

**2010-2011 Water Quality Monitoring of Physical Parameters in  
San Diego Bay, San Diego, CA  
Port of San Diego Agreement No. 55783/Tierra Data Inc. No. 09-11  
Status Report**

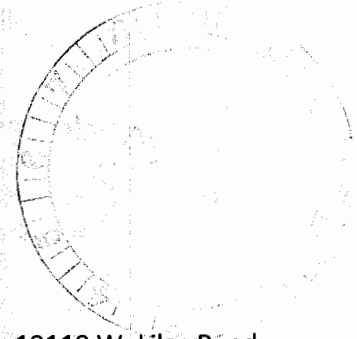
**Date of Work:** November 1, 2010 – November 30, 2010

**Cumulative Dollar Costs Incurred:** \$578,244.60

**Percentage of Work Completed:** 68.0%

**Expected Completion Date:** December 31, 2012

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**1) Monitoring results:**

- a) Data sondes are in place and collecting data within specified parameters and displaying expected results at all three stations. Winter water conditions appear to prevail throughout the bay with all stations recording decreased temperature and salinity readings. Data collection was interrupted for two weeks during this sampling period because of the USCG scheduled servicing of the navigational buoys where Port instruments are affixed too.
- b) Interesting relationships continue to be observed with respect to the location of individual monitoring stations, tidal state, and turbidity concentrations. Station A and B displayed similar trends with respect to turbidity levels during daily observation over one tidal exchange with expected lag time variation (see recent quarterly report). Station C continues to record low concentrations of Chlorophyll with corresponding low hourly and daily variation when compared to stations A and B. Some stratification in the water column appears evident from vertical casting data with defined density layers appearing at between 10 and 20 ft. depth at all three stations (see recent quarterly report).

**2) Discussion of activities conducted:**

- a) Initial sonde deployment occurred on April 20<sup>th</sup>, 2010 at all three stations. Water quality monitoring units, YSI 6920 V2 sondes, are currently in place and collecting data at Stations A, B, and C (Figure 1). All sondes and housings were removed on November 2 in anticipation of the USCG's servicing of the navigational buoys and replaced on November 16. A data gap from Nov 2 through Nov. 16 occurred do to this servicing event. The sondes and housings were removed again on Nov 29<sup>th</sup> to accommodate the USCG's servicing of buoys once again with a proposed reinstallation date of December 7<sup>th</sup>. Data was downloaded from sondes removed during this time and biological fouling was removed from the instruments housings. Data was downloaded directly to an YSI 650 MDS data logger and transferred to the Tierra Data Inc (TDI) server for archiving and review. Data files were reviewed after each servicing for accuracy and integrated into station working files for analysis and graphical display.

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- b) Additional data was collected on each of the three sampling locations by performing vertical casts using an YSI 6920 V2 sonde on Nov 2 and Nov 30 only.
- c) Removed sondes were fully cleaned, calibrated, and fitted with new antifouling coatings prior to reinstallation on Nov 16.

### 3) Problems encountered/resolutions:

- a) The USCG's plans to service each of the three navigational aid buoys encountered delays because of vessel mechanical problems that altered scheduled service dates and further impacted data collection. Communications with the USCG confirmed that the buoys were rescheduled for service the week of November 29<sup>th</sup> and sondes and PVC housings were again removed to insure no damage or loss occurred to the units. The removal of all three data sondes during the service period created notable data gaps.

### 4) Activities planned for next reporting period:

- a) Subsequent sonde downloading and redeployment of serviced sondes is expected to be performed on December 7<sup>th</sup>. Upcoming service dates are projected to be reinitiated on regular two week intervals occurring on December 14<sup>th</sup> and December 28<sup>th</sup>, 2010.

**Table 2. Project Deliverables:**

<b>Quarterly Progress Reports</b>	April 1, 2010 – combined with July 1, 2010 Report due to late start.
	July 1, 2010 – submitted
	October 1, 2010 – submitted
	January 1, 2011
	April 1, 2011
	July 1, 2011
	October 1, 2011
<b>Draft Report</b>	October 31, 2011
<b>Final Report</b>	December 31, 2011

### Location Map for Port of San Diego Water Quality Sensors

