M E M O R A N D U M

TO: Governing Board Members

FROM: Carolina Maran, Ph.D., P.E., Division of Flood Control and Water Supply Planning

DATE: November 12, 2026

SUBJECT: Agreements with University of Central Florida and Tulane University as Part of the ERDC-funded South Florida Compound Flooding Project

Agenda Item Background:
The Contract No. 4600005409, "Aligning Hydrologic, Hydraulic and Coastal Hydrodynamic Tools to Assess Unique Aspects of Compound Flooding from Inland and Coastal Hazards in South Florida" (South Florida Compound Flooding), was executed between the District and the U.S. Army Engineer Research and Development Center (ERDC) on September 24, 2026. The Project is fully funded by ERDC and has a five-year duration.

The Project is intended to propose an approach for assessing compound flooding on different spatial and temporal scales, and using hydrologic, hydraulic, and hydrodynamic/coastal (H&H&H or HH&C) modeling tools preferred by USACE Hydrology, Hydraulics and Coastal Community of Practice (CoP), while leveraging existing tools advanced by the District, mainly through the ongoing Flood Protection Level of Service (FPLOS) Program and Central and Southern Florida (C&SF) Flood Resiliency Studies.

The Project will advance a state-of-the-art approach and increase the knowledge and understanding on compound flooding aspects by coupling complex inland and coastal processes that dominate flood occurrence in South Florida, with consideration of surface-subsurface interactions and system operational rules. Beyond establishing integration mechanisms between coastal and inland equations and modeling approaches, the Project will support determination of the extension and characterization of transition zones - in between coastal/surge dominated areas and inland/riverine/rainfall dominated areas, along with their adequate statistical treatment representing the combined probability from different flood sources, including storm surge and rainfall occurrences, with consideration of groundwater interactions.

To implement the Project in accordance with Contract No. 4600005409 and its subcontracting plan, the District proposes entering into two Agreements with Tulane University (Contract No. 4600005434) and University of Central Florida (Contract No. 4600005435). Both universities will support overall Project development and will be the main parties responsible for completing assigned tasks.

The purpose of this item is to obtain Governing Board authorization for the Executive Director, or designee, to execute Agreements with Tulane University in the amount of $504,437 and University of Central Florida in the amount of $571,932.

Funding Source:

Sources from federal grant agreement W912HZ26CA039 with ERDC, in the total amount of $2,186,623, for which ERDC allocated an estimated $115,040 and is budgeted in Fiscal Year 2026-2027, and the remainder is subject to future federal funding allocation and Governing Board approval of future years' budgets.

Staff Contact and/or Presenter:
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ATTACHMENTS:

Resolution No. 2026-1106