

Water Quality Data Processing



Objectives of this session

1

HYPACK Environment

- What software tools are included
- Changes to streamline the workflow

2

Processing WQ Sensor Data

- New WQS Editor
- Selecting Sensor Data
- Saving Contours from WQS Editor
- Saving Sorted data from WQS Editor

3

Processing ADCP In situ Data

- Displaying the profile information
- Viewing individual Ensembles



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HYPACK Environment

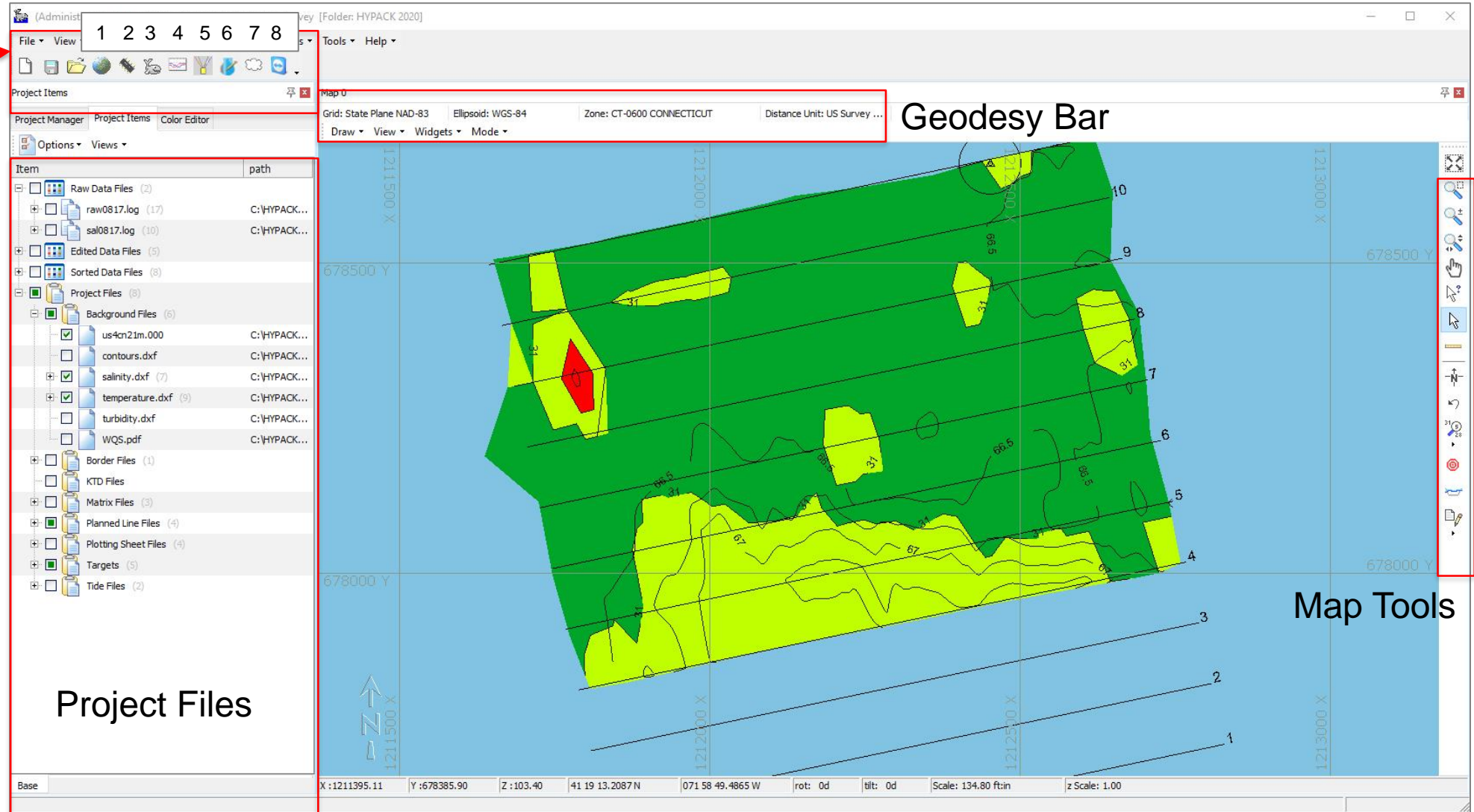


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HYPACK Shell

Icon And Menu Area

1. Geodetic Parameters
2. Hardware Settings
3. Survey Program
4. ADCP Processing
5. ADCP Insitu Processing
6. WQ Editor
7. Point Cloud Viewer
8. Remote Assistance



Project Files

Geodesy Bar

Map Tools



Geodetic Parameters

The Geodetic Parameter options within HYPACK allows the user to choose from pre-defined geodesy settings world wide.

