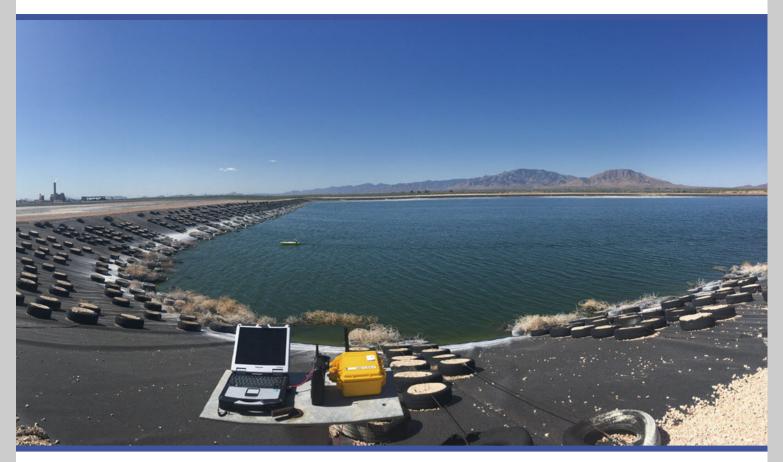


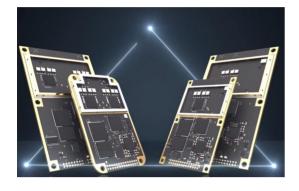
# **CEE NEWS - December 2021**



## **CEE-USV<sup>™</sup> - Using Aerial Drones For Hydrographic Surveys**

Two recent customer surveys demonstrated the benefits of using aerial drones alongside the robotic autopilotcontrolled CEE-USV<sup>™</sup>. First, the previous week's drone overflights provided the exact edge boundaries used in the pre-programming of the survey line plan. No relying on out of date Google Maps or guesswork! This allowed the USV to be launched and immediately get to work. On one occasion, real time drone aerial video helped the USV to continue surveying effectively out of sight and through narrow channels and in shallow pockets of water. Take a look at the survey projects below.

# **Product News**

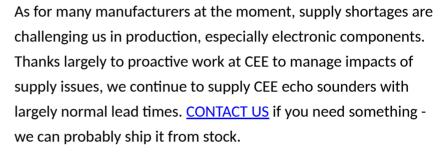


#### New CEESCOPE<sup>™</sup> with Phantom GNSS

With the latest Hemisphere Phantom 40 OEM GNSS board now available, we have already upgraded our differential grade "all in one" echo sounder to the CEESCOPE<sup>™</sup> Phantom. With even more constellations and 800+ channels, the new built-in GNSS still offers the very effective Atlas L-Band signal for up to 4cm accuracy from a non RTK single receiver solution.



#### **CEE ECHO™ and CEESCOPE™ in Stock**

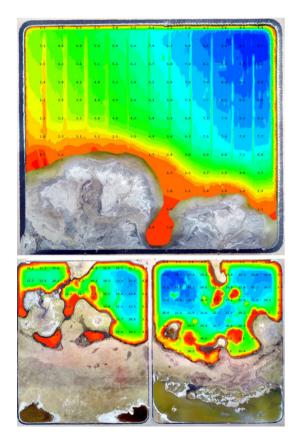


### **CEEPULSE™ Echo Sounder Discontinued**



It started nearly a decade ago as a super-compact custom echo sounder design for a USV manufacturer, lightweight and able to work in very shallow water. Nowadays with the CEE LINE<sup>™</sup> able to match the CEEPULSE<sup>™</sup> performance and adding dual frequency and USB connectivity we decided to discontinue the CEEPULSE for 2022.

## **Customer News**

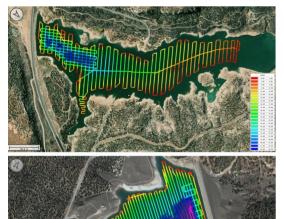


## Drone USV Synergy - Fly Ash Pond Surveys

Using the previous weeks drone overflights as a background image in Hydromagic software, surveyors were able to draw in the exact shoreline for the CEE-USV<sup>™</sup> hydro survey. Using the Route Planner with a 15ft safety margin, robotic survey lines could be drawn up in Hydromagic without the need for surveying the water's edge with the USV, saving significant survey time on site.

