



Contract No. HY/2011/03

**Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road
Section between Scenic Hill and Hong Kong Boundary Crossing
Facilities**

Quarterly EM&A Report No.5 (Sep 2013 to Nov 2013)

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Main Contractor



Designer

ATKINS



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Executive Summary

The Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong Link Road (HKLR) serves to connect the HZMB Main Bridge at the Hong Kong Special Administrative Region (HKSAR) Boundary and the HZMB Hong Kong Boundary Crossing Facilities (HKBCF) located at the north eastern waters of the Hong Kong International Airport (HKIA).

The HKLR project has been separated into two contracts. They are Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between Scenic Hill and Hong Kong Boundary Crossing Facilities (hereafter referred to as the Contract) and Contract No. HY/2011/09 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between HKSAR Boundary and Scenic Hill.

China State Construction Engineering (Hong Kong) Ltd. was awarded by Highways Department as the Contractor to undertake the construction works of Contract No. HY/2011/03. The main works of the Contract include land tunnel at Scenic Hill, tunnel underneath Airport Road and Airport Express Line, reclamation and tunnel to the east coast of the Airport Island, at-grade road connecting to the HKBCF and highway works of the HKBCF within the Airport Island and in the vicinity of the HKLR reclamation. The Contract is part of the HKLR Project and HKBCF Project, these projects are considered to be "Designated Projects", under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap 499) and Environmental Impact Assessment (EIA) Reports (Register No. AEIAR-144/2009 and AEIAR-145/2009) were prepared for the Project. The current Environmental Permit (EP) EP-352/2009/C for HKLR and EP-353/2009/G for HKBCF were issued on 5 September 2013 and 6 August 2013, respectively. These documents are available through the EIA Ordinance Register. The construction phase of Contract was commenced on 17 October 2012.

BMT Asia Pacific Limited has been appointed by the Contractor to implement the Environmental Monitoring & Audit (EM&A) programme for the Contract in accordance with the Updated EM&A Manual for HKLR (Version 1.0) and will be providing environmental team services to the Contract.

This is the fifth Quarterly EM&A report for the Contract which summaries the monitoring results and audit findings of the EM&A programme during the reporting period from 1 September 2013 to 30 November 2013.

Environmental Monitoring and Audit Progress

The EM&A programme were undertaken in accordance with the Updated EM&A Manual for HKLR (Version 1.0). A summary of the monitoring activities during this reporting period is presented as below:

Monitoring Activity		Monitoring Date		
		September 2013	October 2013	November 2013
Air Quality	1-hr TSP	4, 10, 16, 19 and 25	2, 7, 11, 17, 23 and 29	4, 8, 14, 20 and 26
	24-hr TSP	AMS5: 3, 9, 13, 18, 24 and 30 AMS6: 13, 18, 24 and 30	4, 10, 16, 22 and 28	AMS5: 1, 7, 13, 21, 25 and 29 AMS6: 1, 7, 13, 19, 25 and 29
Noise		6, 11, 16 and 25	2, 7, 17, 23 and 29	4, 14, 20 and 26
Water Quality		2, 4, 6, 9, 11, 13, 16, 18, 20, 23, 25, 27 and 30	2, 4, 7, 9, 11, 14, 16, 18, 21, 23, 25, 28 and 30	1, 4, 6, 8, 11, 13, 15, 18, 20, 22, 25, 27 and 29
Chinese White Dolphin		3, 5, 10 and 18	8, 15, 17 and 22	1, 5, 8 and 13
Mudflat Monitoring (Ecology)		1, 7, 8, 14, 15 and 21	-	-
Mudflat Monitoring (Sedimentation rate)		4	-	-
Site Inspection		3, 10, 18 and 27	2, 9, 16, 22 and 29	6, 13, 20 and 29

The 24 hours dust monitoring at station AMS6 was cancelled on 3 September 2013 due to interruption of electricity supply and 9 September 2013 due to malfunction of high volume sampler.

The noise monitoring at NMS5 was cancelled on 4 September 2013 due to the inclement weather and was rescheduled for 6 September 2013.

Due to adverse weather condition, the water quality monitoring at all stations were cancelled on 23 September 2013 during mid-ebb tide and mid-flood tide.

Due to strong winds, the dolphin monitoring was rescheduled from 17 September 2013 to 18 September 2013

Due to the boat arrangement problem, the dolphin monitoring was rescheduled from 10 October 2013 to 22 October 2013.

Due to strong winds, the dolphin monitoring was rescheduled from 12 November 2013 to 13 November 2013.

Due to the electricity supply problem, the 24 hrs dust monitoring at AMS5 was rescheduled from 19 November 2013 to 21 November 2013.

Breaches of Action and Limit Levels

A summary of environmental exceedances for this reporting period is as follows:

Environmental Monitoring	Parameters	Action Level (AL)	Limit Level (LL)
Air Quality	1-hr TSP	0	0
	24-hr TSP	0	0
Noise	L _{eq} (30 min)	0	0
Water Quality	Suspended solids level (SS)	10	3
	Turbidity level	0	0
	Dissolved oxygen level (DO)	0	0
Dolphin Monitoring	Quarterly Analysis (September to November 2013)	1	0

The Environmental Team investigated all exceedances and found that they were not project related.

All investigation reports for exceedances of the Contract have been submitted to ENPO/IEC for comments and/or follow up to identify whether the exceedances occurred related to other HZMB contracts.

Implementation of Mitigation Measures

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. Potential environmental impacts due to the construction activities were monitored and reviewed.

Complaint Log

A summary of environmental complaints for this reporting period is as follows:

Environmental Complaint No.	Date of Complaint Received	Description of Environmental Complaints
COM-2013-033	13 September 2013	Noise
COM-2013-034	17 September 2013	Noise
COM-2013-037	8, 9 and 16 October 2013	Noise
COM-2013-041	31 October 2013	Noise
COM-2013-043	11 November 2013	Noise



Notifications of Summons and Prosecutions

There were no notifications of summons or prosecutions received during this reporting period.

Reporting Changes

This report has been developed in compliance with the reporting requirements for the quarterly summary EM&A reports as required by the Updated EM&A Manual for HKLR (Version 1.0).

The proposal for the change of Action Level and Limit Level for suspended solid and turbidity was approved by EPD on 25 March 2013.

The revised Event and Action Plan for dolphin Monitoring was approved by EPD on 6 May 2013.

It was found that the original monitoring station at IS(Mf)9 (Coordinate- East 813273, North 818850) was inside the perimeter silt curtain on 1 July 2013, as such the original impact water quality monitoring location at IS(Mf)9 was temporarily shifted outside the silt curtain. The new co-ordinates of station IS(Mf)9 are 813226E and 818708N since 1 July 2013.

1 Introduction

1.1 Basic Project Information

- 1.1.1 The Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong Link Road (HKLR) serves to connect the HZMB Main Bridge at the Hong Kong Special Administrative Region (HKSAR) Boundary and the HZMB Hong Kong Boundary Crossing Facilities (HKBCF) located at the north eastern waters of the Hong Kong International Airport (HKIA).
- 1.1.2 The HKLR project has been separated into two contracts. They are Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between Scenic Hill and Hong Kong Boundary Crossing Facilities (hereafter referred to as the Contract) and Contract No. HY/2011/09 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between HKSAR Boundary and Scenic Hill.
- 1.1.3 China State Construction Engineering (Hong Kong) Ltd. was awarded by Highways Department (HyD) as the Contractor to undertake the construction works of Contract No. HY/2011/03. The Contract is part of the HKLR Project and HKBCF Project, these projects are considered to be “Designated Projects”, under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap 499) and Environmental Impact Assessment (EIA) Reports (Register No. AEIAR-144/2009 and AEIAR-145/2009) were prepared for the Project. The current Environmental Permit (EP) EP-352/2009/C for HKLR and EP-353/2009/G for HKBCF were issued on 5 September 2013 and 6 August 2013, respectively. These documents are available through the EIA Ordinance Register. The construction phase of Contract was commenced on 17 October 2012. **Figure 1.1** shows the project site boundary.
- 1.1.4 BMT Asia Pacific Limited has been appointed by the Contractor to implement the EM&A programme for the Contract in accordance with the Updated EM&A Manual for HKLR (Version 1.0) for HKLR and will be providing environmental team services to the Contract. ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) for the Project. The project organization with regard to the environmental works is provided in **Appendix A**.
- 1.1.5 This is the Fifth Quarterly Environmental Monitoring and Audit (EM&A) report for the Contract which summaries the monitoring results and audit findings of the EM&A programme during the reporting period from 1 September 2013 to 30 November 2013.