The user has the ability to create their own geodetic parameters if required or work on a local grid.

HYPACK will convert from WGS-84 to any projection coordinates.

The screenshot shows the 'Geodetic Parameters' dialog box with the following settings:

- Predefined Grids:** State Plane NAD-83 (Zone: CT-0600 CONNECTICUT)
- Distance Unit:** US Survey Foot
- Depth Unit:** same as horizontal
- Elevation Mode:** Elevation Mode (Z-axis positive going up)
- Ellipsoid:** WGS-84 (Semi-Major Axis: 6378137, Flattening: 298.257223563)
- Datum transformation parameters:** Delta X: 0.000, Delta rX: 0.00000, Delta Y: 0.000, Delta rY: 0.00000, Delta Z: 0.000, Delta rZ: 0.00000, Delta Scale: 0.00000
- Datum shift file:** [Empty field]
- Projection:** Lambert Conformal Conical (Central Meridian: 072 45 0 W, Reference Latitude: 40 50 0 N, Scale Factor: 1, North Parallel: 41 52 0 N, South Parallel: 41 12 0 N, False Easting: 1000000, False Northing: 500000)
- Local Grid Adjustment:** Local Grid Adjustment (Local Grid button)
- RTK Tide Method:** Not using RTK tide, (K-N) from KTD file, N from geoid model, K from KTD file, N from geoid model, K from VDatum, N from geoid model, K from user value, (K-N) from user value
- Chart Datum Level:** 0.00