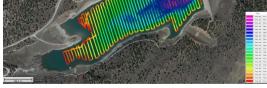
During the survey in an unexpected benefit, real time drone aerial video was used to navigate the USV into small pockets of water out of sight behind thick vegetation.

Learn more about the fly ash survey job HERE



#### **Drone USV Synergy - Utah Reservoirs**

This time in a natural water setting for a pair of drinking water reservoirs, drone imagery was used in AutoCAD to generate a detailed and exact water's edge perimeter. This XYZ data file was imported into Hydromagic with the Route Planner subsequently developing the line plan for the survey. Upon arriving on site, the USV was simply launched and set into robotic mode - easy! Where coverage needed to be improved based on the real time



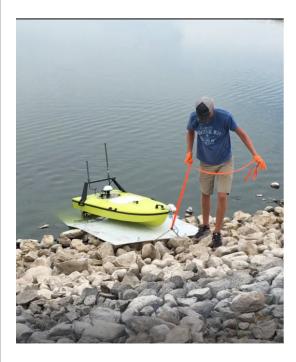


data, additional "fill in" routes were programmed on site.

Learn more about the reservoir survey job HERE

#### 1000 Hours Surveying on the CEE-JET™

Since CEE supplied the Australian city of Gold Coast council with their turnkey CEE-JET<sup>™</sup> hydrographic survey watercraft, surveyors have been busy. With storm events and routine beach nourishment surveys over the recent three years, the CEE-JET<sup>™</sup> has already registered over 1000 hours in action collecting high quality shallow water survey data and occasionally encountering enormous Humpback whales outside the surf.



## **CEE-USV™** in Municipal Waste Water Lagoons

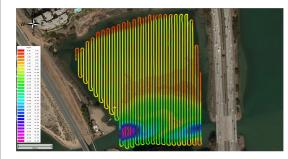
Minnesota, USA based TEAM LAB Chemical Company commenced a professional quality bathymetric mapping operation this summer with their new CEE-USV<sup>™</sup>. Focusing on municipal waste water lagoons throughout the region, TEAM LABS can show their clients precise sludge volumes in their lagoons. With the enormous cost to remove sludge as hazardous waste, the USV allows TEAM LABS to design and support biological sludge reduction programs to greatly reduce cities' costs handling waste water sludge. They also came up with a very effective plastic slide for safe deployment and retrieval of the USV over the rip-rap! Learn more about the CEE-USV <u>HERE</u>.



### **US Marine Corps CEESCOPE™ Program (2)**

Not to be outdone by their East coast compatriots at 2nd Recon, US Marines at 1st Recon BN based at Camp Pendleton CA received their new CEESCOPE<sup>™</sup> survey systems for their Combat Rubber Raiding Craft inflatables. Enormous improvements in survey data density and a vast reduction in manpower and time needed for their surveys will be the inevitable result. After training from CEE, the marines are ready to survey.

# **Software News**



## Hydromagic Maintenance Plan Special Prices

Often, Hydromagic software is purchased and users keep working with the same version for years. Why not take advantage of the increasing functionality being added and sign up for a support contract; you can download the latest version whenever you like and access the latest upgrades. <u>CONTACT US</u> for details.

# **Call for Videos and Photos**



#### **Photos, Videos and Application Notes**

If you have any photos or videos, or interesting, unusual, or completely routine survey applications related to CEE equipment then please let us know. We are always looking for case history candidates - often that presents a nice opportunity to generate some useful and informative promotional material for everyone. And we do all the work. <u>CONTACT US</u> if you want to share.

#### **Contact Us:**

CEE HydroSystems USA, Inc. 701 Palomar Airport Rd, Suite 300 Carlsbad, CA 92011 USA t: +1 760 492 4511 adrian.mcdonald@ceehydrosystems.com

CEE HydroSystems 1/12 Cecil Rd - Hornsby, NSW 2077 Australia t: +61 2 9482 5880 sales@ceehydrosystems.com