MISSION OBJECTIVE

For AIMM Eyes Only

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BLUF: Low profile Vessels (LPVs) are tasked with completing a series of 9 tasks to demonstrate assistance with coastal surveillance.

Situation: "Narco-drones" are unmanned surface vessels (USVs) used to smuggle drugs without the use of a crew. These vessels are low profile vehicles (LPVs) and move slowly and often undetected through our water space with 1000lb of illegal cargo on board.

Overall Challenge: Build an unmanned LPV and gather intelligence on these "Narco-drones". Your LPV will need to navigate 9 obstacles:

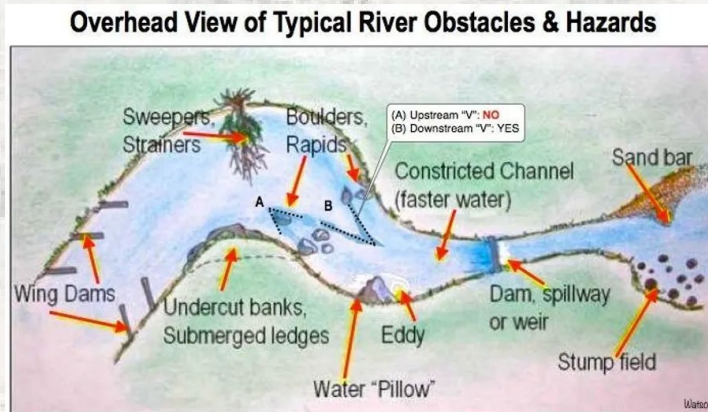# MISSION OBJECTIVE

Challenge 1: Gates(required, 15pts)

LPVs may need to have the ability to home themselves. This will require navigating your LPV through a narrow gate (delineated by a red and green buoy)

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Challenge 2: Dodge (50 Pts)
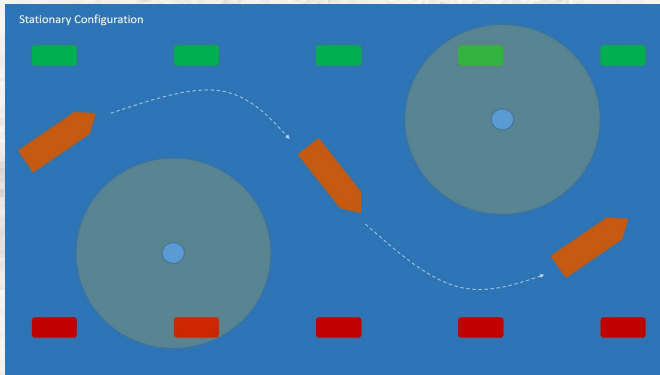

Overhead View of Typical River Obstacles & Hazards

LPVs may need to dodge stationary obstacles while tracking the Narco-drones. This will require slaloming your LPV through a field of red and green buoys.

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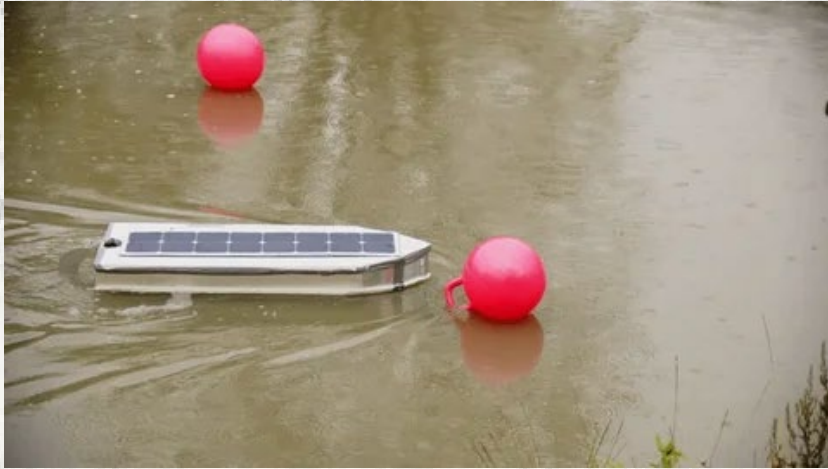Challenge 3: Evade(75 Pts)

LPVs will need to evade detection by adversarial sensors near the collection point. In this challenge the LPV will avoid adversarial LiDAR detectors by a predetermined radius.

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Challenge 4: Identify (40 Pts)

LPVs will need to identify a designated target. The identification will be indicated by gently booping a specifically designated colored buoy.

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Challenge 5: Deploy(10 Pts)

LPVs will need to deploy data collection systems into the water to allow for safer traversal of the waters with manned surface vehicles.

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Challenge 6: Launch(45 Pts)

LPVs will need to launch a signifier into the air, indicating that they've reached the drop point. The signal will be best received if the launched package lands in the designated location.

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Challenge 7: Recover(65 Pts)

LPVs will need to collect and transport a floating contraband sample that can be transported to a lab for further analysis. We expect the material to be in water-tight cases, colored for easy recognition.

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Challenge 8: Receive(30 Pts)

Team systems will need to communicate with the previously deployed data collection system in order to retrieve and make use of the collected information.

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Challenge 9: Return(10 Pts)

LPVs will need to return to base
with any collected samples so that
the sample can be taken to the lab
and the LPVs may be reset and sent
out for another mission.