Environmental Editor



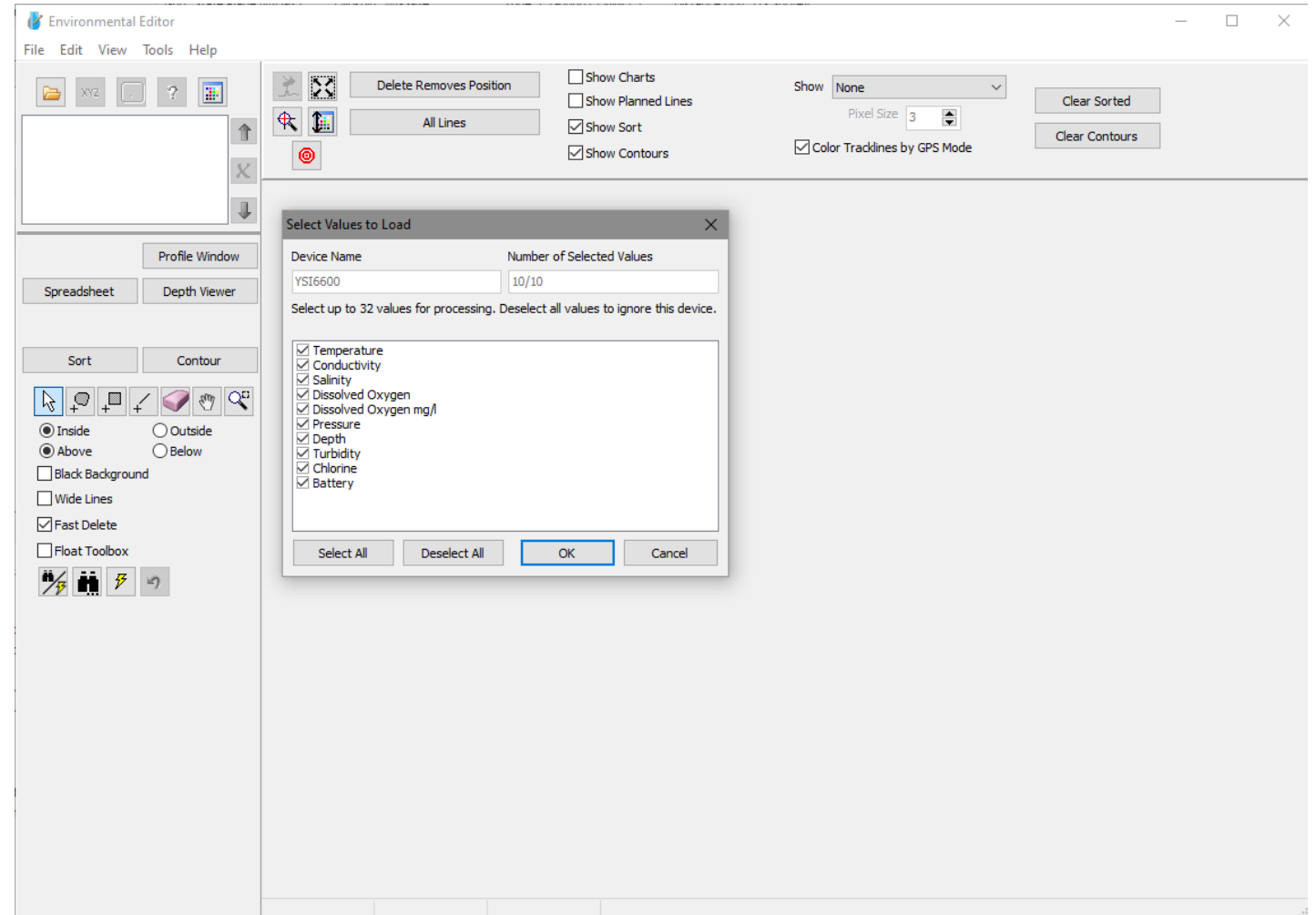
Environmental Editor

The Environmental Editor program can load both Raw data collected as well as processed session data.

Data collected by HYPACK is recorded in an SMI record.

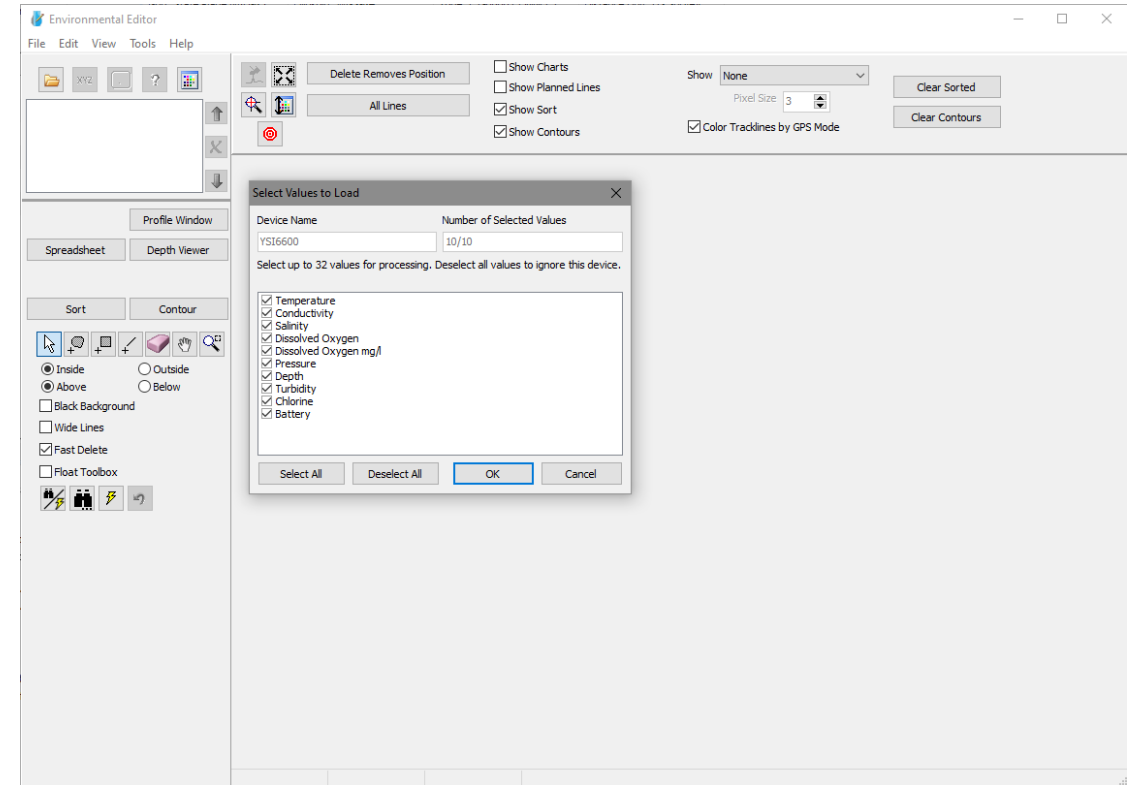
During the Read Parameter phase of loading data the user can choose which sensor data to process