1.2 Project Organisation

- 1.2.1 The project organization structure and lines of communication with respect to the on-site environmental management structure with the key personnel contact names and numbers are shown in **Appendix A**.

1.3 Construction Programme

- 1.3.1 A copy of the Contractor’s construction programme is provided in **Appendix B**.

1.4 Construction Works Undertaken During the Reporting Period

- 1.4.1 A summary of the construction activities undertaken during this reporting period is shown in **Table 1.1**. The Works areas of the Contract are showed in **Appendix C**.



Table 1.1 Construction Activities during Reporting Period

Site Area	Description of Activities
Portion X	<ul style="list-style-type: none"> • Removal of existing rock for existing seawall • Stone column installation • Filling works behind stone platform • Temporary stone platform construction • Band drains Installation • Dismantling/trimming of temporary 40mm stone platform for construction of seawall
Portion Y	<ul style="list-style-type: none"> • Access shaft construction for SHT & HAT • Utility culvert excavation • Excavation for Temporary Diversion of outfall PR10
West Portal	<ul style="list-style-type: none"> • Site formation • Tree felling • Slope protection/ stabilization (soil nailing works) • Boulder removal/ stabilization works • Pipe Roofing Installation and Excavation for Tunnel SHT
Kwo Lo Wan /Airport Road	<ul style="list-style-type: none"> • Works for diversion of Airport Road and Kwo Lo Wan Road
Airport Express Line	<ul style="list-style-type: none"> • Pre-grouting and pipe piling works for AEL access shafts
Kwo Lo Wan /Airport Road /Airport Express Line	<ul style="list-style-type: none"> • Utilities detection • Establishment of site access • Works for east access shaft

2 EM&A Requirement

2.1 Summary of EM&A Requirements

- 2.1.1 The EM&A programme requires environmental monitoring of air quality, noise, water quality, dolphin monitoring and mudflat monitoring as specified in the approved EM&A Manual.
- 2.1.2 A summary of Impact EM&A requirements is presented in **Table 2.1**. The locations of air quality, noise and water quality monitoring stations are shown as in **Figure 2.1**. The transect line layout in Northwest and Northeast Lantau Survey Areas is presented in **Figure 2.2**.

Table 2.1 Summary of Impact EM&A Requirements

Environmental Monitoring	Description	Monitoring Station	Frequencies	Remarks
Air Quality	1-hr TSP	AMS 5 & AMS 6	At least 3 times every 6 days	While the highest dust impact was expected.
	24-hr TSP		At least once every 6 days	--
Noise	L_{eq} (30mins), L_{10} (30mins) and L_{90} (30mins)	NMS5	At least once per week	Daytime on normal weekdays (0700-1900 hrs).
Water Quality	<ul style="list-style-type: none"> Depth Temperature Salinity Dissolved Oxygen (DO) Suspended Solids (SS) DO Saturation Turbidity pH 	<ul style="list-style-type: none"> Impact Stations: IS5, IS(Mf)6, IS7, IS8, IS(Mf)9 & IS10, Control/Far Field Stations: CS2 & CS(Mf)5, Sensitive Receiver Stations: SR3, SR4, SR5, SR10A & SR10B 	Three times per week during mid-ebb and mid-flood tides (within ± 1.75 hour of the predicted time)	3 (1 m below water surface, mid-depth and 1 m above sea bed, except where the water depth is less than 6 m, in which case the mid-depth station may be omitted. Should the water depth be less than 3 m, only the mid-depth station will be monitored).
Dolphin	Line-transect Methods	Northeast Lantau survey area and Northwest Lantau survey area	Twice per month	--
Mudflat	Horseshoe crabs, seagrass beds, intertidal soft shore communities, sedimentation rates and water quality	San Tau and Tung Chung Bay	Once every 3 months	--

2.2 Action and Limit Levels

2.2.1 **Table 2.2** presents the Action and Limit Levels for the 1-hour TSP, 24-hour TSP and noise level.

Table 2.2 Action and Limit Levels for 1-hour TSP, 24-hour TSP and Noise

Environmental Monitoring	Parameters	Monitoring Station	Action Level	Limit Level
Air Quality	1-hr TSP	AMS 5	352 µg/m ³	500 µg/m ³
		AMS 6	360 µg/m ³	
	24-hr TSP	AMS 5	164 µg/m ³	260 µg/m ³
		AMS 6	173 µg/m ³	
Noise	L _{eq} (30 min)	NMS 5	When one documented complaint is received	75 dB(A)

2.2.2 The Action and Limit Levels for water quality monitoring are given as in **Table 2.3**.

Table 2.3 Action and Limit Levels for Water Quality

Parameter (unit)	Water Depth	Action Level	Limit Level
Dissolved Oxygen (mg/L)	Surface and Middle	5.0	4.2 except 5 for Fish Culture Zone
	Bottom	4.7	3.6
Turbidity (NTU)	Depth average	27.5 or 120% of upstream control station's turbidity at the same tide of the same day; The action level has been amended to "27.5 and 120% of upstream control station's turbidity at the same tide of the same day" since 25 March 2013.	47.0 or 130% of turbidity at the upstream control station at the same tide of same day; The limit level has been amended to "47.0 and 130% of turbidity at the upstream control station at the same tide of same day" since 25 March 2013.
Suspended Solid (SS) (mg/L)	Depth average	23.5 or 120% of upstream control station's SS at the same tide of the same day; The action level has been amended to "23.5 and 120% of upstream control station's SS at the same tide of the same day" since 25 March 2013.	34.4 or 130% of SS at the upstream control station at the same tide of same day and 10mg/L for Water Services Department Seawater Intakes; The limit level has been amended to "34.4 and 130% of SS at the upstream control station at the same tide of same day and 10mg/L for Water Services Department Seawater Intakes" since 25 March 2013

Notes:

- (1) Depth-averaged is calculated by taking the arithmetic means of reading of all three depths.
- (2) For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limit.
- (3) For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- (4) The change to the Action and limit Levels for Water Quality Monitoring for the EM&A works was approved by EPD on 25 March 2013. Therefore, the amended Action and Limit Levels are applied for the water monitoring results obtained on and after 25 March 2013.

2.2.3 The Action and Limit Levels for dolphin monitoring are shown in **Tables 2.4 and 2.5**.

Table 2.4 Action and Limit Level for Dolphin Impact Monitoring

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 70% of baseline & ANI < 70% of baseline	STG < 70% of baseline & ANI < 70% of baseline
Limit Level	STG < 40% of baseline & ANI < 40% of baseline	

Remarks:

- (1) STG means quarterly average encounter rate of number of dolphin sightings.
- (2) ANI means quarterly average encounter rate of total number of dolphins.
- (3) For North Lantau Social Cluster, AL will be trigger if either NEL or NWL fall below the criteria; LL will be triggered if both NEL and NWL fall below the criteria.

Table 2.5 Derived Value of Action Level (AL) and Limit Level (LL)

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 4.2 & ANI < 15.5	STG < 6.9 & ANI < 31.3
Limit Level	(STG < 2.4 & ANI < 8.9) and (STG < 3.9 & ANI < 17.9)	

Remarks:

- (1) STG means quarterly average encounter rate of number of dolphin sightings.
- (2) ANI means quarterly average encounter rate of total number of dolphins.
- (3) For North Lantau Social Cluster, AL will be trigger if either NEL or NWL fall below the criteria; LL will be triggered if both NEL and NWL fall below the criteria.

2.3 Event Action Plans

2.3.1 The Event Actions Plans for air quality, noise, water quality and dolphin monitoring are annexed in **Appendix D**.

2.4 Mitigation Measures

2.4.1 Environmental mitigation measures for the contract were recommended in the approved EIA Report. **Appendix E** lists the recommended mitigation measures and the implementation status.

3 Environmental Monitoring and Audit

3.1 Implementation of Environmental Measures

- 3.1.1 In response to the site audit findings, the Contractors carried out corrective actions. Details of site audit findings and the corrective actions during the reporting period are presented in **Appendix F**.
- 3.1.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**.
- 3.1.3 Regular marine travel route for marine vessels were implemented properly in accordance to the submitted plan and relevant records were kept properly.
- 3.1.4 Dolphin Watching Plan was implemented during the reporting period. No dolphins were observed. The relevant records were kept properly.

