



"Revolutionizing Source Water Monitoring: The Role of Docked Drones"

Connor.stahl@amwater.com

UAS Program Manager

Presented to a subcommittee of an advisory committee of the DRBC on November 14, 2024. Contents should not be published or re-posted in whole or in part without permission of the DRBC or the presenter.

Agenda

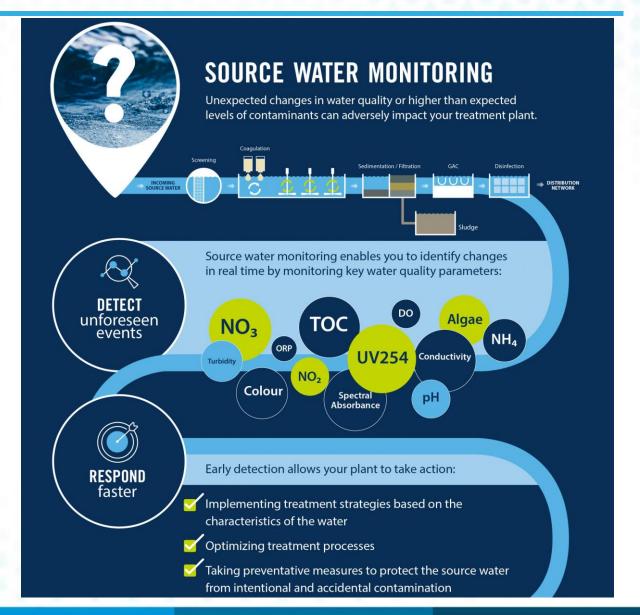
- 1. Introduction to Source Water Monitoring
- 2. Overview of Docked Drone Technology
- 3. Advantages of Drones for Water Quality Assessment
- 4. Recent Event History
- 5. Delaware Dock Install
- 6. Live Demo
- 7. Q&A Session



Source Water Monitoring

Source water monitoring is the process of collecting and analyzing water samples & imagery from rivers, reservoirs, and other sources before they are treated for drinking water.

- Improve water treatment
- Protect public health
- Optimize treatment processes



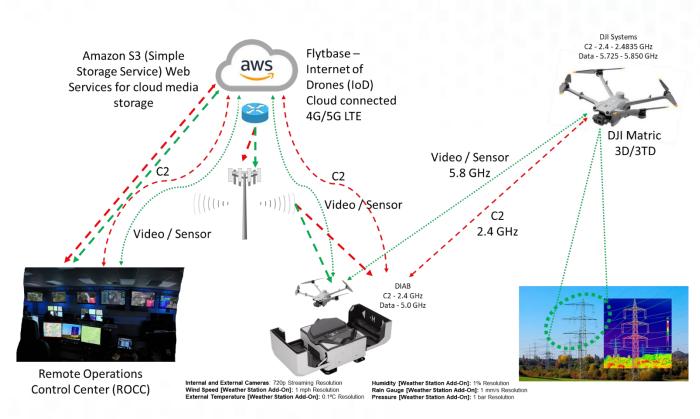


Docked Drone Overview

A docked drone, also known as a drone-in-a-box (DIAB) system, is a drone that is housed in a protective case and can be launched, flown, and monitored remotely.

Docked drones can be deployed with the push of a button and can provide three to five times more data than crewed drones. Some benefits of docked drones include:

- No need to charge batteries, swap SD cards, or find a location for takeoff and landing.
- Drones can operate independently or over large areas.
- Drones can be pre-positioned in strategic locations.
- One operator can command multiple drones





Advantages of Drones for Water Quality Assessment

Drones can be used to assess water quality by collecting water samples and capturing images:

1. Water sampling

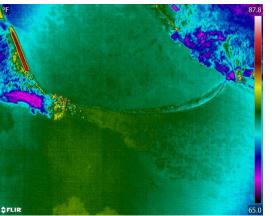
Drones can collect water samples from specific locations for testing. The water can be collected from various depths and transported to a lab for further analysis.

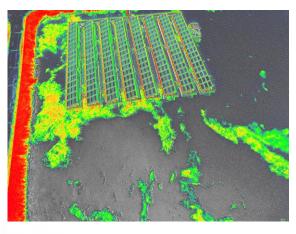
2. Image capture

Drones can capture images of water bodies to help identify issues like harmful algal blooms, oil spills, and seagrass health.

- Real-time monitoring
- Faster turnaround times
- Improved safety
- Better visibility
- Rapid response
- Thermal / Multispectral









Recent Event History

July – September 2022 RM HAB

March 2023 Chemical Plant Spill

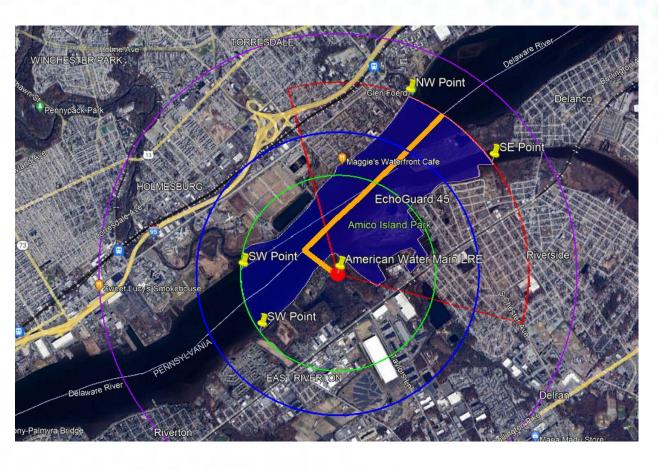






Delaware Dock Install – *12/1/24*







Live Demo



Thank you!

Connor.stahl@amwater.com

UAS Program Manager

