CASE STUDY 2: PORT TAMPA BAY AND HURRICANE IAN

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Resilient and sustainable, Smart Ponds allow seaports to protect the environment from untreated stormwater discharges generated by industrial activities and shield adjacent neighborhoods against extreme weather events, while ensuring that nearly 100 percent of a port's available land can be dedicated to meeting expansion demands for cargo calling on ports. Seaports are the gateway for America's economy, and resilient, green infrastructure that protects ports is essential to support the supply chain even under extreme storm events. Port Tampa Bay is leading by example, and embracing the future of stormwater management with two Smart Ponds that are improving water quality, while also providing flood protection.

Installed at the beginning of January, the second Smart Pond is located near Port Tampa Bay on State Road 676. It joins Port Tampa Bay's first Smart Pond, installed near the entrance of Port Tampa Bay on South 22nd Street last June. The first Smart Pond quickly demonstrated its value, successfully capturing more than 175,000 cubic feet of stormwater during Hurricane Ian, reducing flooding in neighborhoods and businesses surrounding Port Tampa Bay and preventing this untreated runoff from flowing into Tampa Bay. It did this by using National Weather Service data to determine that it did not have adequate storage capacity to capture the incoming rainfall. It then automatically lowered its water level before the arrival of the storm.

The added stormwater capacity in a Smart Pond is a factor when the Port must evaluate the costs of using high-value property for the construction of conventional stormwater ponds. Before Smart Ponds became available, Port Tampa Bay often used underground, reinforced concrete vaults to save land area. Vaults are extremely expensive to construct and maintain, particularly at seaports, where they experience high loads from heavy cargo handling equipment. Maintenance is not only costly but disruptive to operations.

PRESENTER BIO: Mr. De Jesus is a PE with 20 yrs. of exp. & is currently Director of Engineering at Port Tampa Bay. He previously worked designing and constructing projects in the public and private sectors. He received his BS in Civil Engineering from UF & is active with the American Society of Civil Engineers and the Society of American Military Engineers. He is an alumnus of Leadership Tampa Bay. He has expertise in sustainable design and construction having been certified as a LEED Accredited Professional