3.2 Air Quality Monitoring Results

- 3.2.1 The monitoring results for 1-hour TSP and 24-hour TSP are summarized in **Tables 3.1** and **3.2** respectively. Detailed impact air quality monitoring results and relevant graphical plots are presented in **Appendix G**.

Table 3.1 Summary of 1-hour TSP Monitoring Results During the Reporting Period

Reporting Period	Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
September 2013	AMS5	25	16 – 44	352	500
	AMS6	31	14 – 47	360	
October 2013	AMS5	100	47 – 217	352	
	AMS6	105	66 – 229	360	
November 2013	AMS5	65	35 – 127	352	
	AMS6	77	35 – 132	360	

Table 3.2 Summary of 24-hour TSP Monitoring Results During the Reporting Period

Reporting Period	Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
September 2013	AMS5	37	15-64	164	260
	AMS6	74	45-125	173	
October 2013	AMS5	105	54-138	164	
	AMS6	141	83-170	173	
November 2013	AMS5	70	12-97	164	
	AMS6	123	88-160	173	

3.2.2 There were no Action and Limit Level exceedances for air during daytime on normal weekdays of the reporting period.

3.3 Noise Monitoring Results

3.3.1 The monitoring results for construction noise are summarized in **Table 3.3** and the monitoring results and relevant graphical plots for this reporting period are provided in **Appendix H**.

Table 3.3 Summary of Construction Noise Monitoring Results During the Reporting Period

Reporting period	Monitoring Station	Average $L_{\text{eq}}(30 \text{ mins}), \text{dB(A)}^*$	Range of $L_{\text{eq}}(30 \text{ mins}), \text{dB(A)}^*$	Action Level	Limit Level $L_{\text{eq}}(30 \text{ mins}), \text{dB(A)}$
September 2013	NMS5	60	58 – 62	When one documented complaint is received	75
October 2013		61	57 – 63		
November 2013		60	58 – 62		

*+3dB(A) Facade correction included

3.3.2 There were no Action and Limit Level exceedances for noise during daytime on normal weekdays of the reporting period.

3.3.3 Major noise sources during the noise monitoring included construction activities of the Contract and nearby traffic noise.

3.4 Water Quality Monitoring Results

3.4.1 Impact water quality monitoring was conducted at all designated monitoring stations during the reporting period. Impact water quality monitoring results and relevant graphical plots are provided in **Appendix I**.

3.4.2 During the reporting period, there were 10 Action Level exceedances and 3 Limit Level exceedances of suspended solids level.

3.4.3 Water quality impact sources during the water quality monitoring were the construction activities of the Contract, nearby construction activities by other parties and nearby operating vessels by other parties.

3.5 Dolphin Monitoring Results

Data Analysis

- 3.5.1 Distribution Analysis – The line-transect survey data was integrated with the Geographic Information System (GIS) in order to visualize and interpret different spatial and temporal patterns of dolphin distribution using sighting positions. Location data of dolphin groups were plotted on map layers of Hong Kong using a desktop GIS (ArcView© 3.1) to examine their distribution patterns in details. The dataset was also stratified into different subsets to examine distribution patterns of dolphin groups with different categories of group sizes, young calves and activities.
- 3.5.2 Encounter rate analysis – Encounter rates of Chinese White Dolphins (number of on-effort sightings per 100 km of survey effort, and total number of dolphins sighted on-effort per 100 km of survey effort) were calculated in NEL and NWL survey areas in relation to the amount of survey effort conducted during each month of monitoring survey. Dolphin encounter rates were calculated in two ways for comparisons with the HZMB baseline monitoring results as well as to AFCD long-term marine mammal monitoring results.
- 3.5.3 Firstly, for the comparison with the HZMB baseline monitoring results, the encounter rates were calculated using primary survey effort alone, and only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. The average encounter rate of sightings (STG) and average encounter rate of dolphins (ANI) were deduced based on the encounter rates from six events during the present quarter (i.e. six sets of line-transect surveys in North Lantau), which was also compared with the one deduced from the six events during the baseline period (i.e. six sets of line-transect surveys in North Lantau).
- 3.5.4 Secondly, the encounter rates were calculated using both primary and secondary survey effort collected under Beaufort 3 or below condition as in AFCD long-term monitoring study. The encounter rate of sightings and dolphins were deduced by dividing the total number of on-effort sightings (STG) and total number of dolphins (ANI) by the amount of survey effort for the entire quarterly period (September - November 2013).
- 3.5.5 Quantitative grid analysis on habitat use – To conduct quantitative grid analysis of habitat use, positions of on-effort sightings of Chinese White Dolphins collected during the quarterly impact phase monitoring period were plotted onto 1-km² grids among Northwest Lantau (NWL) and Northeast (NEL) survey areas on GIS. Sighting densities (number of on-effort sightings per km²) and dolphin densities (total number of dolphins from on-effort sightings per km²) were then calculated for each 1 km by 1 km grid with the aid of GIS. Sighting density grids and dolphin density grids were then further normalized with the amount of survey effort conducted within each grid. The total amount of survey effort spent on each grid was calculated by examining the survey coverage on each line-transect survey to determine how many times the grid was surveyed during the study period. For example, when the survey boat traversed through a specific grid 50 times, 50 units of survey effort were counted for that grid. With the amount of survey effort calculated for each grid, the sighting density and dolphin density of each grid were then normalized (i.e. divided by the unit of survey effort).
- 3.5.6 The newly-derived unit for sighting density was termed SPSE, representing the number of on-effort sightings per 100 units of survey effort. In addition, the derived unit for actual dolphin density was termed DPSE, representing the number of dolphins per 100 units of survey effort. Among the 1-km² grids that were partially covered by land, the percentage of sea area was calculated using GIS tools, and their SPSE and DPSE values were adjusted accordingly. The following formulae were used to estimate SPSE and DPSE in each 1-km² grid within the study area:

$$\text{SPSE} = ((S / E) \times 100) / \text{SA}\%$$
$$\text{DPSE} = ((D / E) \times 100) / \text{SA}\%$$

where S = total number of on-effort sightings

D = total number of dolphins from on-effort sightings
E = total number of units of survey effort
SA% = percentage of sea area

- 3.5.7 Behavioural analysis – When dolphins were sighted during vessel surveys, their behaviour was observed. Different activities were categorized (i.e. feeding, milling/resting, traveling, socializing) and recorded on sighting datasheets. This data was then input into a separate database with sighting information, which can be used to determine the distribution of behavioural data with a desktop GIS. Distribution of sightings of dolphins engaged in different activities and behaviours would then be plotted on GIS and carefully examined to identify important areas for different activities of the dolphins.
- 3.5.8 Ranging pattern analysis – Location data of individual dolphins that occurred during the 3-month baseline monitoring period were obtained from the dolphin sighting database and photo-identification catalogue. To deduce home ranges for individual dolphins using the fixed kernel methods, the program Animal Movement Analyst Extension, was loaded as an extension with ArcView© 3.1 along with another extension Spatial Analyst 2.0. Using the fixed kernel method, the program calculated kernel density estimates based on all sighting positions, and provided an active interface to display kernel density plots. The kernel estimator then calculated and displayed the overall ranging area at 95% UD level.

Summary of Survey Effort and Dolphin Sightings

- 3.5.9 During the period of September to November 2013, six sets of systematic line-transect vessel surveys were conducted to cover all transect lines in NWL and NEL survey areas twice per month.
- 3.5.10 From these surveys, a total of 862.46 km of survey effort was collected, with 94.3% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility). Among the two areas, 331.22 km and 531.24 km of survey effort were conducted in NEL and NWL survey areas respectively. In addition, the total survey effort conducted on primary lines was 644.87 km, while the effort on secondary lines was 217.59 km. Survey effort conducted on primary and secondary lines were both considered as on-effort survey data. Summary table of the survey effort is shown in **Annex I of Appendix J**.
- 3.5.11 During the six sets of monitoring surveys in September to November 2013, a total of 45 groups of 187 Chinese White Dolphins were sighted. All except two sightings were made during on-effort search. Thirty-four on-effort sightings were made on primary lines, while another nine on-effort sightings were made on secondary lines. In this quarterly period, only two groups of eight dolphins were sighted in NEL, while the other 43 groups of 179 dolphins were sighted in NWL. Summary table of the dolphin sightings is shown in **Annex II of Appendix J**.