Environmental Editor saves to a binary *.smi session format as well as XYZ and HYPACK Edited All Files



Input Data

- HYPACK Survey (*.raw & *.log) files with SMI records
 - Example Drivers:
 - YSI-6000
 - YSI EXO
 - Generic Input Parser
- Edited *.SMI files saved from HYPACK's Environmental and Magnetometer Editors
- i3XO EcoMapper *.log files
- EXO *.bin files



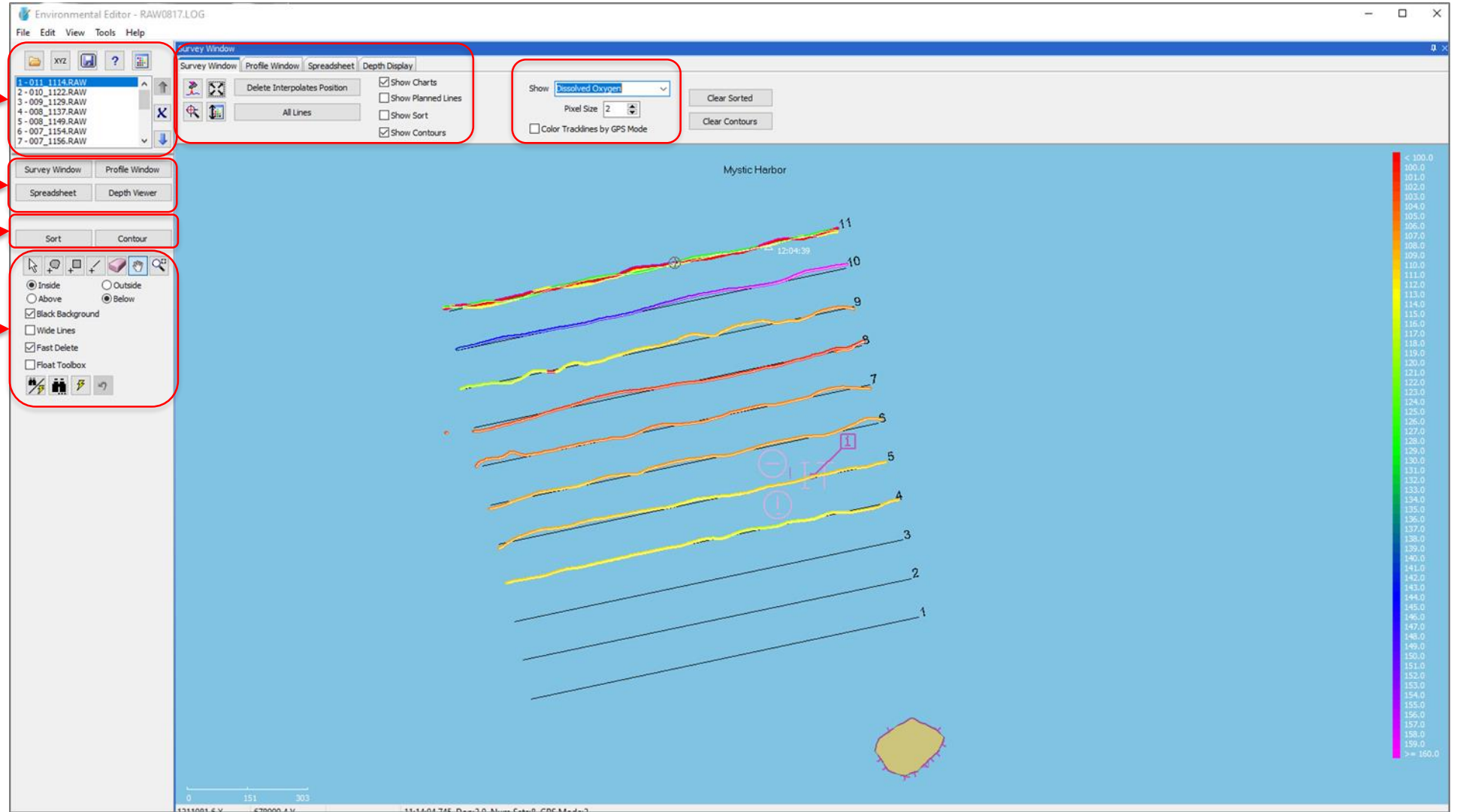
