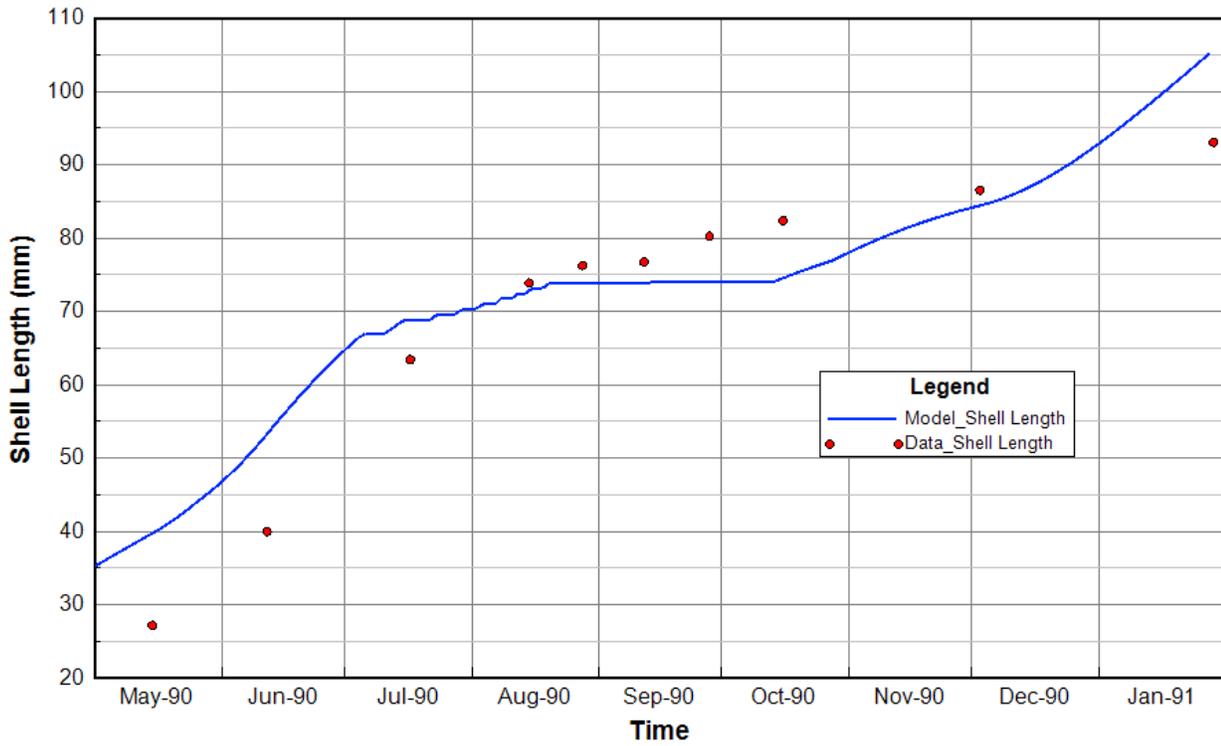


Figure 3. Dry weight comparison