Distribution

- 3.5.12 Distribution of dolphin sightings made during monitoring surveys in September, October and November 2013 was shown in **Figure 1 of Appendix J**. Almost all sightings were made in the northwestern portion of the North Lantau region, similar to the dolphin distribution pattern in the previous quarter. In particular, dolphin groups were mainly sighted around Lung Kwu Chau, Shau Chau, Black Point, and along the Urmston Road section between Black Point and Lung Kwu Chau (**Figure 1 of Appendix J**). Moreover, a few sightings were also made to the west and northeast of Chek Lap Kok airport platform, and two sightings were made near Tai Mo To (**Figure 1 of Appendix J**).
- 3.5.13 A few dolphin groups were sighted in the vicinity of the HKBCF reclamation site, but none was sighted near HKLR03 reclamation site (**Figure 1 of Appendix J**). In contrary to the previous quarter, no sighting was made along or near the HKLR09 alignment.
- 3.5.14 Sighting distribution between the impact phase monitoring period (September to November 2013) was compared to the one in the baseline monitoring period (September to November

2011). During the present monitoring period, dolphins rarely occurred in NEL region, which was in stark contrast to their frequent occurrence around the Brothers Islands and HKBCF reclamation site during the baseline period (**Figure 1 of Appendix J**).

- 3.5.15 The low occurrence of dolphins in NEL region (particularly around the Brothers Islands and Shum Shui Kok) has been documented repeatedly in previous quarters. This should be a serious concern for the HZMB-related construction activities (including the upcoming TM-CLKL bored piling works) in this area, especially when considered that the present period (September to November) in 2013 was exactly the same three-month period as the baseline monitoring period, and any speculation of seasonal fluctuation in dolphin occurrence can be ruled out. To ensure the continuous usage of NEL waters by the dolphins, every possible measure should be implemented by the contractors and relevant authorities to minimize all disturbances to the dolphins, as a future marine park around the Brothers Islands will be established in this important dolphin habitat as a compensation measure for the habitat loss resulted from the HKBCF and HKLR reclamation works.
- 3.5.16 On the other hand, dolphin occurrence in the western portion of North Lantau region was largely similar between the two periods, except that fewer dolphins were sighted to the west of the airport and near Pillar Point (**Figure 1 of Appendix J**).

Encounter Rate

- 3.5.17 For the three-month study period in September, October and November 2013, the encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data from the primary transect lines under favourable conditions (Beaufort 3 or below) from each of the survey areas are shown in **Table 3.4**. The average encounter rates deduced from the six sets of surveys were also compared with the ones deduced from the baseline monitoring period in September to November 2011 (See **Table 3.5**).

Table 3.4 Dolphin Encounter Rates (Sightings Per 100 km of Survey Effort) During three Reporting Period (Sep 2013 – Nov 2013)

Survey Area	Dolphin Monitoring	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
		Primary Lines Only	Primary Lines Only
Northeast Lantau	Set 1 (3 & 5 Sep 2013)	0.00	0.00
	Set 2 (10 & 18 Sep 2013)	3.44	6.87
	Set 3 (8 & 15 Oct 2013)	0.00	0.00
	Set 4 (17 & 22 Oct 2013)	2.63	15.78
	Set 5 (1 & 5 Nov 2013)	0.00	0.00
	Set 6 (8 & 13 Nov 2013)	0.00	0.00
Northwest Lantau	Set 1 (3 & 5 Sep 2013)	1.48	8.88
	Set 2 (10 & 18 Sep 2013)	4.19	12.57
	Set 3 (8 & 15 Oct 2013)	3.91	13.69
	Set 4 (17 & 22 Oct 2013)	12.24	33.67
	Set 5 (1 & 5 Nov 2013)	10.30	50.02
	Set 6 (8 & 13 Nov 2013)	16.09	76.06

Table 3.5 Comparison of Average Dolphin Encounter Rates between Reporting Period (Sep 2013 – Nov 2013) and Baseline Monitoring Period (Sep – Nov 2011)

Survey Area	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Reporting Period	Baseline Monitoring Period	Reporting Period	Baseline Monitoring Period
Northeast Lantau	1.01 ± 1.59	6.00 ± 5.05	3.77 ± 6.49	22.19 ± 26.81
Northwest Lantau	8.04 ± 5.70	9.85 ± 5.85	32.48 ± 26.51	44.66 ± 29.85

Note:

The encounter rates deduced from the baseline monitoring period have been recalculated based only on the survey effort and on-effort sighting data made along the primary transect lines under favourable conditions)

Table 3.6 Comparison of Average Dolphin Encounter Rates in Northeast Lantau Survey Area from All Quarters of Impact Monitoring Period and Baseline Monitoring Period (Sep – Nov 2011)

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
September-November 2011 (Baseline)	6.00 ± 5.05	22.19 ± 26.81
December 2012-February 2013 (Impact)	3.14 ± 3.21	6.33 ± 8.64
March-May 2013 (Impact)	0.42 ± 1.03	0.42 ± 1.03
June-August 2013 (Impact)	0.88 ± 1.36	0.88 ± 1.36
September-November 2013 (Impact)	1.01 ± 1.59	3.77 ± 6.49

Note:

The encounter rates deduced from the baseline monitoring period have been recalculated based only on survey effort and on-effort sighting data made along the primary transect lines under favourable conditions.

- 3.5.18 In NEL, the average dolphin encounter rates (both STG and ANI) in the present three-month study period were much lower (reductions of 83.2% and 83.0% respectively) than the ones recorded in the 3-month baseline period (Table 3.5). In fact, dolphin occurrence in NEL in the past three quarters have been exceptionally low when compared to the baseline period (Table 3.6), which has prompted the triggering of the Event and Action Plan (in fact, the present quarter was the fourth consecutive quarter being accessed that have triggered the Action Level under the Event and Action Plan).
- 3.5.19 On the other hand, the average dolphin encounter rates (STG and ANI) in NWL during the present impact phase monitoring period were also lower (reductions of 18.3% and 27.3% respectively) than the ones recorded in the 3-month baseline period, indicating a reduced dolphin usage of this survey area.
- 3.5.20 A two-way ANOVA with repeated measures and unequal sample size was conducted to examine whether there were any significant differences in the average encounter rates between the baseline and impact monitoring periods. The two variables that were examined included the two periods (baseline and impact phases) and two locations (NEL and NWL).
- 3.5.21 For the comparison between the baseline period and the present quarter (fourth quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and

ANI were 0.1424 and 0.2339 respectively. If the alpha value is set at 0.1, no significant difference was detected between the baseline and present quarters in both the encounter rates of STG and ANI.

- 3.5.22 For the comparison between the baseline period and the cumulative quarters in impact phase (i.e. first four quarters of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0366 and 0.0179 respectively. If the alpha value is set at 0.1, significant differences were detected in both the average dolphin encounter rates of STG and ANI (i.e. between the two periods and the locations).
- 3.5.23 To facilitate the comparison with the AFCD long-term monitoring results, the encounter rates were also calculated for the present quarter using both primary and secondary survey effort. The encounter rates of sightings (STG) and dolphins (ANI) in NWL were 8.33 sightings and 33.93 dolphins per 100 km of survey effort respectively, while the encounter rates of sightings (STG) and dolphins (ANI) in NEL were 0.62 sightings and 2.50 dolphins per 100 km of survey effort respectively.

Group Size

- 3.5.24 Group size of Chinese White Dolphins ranged from 1- 11 individuals per group in North Lantau region during September to November 2013. The average dolphin group sizes from these three months were compared with the one deduced from the baseline period in September to November 2011, as shown in **Table 3.7**.

Table 3.7 Comparison of Average Dolphin Group Sizes between Reporting Period (Sep 2013 – Nov 2013) and Baseline Monitoring Period (Sep– Nov 2011)

	Average Dolphin Group Size	
	Reporting Period	Baseline Monitoring Period
Overall	4.16 ± 2.46 (n = 45)	3.72 ± 3.13 (n = 66)
Northeast Lantau	4.00 ± 2.83 (n = 2)	3.18 ± 2.16 (n = 17)
Northwest Lantau	4.16 ± 2.48 (n = 43)	3.92 ± 3.40 (n = 49)

- 3.5.25 The average dolphin group sizes in the entire North Lantau region as well as in NWL during September to November 2013 were slightly higher than the ones recorded in the 3-month baseline period (Table 3.7). Although the average group size in NEL was quite high during the present monitoring period when compared to the baseline period, the sample size of the two dolphin groups in 2013 was very small for such comparison.
- 3.5.26 Distribution of dolphins with larger group sizes during September to November 2013 is shown in **Figure 2 of Appendix J**, and was compared with the one in baseline period. In 2013, most larger dolphin groups mainly clustered around Lung Kwu Chau and off Lung Kwu Tan, while these larger groups were more scattered in the Northwest Lantau region without any apparent concentration during the baseline monitoring period in 2011 (Figure 2). Notably, none of the larger dolphin groups were sighted near the HKBCF or HKLR03 reclamation sites in 2011.

