

Client
Cleveland Hopkins
International Airport

Key Services Provided

- Project Design
- Field Sampling
- Periphyton Analysis
- Bacteria Analysis
- Fungal Screening
- ATP Analysis
- Photomicroscopy
- Data Analysis

Project Duration
2014-2015

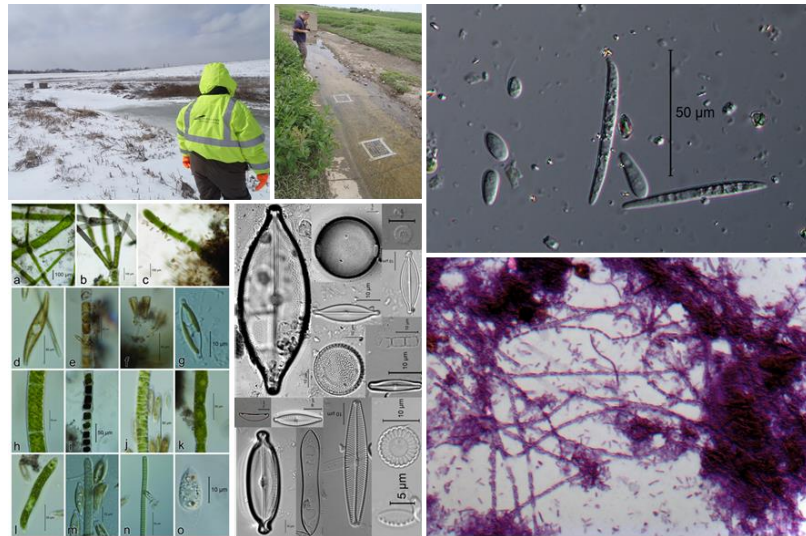
ES Project Cost
\$269,910.00

ES Key Staff

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Alex Valigosky
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Bradley Bartelme

CLEVELAND AIRPORT BIOFILM ASSESSMENT

Cleveland, OH



EnviroScience, Inc. assembled a team of consultants and laboratories to develop and implement a comprehensive phased approach to determine conditions that support excessive biofilm growth at Cleveland Hopkins International Airport. Overall, EnviroScience assessed a multitude of biological and chemical variables to properly assess the dynamic of biofilm communities throughout the airport and its surrounding drainage into Abram Creek, a small tributary to the Rocky River. In addition, novel artificial sampling devices were constructed to further piece apart the microhabitat variability. State-of-the-art microscopy techniques were used to photo document every species encountered. Subsequent photos were uploaded to a database provided as one of the deliverables. This project aided in the development of a novel algae counting and identification database. All analyses were completed following U.S. EPA standard procedures (USEPA 2013).

The EnviroScience core services relevant to this procurement included:

- Project Design
- Field Sampling
- Periphyton analysis
 - (Diatom and Soft Algae - identification and enumeration)
- Bacteria screening
 - Heterotrophic Aerobic Bacteria sampling
 - Bacteria staining
- Fungal screening
- ATP Analysis
- Photomicroscopy
- Data Analysis