



Hydrographic Surveying



Karins and Associates uses state of the art surveying equipment including GPS, robotic total stations, high definition 3D laser scanning, and a Kingfisher™ robotic unmanned surface vessel (USV) for hydrographic surveying aquatic areas not easily accessible by conventional equipment.

The USV enables water resource professionals to quickly, accurately, and safely collect and analyze inland bathymetry data. Survey technicians are able to remain safe and dry on shore while the USV travels through a waterbody collecting geo-referenced depth information from an onboard survey-grade SONAR and GPS.

How it works:

- A Wifi transmitter is setup near the shore, which connects the controller with the vessel
- Measurements are taken remotely with survey personnel operating from the shoreline
- The on-board GPS unit provides real time positional data, while mounted SONAR measures the depth
- Positional and depth data are combined to generate a topographic surface of the bottom

Ideal for surveying:

- Lakes and Ponds
- Stormwater Facilities
- Marinas
- Inland Bays

This form of hydrographic surveying is especially ideal for surveying artificially constructed ponds, which serve a vital function in water infrastructure. Over time, these ponds slowly accumulate sediment and lose functionality, increasing flood risk and decreasing pollution protection from downstream ecosystems. Wet ponds require bathymetric surveys periodically in order to calculate permanent pool volumes and to estimate the sediment accumulation over time. The USV is ideal for surveying the ground surface beneath the wet pond permanent pool surface.