Habitat Use

- 3.5.27 From September-November 2013, the most heavily utilized habitats by Chinese White Dolphins mainly concentrated around Lung Kwu Chau, near Pak Chau, and the Urmston Road section between Lung Kwu Chau and Lung Kwu Tan (**Figures 3a and 3b of Appendix J**). Only two grids in NEL recorded the presence of dolphins, with one of the grids overlap with the HKBCF work site. None of the grids near HKLR03 reclamation site or HKLR09 bridge alignment recorded the presence of dolphins.

- 3.5.28 It should be noted that the amount of survey effort collected in each grid during the three-month period was fairly low (6-12 units of survey effort for most grids), and therefore the habitat use pattern derived from the three-month dataset should be treated with caution. A more complete picture of dolphin habitat use pattern will be presented when more survey effort for each grid will be collected throughout the impact phase monitoring programme.
- 3.5.29 When compared with the habitat use patterns during the baseline period, dolphins usage in NEL was noticeably much lower in the present impact monitoring period (**Figure 4 of Appendix J**). During the baseline period, dolphin densities were particularly higher along the coastline between Shum Shui Kok and Siu Ho Wan, while this area was vacated by dolphins during the present impact phase period. On the other hand, the density patterns between the baseline and impact phase monitoring periods were similar in the Northwest Lantau region.
- 3.5.30 The absence of dolphins in the identified important habitats around the Brothers Islands and Shum Shui Kok in consecutive quarters in 2013 is of serious concern. The future Brothers Islands Marine Park will be established in this area upon the completion of HKBCF reclamation works, as an important compensation measure for the habitat loss in relation to HZMB projects. It should be further examined whether the very low usage of dolphins would continue in this important dolphin habitat, and the potential measures should be implemented soon that may enhance the dolphin usage of this area.

Mother-calf Pairs

- 3.5.31 During the three-month study period, a total of four unspotted calves (UC) and 14 unspotted juveniles (UJ) were sighted in NEL and NWL survey areas. These young calves comprised 9.6% of all animals sighted, which was higher than the percentage recorded during the baseline monitoring period (6.8%).
- 3.5.32 The occurrence of these young calves mainly concentrated around Lung Kwu Chau and off Lung Kwu Tan, and most of them were involved in larger dolphin groups (**Figure 5 of Appendix J**). None of these calves were sighted in the vicinity of the HKBCF or HKLR03 reclamation site during the present quarter.

Activities and Associations with Fishing Boats

- 3.5.33 A total of five dolphin sightings were associated with feeding and socializing activities during the three-month study period. The percentage of feeding activities comprised of 4.4% of the total number of dolphin sightings, which was much lower than the one recorded during the baseline period (11.6%). On the contrary, the percentage of socializing activities were 6.6% during the present impact phase monitoring period, which was slightly higher than the one recorded during the baseline period (5.4%). Only one group of dolphins was engaged in traveling activity, and the rarity of this observed activity was similar to the baseline monitoring period and previous impact phase monitoring periods.
- 3.5.34 Distribution of dolphins engaged in different activities during the three-month study period is shown in (**Figure 6 of Appendix J**). No apparent concentration of sightings was found for all three types of observed activities.
- 3.5.35 During the three-month period, only one of the 45 dolphin groups was found to be associated with an operating gill-netter. The extremely low level of fishing boat association in the present and previous quarters was consistently found, and was likely related to the recent trawl ban being implemented in 2013 in Hong Kong waters.

Photo-identification and Individual Range Use

- 3.5.36 From September to November 2013, over 3,000 digital photographs of Chinese White Dolphins were taken during the impact phase monitoring surveys for the photo-identification work.
- 3.5.37 In total, 56 individuals sighted 110 times altogether were identified (see summary table in **Annex III** and photographs of identified individuals in **Annex IV of Appendix J**). Only eight of

these 110 re-sightings were made in NEL, which involved eight different individuals. Notably, these were the same individuals that were repeatedly sighted before in NEL throughout the HKLR03 impact phase monitoring surveys as well as in the baseline monitoring period.

- 3.5.38 Most identified individuals were sighted only once or twice during the three-month period, with the exception of 11 individuals being sighted thrice, and four individuals being sighted four times (CH34, NL33, NL98 and WL05). One individual, NL220 were sighted five times, but three of those sightings were made on the same survey day.
- 3.5.39 Notably, nine of these 56 individuals were also sighted in West Lantau waters during the HKLR09 monitoring surveys in the same 3-month period, showing their extensive movement between North and West Lantau regions.
- 3.5.40 Twelve well-recognized females were accompanied with their calves during their re-sightings. Besides NL80, NL182 and WL 124, the other mothers (NL33, NL93, NL98, NL123, NL145, NL188, NL220, NL221 and NL264) were frequently sighted with their calves throughout the HKLR03 impact phase monitoring surveys.
- 3.5.41 Ranging patterns of the 56 individuals identified during the three-month study period were determined by fixed kernel method, and are shown in **Annex V of Appendix J**.
- 3.5.42 Only a few individuals had their range extended to NEL survey area, while other individuals mostly focused their range use in NWL survey area during the present quarter. In contrast to the extensive movements between NEL and NWL survey areas in the first two impact monitoring quarters (October 2012 - February 2013) and the baseline period (September-November 2011), many of these identified individuals appeared to abandon their usage in NEL waters during the present and previous quarters, even though they were regularly sighted there before and their core areas were centered around the Brothers Islands (e.g. NL24, NL33, NL139, NL261) (**Annex V of Appendix J**).
- 3.5.43 It is apparent that the majority of individual dolphins that utilized NEL waters in the past has either diminished or avoided this area for their recent range use. This coincided well with the dramatic decline in dolphin occurrence in NEL as discussed in **Sections 3.5.16 to 3.5.26**. This is of serious concern, as the Brothers Islands in NEL was once identified an important habitat for many year-round residents that focused their core area use there (Hung 2008). Therefore, the ranging pattern of individual dolphins should be continuously monitored around Lantau waters, and measures should be taken to ensure that dolphins will continue to move between NWL and NEL without any hindrance as a result of the HZMB-related construction works.

Action Level / Limit Level Exceedance

- 3.5.44 There was one Action Level exceedances of dolphin monitoring for the quarterly monitoring data (September – November 2013). According to the contractor's information, the marine activities undertaken for HKLR03 during the two quarterly periods (June to August 2013 and September to November 2013) included stone platform construction, reclamation, stone column installation, band drain installation and excavation of stone platform. During the quarterly period of September to November 2013, geotextile laying activities were also carried out. There is no evidence showing the current AL non-compliance directly related to the construction works of HKLR03. It should also be noted that reclamation work under HKLR03 (adjoining the Airport Island) situates in waters which has rarely been used by dolphins in the past, and the working vessels under HKLR03 have been travelling from source to destination in accordance with the Marine Travel Route to minimize impacts on Chinese White Dolphin. In addition, the contractor will implement proactive mitigation measures such as avoid anchoring at Marine Department's designated anchorage site – Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.
- 3.5.45 A two-way ANOVA with repeated measures and unequal sample size was conducted to examine whether there were any significant differences in the average encounter rates between the baseline and impact monitoring periods. The two variables that were examined included the two periods (baseline and impact phases) and two locations (NEL and NWL).

