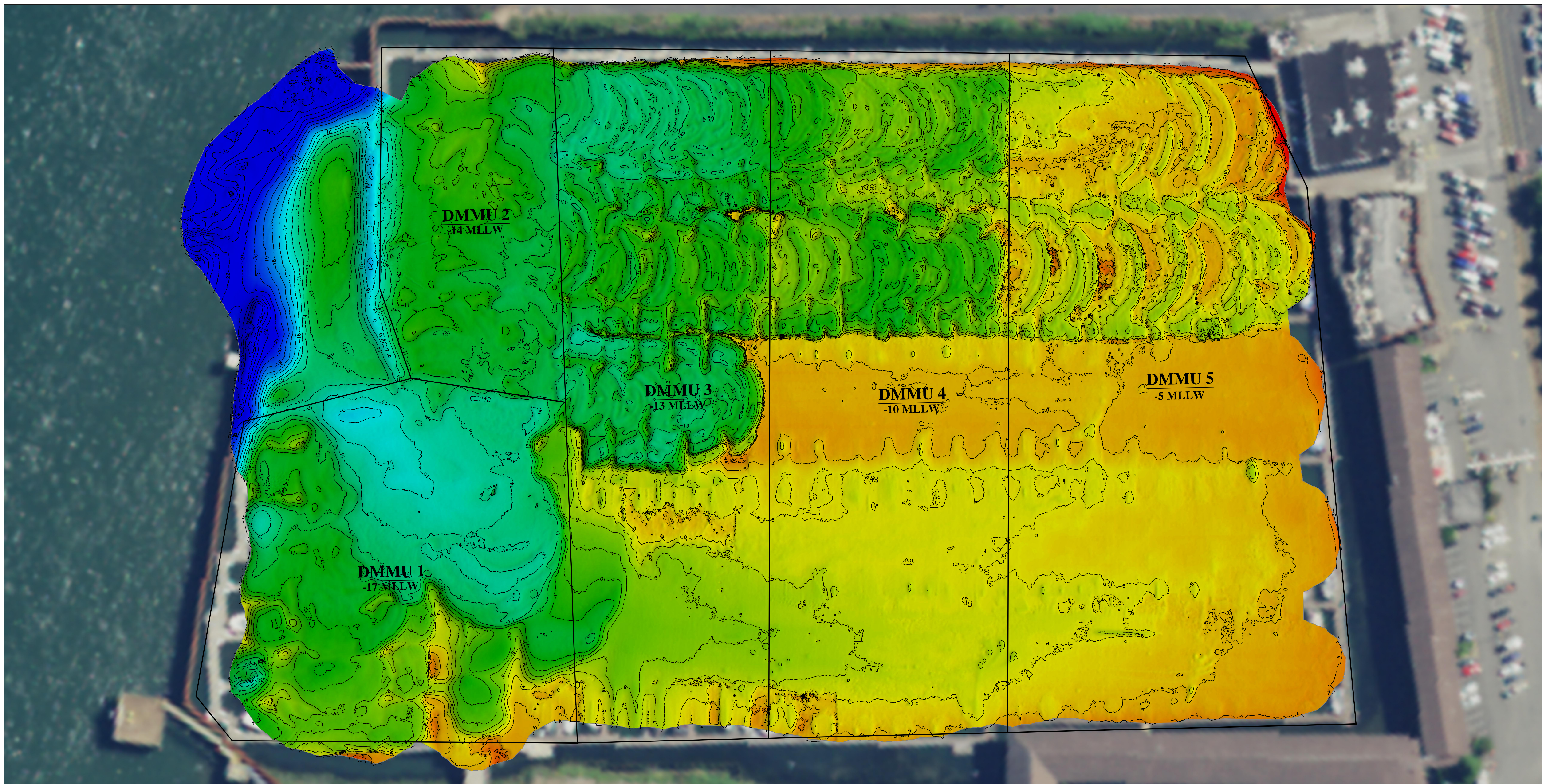


Port of Astoria

West Mooring Basin Pre-Dredge Bathymetric Survey

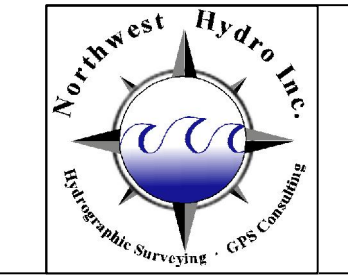
September 6, 2022



- NOTES**
1. HORIZONTAL DATUM: NAD 83 (2011) STATE PLANE COORDINATES, OREGON NORTH ZONE.
 2. UNITS: U.S. SURVEY FEET
 3. VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW). MLLW DETERMINED FROM USACE TIDE BOARD LOCATED ON THE ASTORIA BRIDGE PIER AND USACE MONUMENT 1402-19 (ELEV. = 15.87 FT.)
 4. CONTOUR INTERVAL: 1 FOOT. CONTOURS WERE DEVELOPED FROM A GRIDDED 1 FT X 1 FT DATASET USING AN INVERSED WEIGHTED AVERAGE OF ALL SOUNDINGS.
 5. ALL HORIZONTAL POSITIONING AND VESSEL ATTITUDE WAS PROVIDED IN REAL TIME USING AN APPLANIX F90-MV RTK GPS AIDED INERTIAL SENSOR RECEIVING RTK CORRECTIONS FROM A TRIMBLE R9 RTK BASE STATION.
 6. SOUNDINGS WERE COLLECTED USING A R2SONIC 2022 MULTIBEAM SONAR SYSTEM AND DATA PROCESSING WAS COMPLETED USING HYPACK HYDROSWEEP SOFTWARE.
 7. THIS BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE GENERAL CONDITION OF THE EYELEDGE AT THE TIME OF THE SURVEY. THE CONDITION OF THE BOTTOM MAY CHANGE AT ANY TIME AFTER THE DATE OF THIS SURVEY.
 8. ALL BATHYMETRIC DATA WAS COLLECTED IN ACCORDANCE WITH THE U.S. ARMY CORPS OF ENGINEERS HYDROGRAPHIC SURVEY MANUAL EM 1110-02-1003 (NOVEMBER 2013).

THIS HYDROGRAPHIC SURVEY WAS COMPLETED BY AN AMERICAN CONGRESS ON SURVEYING AND MAPPING CERTIFIED HYDROGRAPHER.

JAMES W. GLAESER DATE
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 CERTIFIED HYDROGRAPHER #222



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