

PROJECT OVERVIEW REPORT

1. UTC Identifying Number
69A3551847102
2. Center Identifying Number
CAIT-UTC-REG 7
3. Project Title
MEMS Sensor Development for In-Situ Quantification of Toxic Metals in Sediment
4. Principal Investigator & Contact Information
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7. Project Description
The primary goal of this proposal is to develop a new sample-to-answer in-situ MEMS probe which can rapidly determine in which locations the hot spots of metal contamination are and which areas require dredging and which do not. This management of resources can make the process significantly more cost effective.
8. Implementation of Research Outcomes (or why not implemented)
The intended outcome of the project is a working prototype for the real-time, in-situ quantification of metals concentrations in marine sediments. It is anticipated that this product can be used in future studies to push the state of the art forward in sediment management. There are many areas in the NYNJ Harbor that will be dredged for environmental purposes, and a particularly interesting topic to the authors is the deposition of sediments in recently dredged areas and extent to

which "new" sediments contribute to the contamination inventory in a specific area.

9. Impacts/Benefits of Implementation (actual, not anticipated)
To Be Determined

10. Dates and Budget

Start date: 9/1/2018

End date: 9/30/2019

UTC (CAIT) Dollars: \$80,000

Cost Sharing: \$0.00

Total Dollars: \$80,000

11. Keywords

MEMS, Sensors, Sediment

12. Web Links (Reports and Project Website)

<https://cait.rutgers.edu/research/mems-sensor-development-for-in-situ-quantification-of-toxic-metals-in-sediment/>