- 3.5.46 For the comparison between the baseline period and the present quarter (fourth quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.1424 and 0.2339 respectively. If the alpha value is set at 0.1, no significant difference was detected between the baseline and present quarters in the average dolphin encounter rates of STG and ANI.
- 3.5.47 For the comparison between the baseline period and the cumulative quarters in impact phase (i.e. first four quarters of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0366 and 0.0179 respectively. If the alpha value is set at 0.1, significant difference was detected in both the average dolphin encounter rates of STG and ANI (i.e. between the two periods and the locations).
- 3.5.48 The AFCD monitoring data during September-November 2013 has been reviewed by the dolphin specialist, and only two groups of three dolphins were sighted from 77.81 km of survey effort on primary lines in NEL during the same quarter. This review has confirmed that the very low occurrence of dolphins reported by the HKLR03 monitoring survey in summer 2013 in NEL is accurate.
- 3.5.49 There is no evidence showing that the sources of impact directly related to the construction works of HKLR03 that may have affected the dolphin usage in the NEL region.
- 3.5.50 All dolphin protective measures are fully and properly implemented in accordance with the EM&A Manual. In order to minimise disturbance to the Brother's Island, the Contractor provide training to skippers to ensure that their working vessels travel from source to destination to minimize impacts on Chinese White Dolphin and avoid anchoring at Marine Department's designated anchorage site - Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

3.6 Mudflat Monitoring Results

Sedimentation Rate Monitoring

- 3.6.1 The baseline sedimentation rate monitoring was in September 2012 and impact sedimentation rate monitoring was undertaken on 4 September 2013. The mudflat surface levels at the four established monitoring stations and the corresponding XYZ HK1980 GRID coordinates are presented in **Table 3.8** and **Table 3.9**.

Table 3.8 Measured Mudflat Surface Level Results

Monitoring Station	Baseline Monitoring (September 2012)			Impact Monitoring (September 2013)		
	Easting (m)	Northing (m)	Surface Level (mPD)	Easting (m)	Northing (m)	Surface Level (mPD)
S1	810291.160	816678.727	0.950	810291.152	816678.733	1.022
S2	810958.272	815831.531	0.864	810958.277	815831.548	0.916
S3	810716.585	815953.308	1.341	810716.599	815953.297	1.393
S4	811221.433	816151.381	0.931	811221.405	816151.371	1.019

Table 3.9 Comparison of measurement

Monitoring Station	Comparison of measurement			Remarks and Recommendation
	Easting (m)	Northing (m)	Surface Level (mPD)	
S1	-0.008	0.006	0.072	Level continuously increased
S2	0.005	0.0017	0.052	Within tolerance, no significant change
S3	0.014	-0.011	0.052	Within tolerance, no significant change
S4	-0.028	-0.010	0.088	Level continuously increased

3.6.2 This measurement result was generally and relatively higher than the baseline measurement at S1 and S4. The mudflat level is continuously increased. For S2 and S3 showed that the level has increased within tolerance and their sea bed depth would not be considered as significant change.

Water Quality Monitoring

3.6.3 The mudflat monitoring covered water quality monitoring data. Reference was made to the water quality monitoring data of the representative water quality monitoring station (i.e. SR3) as in the EM&A Manual. The water quality monitoring location (SR3) is shown in **Figure 2.1**.

3.6.4 Impact water quality monitoring in San Tau (monitoring station SR3) was conducted in September 2013. The monitoring parameters included dissolved oxygen (DO), turbidity and suspended solids (SS).

3.6.5 Due to adverse weather condition, the water quality monitoring at station SR3 was cancelled on 23 September 2013 during mid-ebb tide and mid-flood tide. The Impact monitoring results for SR3 were extracted and summarised below:

Table 3.10 Impact Water Quality Monitoring Results (Depth Average)

Date	Mid Ebb Tide			Mid Flood Tide		
	DO (mg/L)	Turbidity (NTU)	SS (mg/L)	DO (mg/L)	Turbidity (NTU)	SS (mg/L)
02-Sep-13	7.2	4.5	2.4	8.8	9.6	11.1
04-Sep-13	5.3	9.0	10.9	5.5	9.0	9.4
06-Sep-13	6.5	8.4	7.1	6.4	11.1	10.6
09-Sep-13	5.7	7.5	6.7	5.6	8.3	8.3
11-Sep-13	6.8	4.1	4.5	6.4	4.3	4.8
13-Sep-13	5.7	4.3	3.7	6.6	10.3	3.4
16-Sep-13	6.8	4.2	5.2	8.6	12.1	18.0
18-Sep-13	6.7	8.5	5.2	6.8	10.5	9.9
20-Sep-13	6.2	8.5	7.9	5.9	12.8	12.0
23-Sep-13	-	-	-	-	-	-
25-Sep-13	6.5	9.4	10.1	6.5	9.5	9.8
27-Sep-13	6.2	5.7	5.7	7.1	5.1	7.1
30-Sep-13	6.5	3.8	2.9	6.8	4.7	6.7
Average	6.3	6.5	6.0	6.7	8.9	9.2

Mudflat Ecology Monitoring

Sampling Zone

- 3.6.6 There are two survey areas specified under the updated EM&A Manual for the Contract, namely Tung Chung Bay and San Tau. Tung Chung Bay survey area is divided into three sampling zones (TC1, TC2 and TC3) and there is one sampling zone at San Tau (ST). Survey of horseshoe crabs, seagrass beds and intertidal communities were conducted in each sampling zone. The locations of sampling zones are shown in **Annex I of Appendix O**.

Horseshoe Crabs

- 3.6.7 An active search method was adopted for horseshoe crab survey at each sampling zone. The survey was undertaken by 2 specialists at each sampling zone. During the search period, any accessible and potential area would be investigated for any horseshoe crab individuals within 2-3 hours in low tide period (tidal level below 1.2 m above Chart Datum (C.D.)). Once a horseshoe crab was found, the species, size and inhabiting substrate, photographic record and respective GPS coordinate were recorded with reference to Li (2008). The horseshoe crab surveys were conducted on 15th (for zones TC3 and ST) and 21st (for zones TC1 and TC2) September 2013 with hot and cloudy weather.

Seagrass Beds

- 3.6.8 An active search method was adopted for seagrass bed survey at each sampling zone. The survey was undertaken by 2 specialists each spending within 2-3 hours in low tide period. Once seagrass bed was observed, the species, the estimated area (m²), photographic record and respective GPS coordinate were recorded. The seagrass bed surveys were conducted on 15th (for zones TC3 and ST) and 21st (for zones TC1 and TC2) September 2013 with hot and cloudy weather.

Intertidal Soft Shore Communities

- 3.6.9 The sandy shore of San Tau and Tung Chung Bay from the uppermost part of the shore and to the water edge was divided into three tidal zones – upper, middle and lower zones, at each sampling zone, TC1, TC2, TC3 and ST. A 100m transect was laid in each of the three tidal zones for fauna sampling.
- 3.6.10 At each sampling zone, three 100m horizontal transects were laid at 2.0m, 1.5m and 1.0m above C.D. Along each transect, ten random quadrats (0.5 m x 0.5m) were placed. In each quadrat, the epifauna and infauna (within the top 5cm sediment) in each quadrat were identified and their numbers/coverage percentages were recorded. One core of 10cm diameter x 20cm depth was also collected within each quadrat. The sediments of the cores were sieved with 2mm mesh-size sieve and the biota inside was identified and counted. All collected fauna were released after recording except some tiny individuals that *in-situ* identification was not feasible. These tiny individuals were collected and were identified in the laboratory. Species and abundance of biota in both cores and quadrats were reported. The intertidal soft shore community surveys were conducted in low tide period on 1st (for ST), 7th (for TC3), 8th (for TC1) and 14th September 2013 (for TC2).

Data Analysis

- 3.6.11 Data collected from direct search and core sampling was pooled in every quadrat for data analysis. Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) were calculated for every quadrat using the formulae below,

$$H' = -\sum (N_i / N) \ln (N_i / N) \text{ (Shannon and Weaver, 1963)}$$
$$J = H' / \ln S, \text{ (Pielou, 1966)}$$

where S is the total number of species in the sample, N is the total number of individuals, and N_i is the number of individuals of the ith species.

