

Kick-off Meeting Summary from Dr. Silong Lu (HSPF peer reviewer; Dynamic Solutions, LLC).

12/13/2023

The kick off meeting took place at 10 am, 12/13/2014 in Lake Mary City Hall. Dr. Andrew Sutherland started to brief the purpose of the kickoff meeting, overview of Crystal Lake and minimum flows and levels (MFLs) the district needs to do and required by FL statutes, and overviewed the MFLs process: MFLs determination and assessment.

Dr. Fatih Gordu provided an overview of how the District uses surface water models in the MFLs process, including various stages of hydrological analyses and use of HSPF model of long-term simulations and scenarios for MFLs development.

Dr. Olkeba Leta presented the HSPF model for Crystal Chain of Lakes including some background, data use and sources of basin boundary and subbasin delineation, rainfall, PET, land use and land cover, soil, lake bathymetry and stage, DEM and UFA groundwater stage data, model calibration and validation, sensitivity analysis and long-term simulation. The model was calibrated to the period of 1/1/2007 to 12/31/2019 and validated to the period of 1/1/1995 to 12/31/2006 to cover a variety of the hydrologic conditions. Sensitivity analysis showed that lake leakance is most sensitive and showed more impact on low and medium stages while DEEPFR and LZETP is moderately sensitive and INFILT and LSZN is not. The long-term simulation covers the period of 1/1/1953 to 12/31/2019.

Dr. Sutherland asked if Dr. Silong Lu, the reviewer, has any questions and comments. Dr. Lu responded: No, at this moment.

Rob Denis with Liquid Solutions asked if the regional groundwater model results used for both East and West Crystal Lake in the HSPF model. Dr. Leta explained how the model was setup with the regional groundwater model data for both lakes. Rob asked if the local groundwater may be different as West Crystal Lake is close to the production wells which may cause lake stage fluctuation. Dr. Gordu responded it is possible but need a close look.

Dr. Sutherland also mentioned several milestone dates of the review process and the model, report and other relevant documents can be found under the MFLs program at the district website.

During the following site visit, two locations were visited due to accessibility. The connection between Channel Lake and East Crystal Lake under N County Club Rd at Liberty Park was checked/verified. The second connection between DeForest Lake and Amory Lake under W Crystal Drive was checked/verified as well.