Environmental Editor – Survey Window

File selection

Display Windows

Final Products

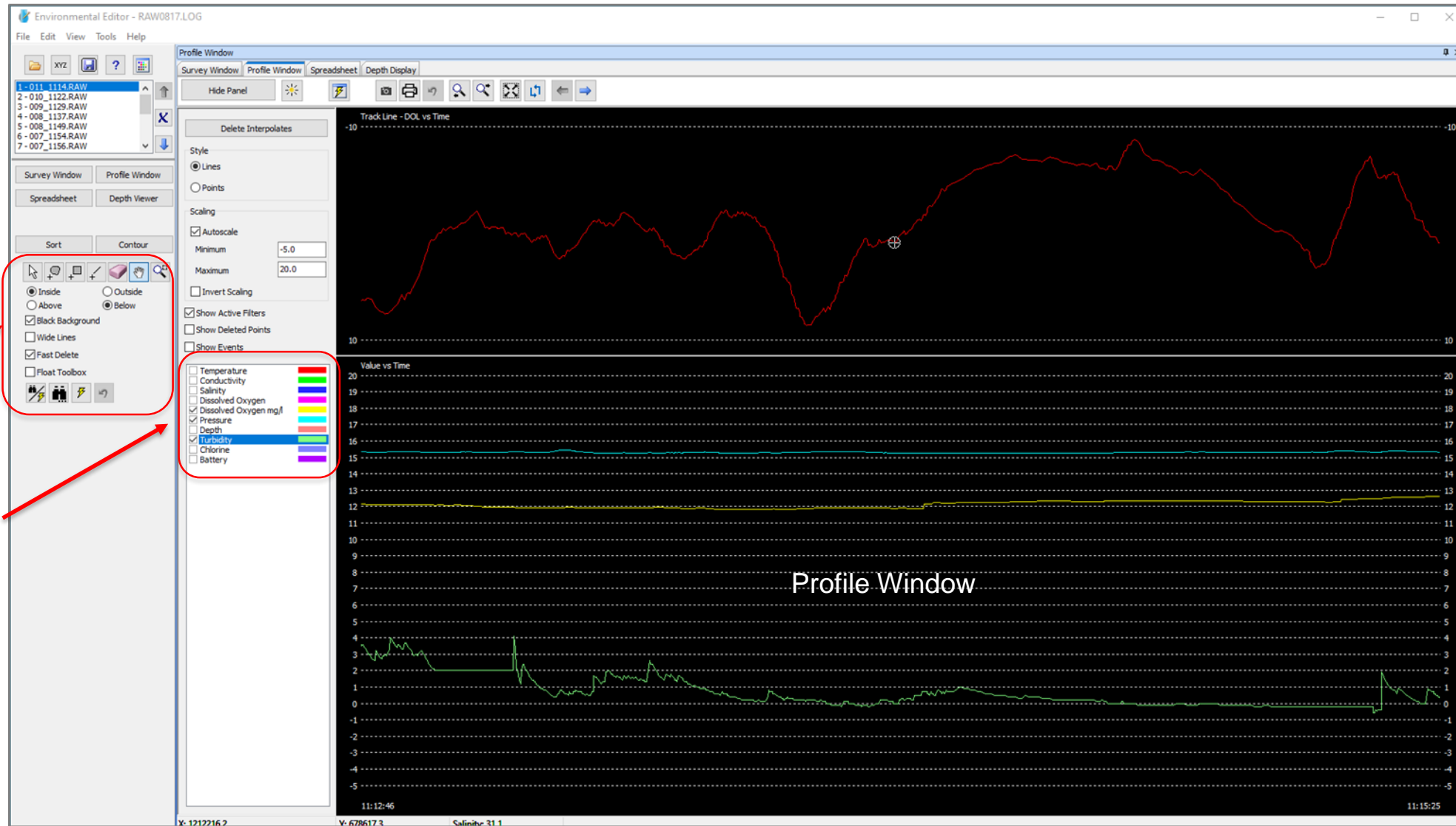
Editing Tools



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xylem
Let's Solve Water

Environmental Editor – Profile Window



Editing Tools

Sensor Selection

Profile Window



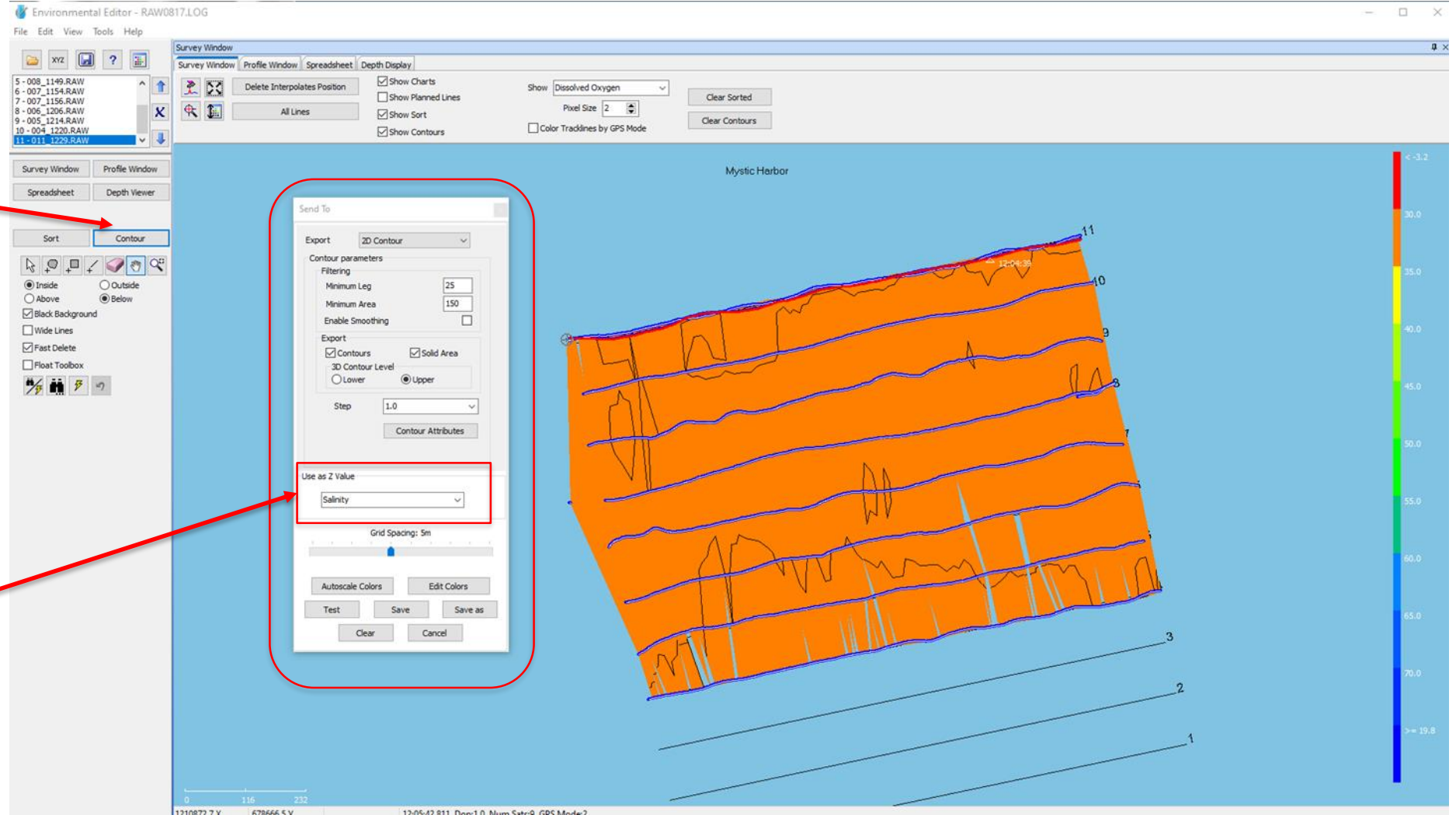
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Environmental Editor – Contour Option

Contouring has been embedded in the WQS Editor

The same options as are available in the TIN MODEL program

Contours can be generated from any sensor without reloading the data



Environmental Editor – Sort Option

Data Sorting has been embedded in the WQS Editor

The same options as are available in the SORT program