Mudflat Ecology Monitoring Results and Conclusion

Horseshoe Crabs

- 3.6.12 **Table 3.1 and Figure 3.1 of Appendix O** show the records of horseshoe crab survey at every sampling zone. In general, horseshoe crab *Tachypleus tridentatus* was found at all sampling zone (TC1: 10 individuals; TC2: 2 individuals; TC3: 7 individuals; ST: 94 individuals). All individuals were found on soft mud, sandy substratum or sandy substratum surrounded by small gravels. Grouping was observed while the group size ranged 2-11 individuals.
- 3.6.13 Since the commencement of the survey on September 2012, no individual was found at TC2 until the present survey (2 individuals). It showed that TC2 was not a suitable nursery ground for horseshoe crab
- 3.6.14 According to **Table 3.2 of Appendix O**, the search records of *Tachypleus tridentatus* were 2.50 individuals hr⁻¹ person⁻¹ (mean prosomal widths: 31.22 mm), 0.50 individuals hr⁻¹ person⁻¹ (25.51 mm) and 1.75 individuals hr⁻¹ person⁻¹ (30.87 mm) at TC1, TC2 and TC3 respectively. Similar to previous surveys, the highest search record of 15.67 individuals hr⁻¹ person⁻¹ (40.39 mm) was reported at ST. According to Li (2008), the prosomal width of *Tachypleus tridentatus* recorded ranged 19.33 - 68.01 mm that corresponded to an estimated age of 2.6 - 8.0 years old. It was obvious that ST was an important nursery ground for horseshoe crab especially newly hatched individuals due to larger area of suitable substratum (fine sand or soft mud) and less human disturbance (far from urban district).
- 3.6.15 **Figure 3.2 of Appendix O** shows the changes of number of individuals, mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* at the every sampling zone along the sampling months. Both number of individuals and search records declined generally during dry season (from September to December 2011) at TC1, TC2 and ST. The horseshoe crabs were inactive and burrowed in the sediments during cold weather (<15 °C). Similar results of low search record in dry seasons were reported in a previous territory-wide survey of horseshoe crab. For example, the search records at Tung Chung Wan were 0.17 individuals hr⁻¹ person⁻¹ and 0 individual hr⁻¹ person⁻¹ in wet season and dry season respectively (details see Li, 2008). From December 2012 to September 2013 (present survey), both values increased with the warmer climate at the three sampling zones.
- 3.6.16 At ST, sharp increase of number of individuals was recorded from 15 individuals in March 2013, 59 individuals in June 2013 to 94 individuals in September 2013). A personal conversation was conducted with Prof. K.S. Shin (Department of Biology and Chemistry, The City University of Hong Kong (CityU) who was running a conservation programme of horseshoe crab in Hong Kong. His monitoring team had recorded similar increase of horseshoe crab population during wet season this year. It was believed the suitable ambient temperature increased its conspicuousness.
- 3.6.17 **Figure 3.3 of Appendix O** shows the changes of prosomal width of horseshoe crab *Tachypleus tridentatus* at ST. It was believed that most of individuals (50% records between upper and lower quartile), recorded in the dry season, had grown to a size of double in June 2013 (prosomal width increase from 10-20 mm to 30-50 mm). The individuals remained similar in size in present survey. It indicated the major moulting period occurring between March and June. At the same time, tiny individuals (10-15 mm) were found (outliers of low value) that seasonal spawning was believed occurring at ST.
- 3.6.18 Besides, 18 labeled individuals of *Tachypleus tridentatus* (prosomal width: 28.76-56.00 mm) were recorded in the present survey (Table 3.1 and Figure 3.1). All of them were released through a conservation programme conducted by Dr. Shin (CityU). It was a re-introduction trial of artificial bred and marked horseshoe crab juvenile at selected sites. So that the horseshoe crabs population might be restored in the natural habitat. Through a personal conversation with Dr Shin, about 100 individuals were released to ST on 20 June 2013. All these labeled individuals were not included in the results of present monitoring programme.

- 3.6.19 Another less common species *Carcinoscorpius rotundicauda* was not found during the whole survey period except the survey conducted in December 2012 at ST (4 individuals). This species was believed present in ST at very low number while encounter was very rare
- 3.6.20 The present survey was the fourth time of sampling of the EM&A programme during the construction period. Based on the results, impacts of the HKLR project could not be detected on horseshoe crabs considering the factor of natural, seasonal variation, In case, abnormal phenomenon (e.g. very few numbers of horseshoe individuals in warm weather) is observed, it would be reported as soon as possible.

Seagrass Beds

Table 3.3 and Figure 3.4 of Appendix O show the records of seagrass beds survey at every sampling zone. Seagrass was recorded in ST only while the largest patch was *Halophila ovalis* located nearby the mangrove vegetation on sandy substratum at tidal level 2 m above C.D.. The estimated total area was 758.9 m² with estimated coverage ranged 85-90%. It was a long seagrass strand merged by the growth of 2 to 3 smaller patches recorded in previous surveys from September 2012 to June 2013. Moreover, six small patches of *H. ovalis* were recorded on soft mud at tidal level between 1.0 m and 1.5 m above C.D.. The estimated total area of each patch ranged 1.2 - 8.0 m² with estimated coverage ranging 15-70%. These small patches were yet recorded in previous surveys and were distant from the largest strand. Seasonal recruitment of *H. ovalis* was believed occurred between June and September. One small patch of *Zostera japonica* was found within the long strand of *Halophila ovalis*. The estimated area was 3.7 m² while the estimated coverage was about 95%.

- 3.6.21 **Figure 3.5 of Appendix O** shows the changes of estimated total area of seagrass beds at ST along the sampling months. For seagrass *Halophila ovalis*, the total area and estimated coverage increased gradually. It showed that the seagrass was in scattered patches during dry season then grew and merged into single patch during wet season. Seasonal recruitment during wet season further increased the total area of seagrass. However it was doubt that the newly recruited patches of seagrass would survive the natural heat stress, predation and wave action. For seagrass *Zostera japonica*, it was not reported in the surveys of September and December 2012. Seasonal recruitment of few patches was reported between December and March. Then the patch size increased and merged gradually with the warmer climate. However the patch size decreased sharply in the present survey. The patch might not overcome the high heat stress exerted on shore between June and September 2013.
- 3.6.22 The present survey was the fourth time of sampling of the EM&A programme during the construction period. Based on the results, impacts of the HKLR project could not be detected on seagrass. The seagrass area of *Halophila ovalis* was increasing steadily due to natural growth and seasonal recruitment. Although that of *Zostera japonica* decreased in the present survey, it would be the cause of natural heat stress. In case, abnormal phenomenon (e.g. rapid reduction of seagrass patch size) was observed, it would be reported as soon as possible.

Intertidal Soft Shore Communities

- 3.6.23 **Table 3.4 and Figure 3.5 of Appendix O** show the types of substratum along the horizontal transect at every tidal level of every sampling zone. The relative distribution of different substrata was estimated by investigating the substratum types (Gravels & Boulders / Sands / Soft mud) of the ten random quadrats along the horizontal transect.
- 3.6.24 The distribution of substratum types varied among tidal levels and sampling zones. At TC1, higher percentage of 'Sands' was recorded (60%) while the rest was 'Gravels and Boulders' (40%) at high tidal level. High percentage of 'Gravels and Boulders' (80%) was recorded at mid tidal level. Even distribution of 'Soft mud' (40%) and 'Sands' (40%) was recorded at low tidal level. At TC2, high percentage of 'Sands' (60%) was recorded while the rest was 'Soft mud' (40%) at high tidal level. But higher percentages of 'Soft mud' (50-70%) and lower percentage of 'Sands' (30%) were recorded at mid and low tidal levels. At TC3, high percentages of 'Sands' (80-100%) were recorded at high and mid tidal levels. 'Gravels and Boulders' was the major



