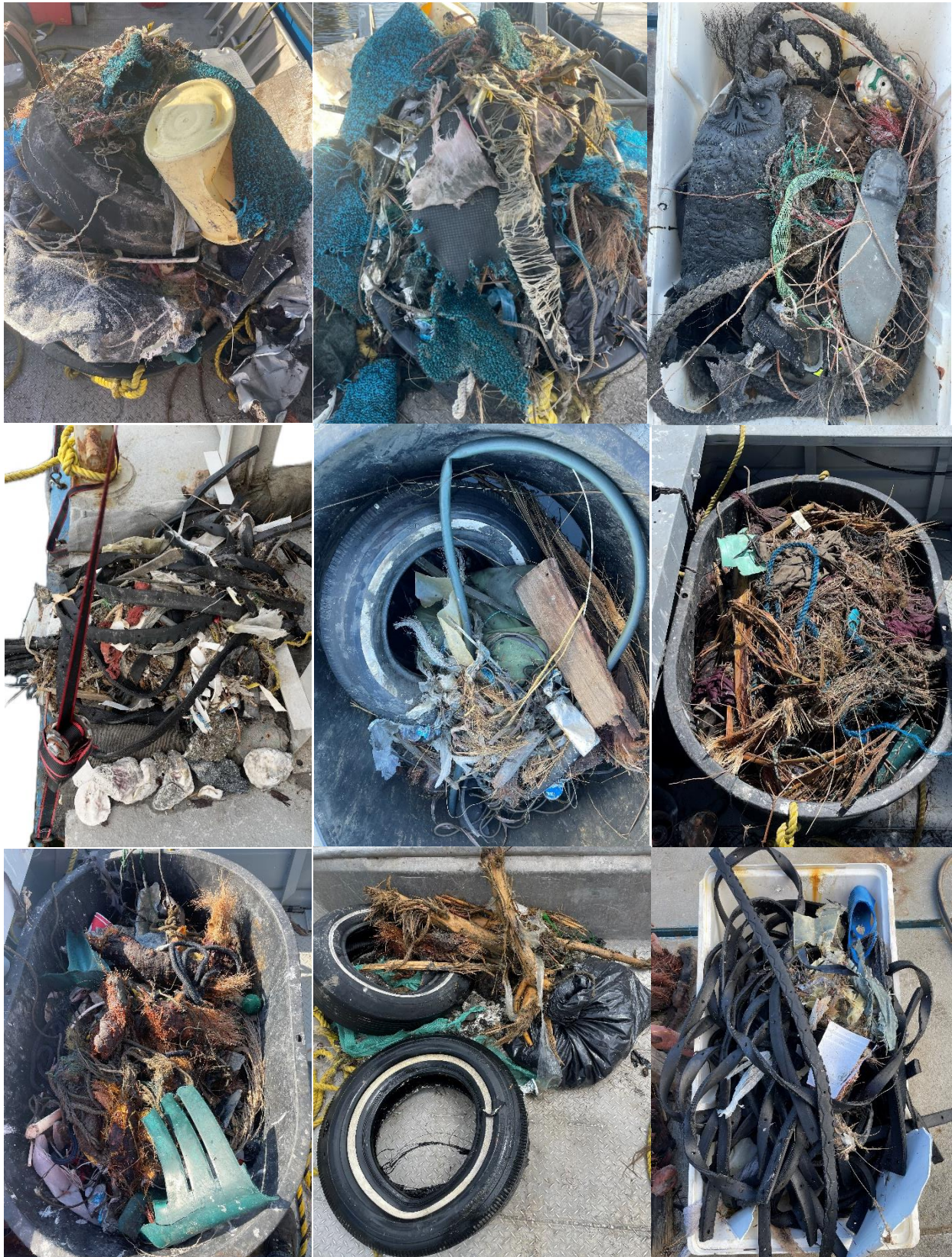


Attachment D

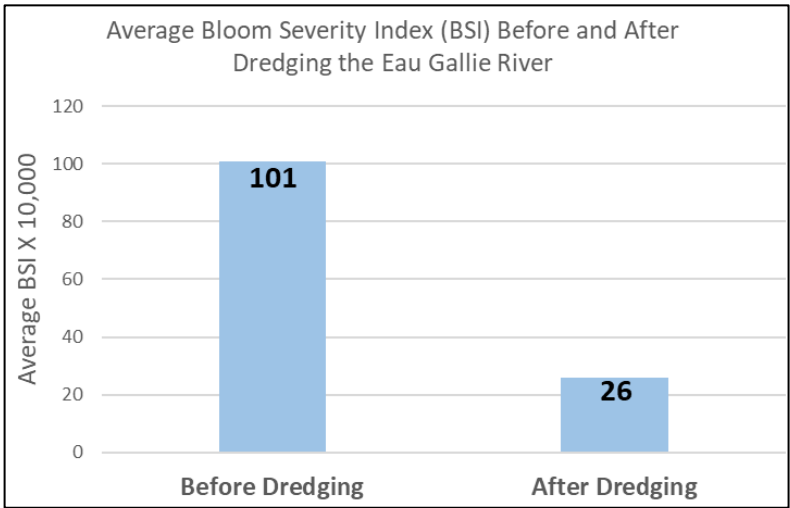
Muck Removal Benefits-Water Quality

Not only is muck removed, but **trash** that clogs the dredge is also pulled daily from the lagoon.



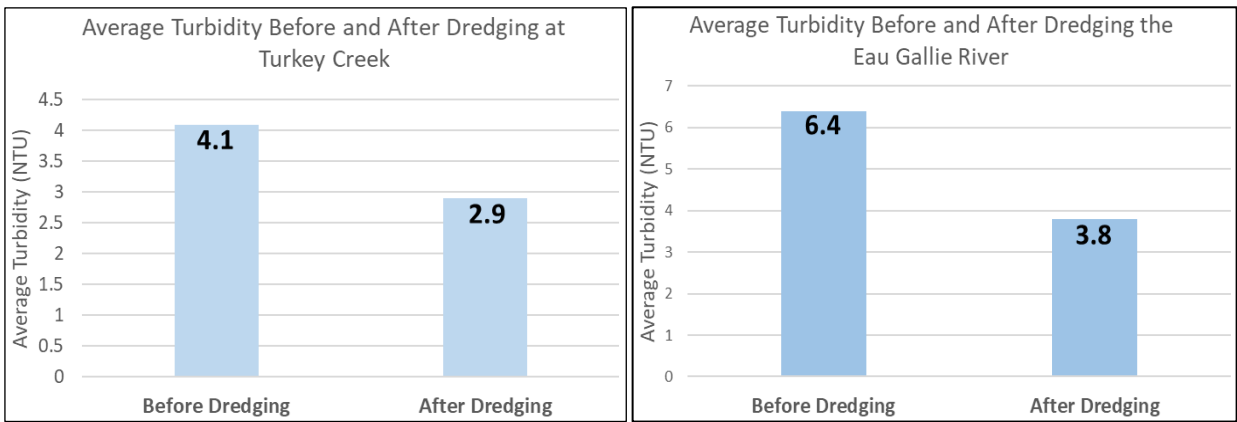
Muck Removal Benefits: Decreased Bloom Severity Index (BSI)

The bloom severity index (BSI) is a simple number that shows how intense and widespread a harmful algal bloom is in a specific area. After dredging the Eau Gallie River, the BSI decreased by approximately 74%.



Muck Removal Benefits: Decreased Turbidity

The St. Johns River Water Management District maintains several long-term water quality monitoring stations in the IRL, including one northeast of Brevard County's Turkey Creek muck removal project and one east of the St. Johns River Water Management District's Eau Gallie River and Elbow Creek restoration dredging project.



Turbidity decreased by approximately 30% after dredging was completed in Turkey Creek and by approximately 41% after dredging was completed in Eau Gallie River and Elbow Creek.

Muck Removal Benefits: Improved Dissolved Oxygen

In January 2022, Dr. Austin Fox from Florida Tech deployed bottom-water dissolved oxygen sensors in the Sykes Creek muck removal project area to evaluate the impacts of muck removal through environmental dredging on bottom-water dissolved oxygen concentrations. So far, data from these sensors show higher dissolved oxygen levels in the recently dredged canals and a more mixed water column. This means the oxygen does not drop off near the bottom as it used to—it remains more consistent throughout the entire water column (Fox, 2023).