- substratum (60%) at low tidal level followed by 'Sands' (30%). At ST, 'Gravels and Boulders' (100%) was recorded only at high tidal level. Even distribution of 'Gravels and Boulders' (50%) and 'Sands' (50%) was recorded at mid tidal level. At low tidal level, high percentage of 'Soft mud' (80%) was recorded at low tidal level followed by 'Gravels and Boulders' (20%).
- 3.6.25 There was neither consistent vertical nor horizontal zonation pattern of substratum type in the study site. Such heterogeneous variation should be caused by different hydrology (e.g. wave in different direction and intensity) received by the four sampling zones.
- 3.6.26 **Table 3.5 of Appendix O** lists the total abundance, density and number of taxon of every phylum in the present survey. A total of 19329 individuals were recorded. Mollusks were significantly the most abundant phylum (total individuals 18738, density 625 individuals m⁻², relative abundance 96.9%). The second abundant group was arthropod (total individuals: 421, density 14 individuals m⁻², 2.2%) respectively. Relatively other phyla were very low in abundance ($\leq 0.6\%$). Similarly, the most diverse phylum were mollusks (37 taxa) followed by arthropods (13 taxa) and annelids (8 taxa). The taxa of other phyla were relatively less (≤ 1 taxon). The complete list of collected specimens is provided in **Annex III of Appendix O**.
- 3.6.27 **Table 3.6 of Appendix O** shows the number of individual, relative abundance and density of each phylum at every sampling zone. The results were similar among the four sampling zones. In general, mollusks were the most dominant phylum (no. of individuals: 3119-7510 individuals, relative abundance 93.7-98.8%). Arthropods were the second abundant phylum (no. of individuals: 49-185 individuals, 0.6-4.6%) although the number of individuals was significantly lower than that of mollusks. Relatively, other phyla were very low in abundance across the four sampling zones ($< 1\%$) except the annelids at TC2 (no. of individuals: 57 individuals, relative abundance 1.4%).
- 3.6.28 **Table 3.7 of Appendix O** lists the abundant species (relative abundance $> 10\%$) at every sampling zone. At TC1, gastropod *Batillaria multiformis* was clearly the dominant species (403-406 individuals m⁻², relative abundance 51-64%) at high and mid tidal levels. It was also in moderate abundance at low tidal level (32 individuals m⁻², 10%). Gastropod *Cerithidea djadjariensis* (98-111 individuals m⁻², 18-29%) was also abundant at high and low tidal levels. Gastropod *Monodonta labio* (135 individuals m⁻², 17%) was the second abundant at mid tidal level. Rock oyster *Saccostrea cucullata* was at moderate abundance at mid and low tidal levels (61-96 individuals m⁻², 12-18%).
- 3.6.29 At TC2, gastropod *Cerithidea cingulata* was the most abundant at high tidal level (412 individuals m⁻², relative abundance 50%) but was less in abundance at mid tidal level (61 individuals m⁻², 13%). All three tidal levels were dominated by gastropod *Cerithidea djadjariensis* (167-271 individuals m⁻², 33-52%). At mid tidal level, rock oyster *Saccostrea cucullata* (72 individuals m⁻², 15%) was the second abundant species. At low tidal level, gastropod *Batillaria zonalis* (42 individuals m⁻², 13%) was common-occurring species.
- 3.6.30 At TC3, the high and mid tidal levels were mainly dominated by gastropods *Batillaria multiformis* (526-857 individuals m⁻², relative abundance 49-63%), *Cerithidea djadjariensis* (244-310 individuals m⁻², 18-29%) and *Cerithidea cingulata* (191-206 individuals m⁻², 14-19%). At low tidal level, the abundant species were gastropod *Monodonta labio* (196 individuals m⁻², 33%), rock oyster *Saccostrea cucullata* (158 individuals m⁻², 27%) followed by gastropod *Batillaria multiformis* (91 individuals m⁻², 15%).
- 3.6.31 At ST, gastropod *Batillaria multiformis* was highly abundant (329 individuals m⁻², relative abundance 55%) at high tidal level followed by gastropod *Monodonta labio* (108 individuals m⁻², 18%). Relatively the abundant species were similar but lower in abundances at mid tidal level such as gastropods *Cerithidea djadjariensis* (88 individuals m⁻², 18%), *Batillaria multiformis* (58 individuals m⁻², 12%), *Cerithidea cingulata* (58 individuals m⁻², 12%), *Lunella coronata* (56 individuals m⁻², 12%) and rock oyster *Saccostrea cucullata* (88 individuals m⁻², 18%). At low tidal level, the abundant species gastropod *Cerithidea djadjariensis* (95 individuals m⁻², 44%) and *Batillaria zonalis* (24 individuals m⁻², 11%) were also low in abundances.

- 3.6.32 There was no consistent zonation pattern of species distribution observed across sampling zones and tidal levels in Tung Chung Wan and San Tau. The species distribution should be determined by the type of substratum primarily. In general, gastropods *Batillaria multiformis* (7058 individuals, 37%), *Cerithidea djadjariensis* (4207 individuals, 22%), *Cerithidea cingulata* (2701 individuals, 14%) were the most common occurring species on sandy substratum mainly among the four sampling zones. Moreover gastropod *Monodonta labio* (1360 individuals, 7%) and rock oyster *Saccostrea cucullata* (1520 individuals, 8%), were common occurring species inhabiting gravel and boulders substratum.
- 3.6.33 **Table 3.8 of Appendix O** shows the mean values of number of species, density, H' and J of soft shore communities at every tidal level and sampling zone. Among the sampling zones, the mean number of species was generally similar among TC1, TC2 and TC3 (7-13 spp. 0.25 m⁻²) while ST had relatively higher value (8-15 spp. 0.25 m⁻²). The mean densities of TC3 (590-1371 individuals m⁻²) was generally higher than that of TC1 (332-800 individuals m⁻²) and TC2 (320-827 individuals m⁻²) followed by ST (218-602 individuals m⁻²). The mean biodiversity index and species evenness were similar that ranged 1.22-1.56 and 0.58-0.66 respectively.
- 3.6.34 Across the tidal levels, there was no difference of the mean number of species. Higher mean densities were observed at high and mid tidal levels. Usually higher mean biodiversity index and species evenness were observed at mid and low tidal levels.
- 3.6.35 **Figure 3.6 of Appendix O** shows the temporal changes of number of species, density, H' and J at every tidal level and sampling zone since the baseline monitoring survey (Sep 2012). No significant temporal change of any biological parameters was observed at all sampling zones. Although declined densities were reported at sampling zones TC2 (mid and low tidal levels) and TC3 (high and mid tidal levels) in dry season on December 2012, it was believed a natural, seasonal variation due to higher mortality and lower activity rate of intertidal fauna during cold, dry season. The densities of both sampling zones had increased along with the hot, wet season. At the same time, steady increases of number of species and biodiversity index were observed at ST (mid and low tidal levels).
- 3.6.36 The present survey was the fourth time of sampling of the EM&A programme during the construction period. Based on the results, impacts of the HKLR project were not detected on intertidal soft shore community.

3.7 Solid and Liquid Waste Management Status

- 3.7.1 The Contractor registered with EPD as a Chemical Waste Producer on 12 July 2012 for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 3.7.2 The summary of waste flow table is detailed in **Appendix K**.
- 3.7.3 The Contractor was reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practise on the Packaging, Labelling and Storage of Chemical Wastes.

3.8 Environmental Licenses and Permits

- 3.8.1 The valid environmental licenses and permits during the reporting period are summarized in **Appendix L**.

4 Environmental Complaint and Non-compliance

4.1 Environmental Exceedances

4.1.1 The detailed air quality, noise, water quality and dolphin exceedances are provided in **Appendix M**. Also, the summaries of the environmental exceedances are presented as followed:

Air Quality

4.1.2 There were no Action and Limit Level exceedances for 1-hr TSP or 24-hr TSP recorded air quality were recorded during the reporting period.

Noise

4.1.3 No Action and Limit Level exceedances for noise were recorded during this reporting period.

Water Quality

4.1.4 During the reporting period, there were 10 Action Level exceedances and 3 Limit Level exceedances of suspended solids level. No exceedances of turbidity level were recorded. No exceedances of dissolved oxygen level. There were no specific activities recorded during the monitoring period that would cause any significant impacts on monitoring results and no leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise. Therefore, all exceedances were considered as non-contract related. The detailed numbers of exceedances recorded during the reporting period at each impact station are summarised in **Table 4.1**.

Dolphin

4.1.5 There was one Action Level exceedances of dolphin monitoring for the quarterly monitoring data (September – November 2013). According to the contractor's information, the marine activities undertaken for HKLR03 during the two quarterly periods (June to August 2013 and September to November 2013) included stone platform construction, reclamation, stone column installation, band drain installation and excavation of stone platform. During the quarterly period of September to November 2013, geotextile laying activities were also carried out.

4.1.6 There is no evidence showing the current AL non-compliance directly related to the construction works of HKLR03. It should also be noted that reclamation work under HKLR03 (adjoining the Airport Island) situates in waters which has rarely been used by dolphins in the past, and the working vessels under HKLR03 have been travelling from source to destination in accordance with the Marine Travel Route to minimize impacts on Chinese White Dolphin. In addition, the contractor will implement proactive mitigation measures such as avoiding anchoring at Marine Department's designated anchorage site – Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

4.1.7 All dolphin protective measures are fully and properly implemented in accordance with the EM&A Manual. In order to minimise disturbance to the Brother's Island, the Contractor provide training to skippers to ensure that their working vessels travel from source to destination to minimize impacts on Chinese White Dolphin and avoid anchoring at Marine Department's designated anchorage site - Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

Table 4.1 Summary of Water Quality Exceedances

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total Number of Exceedances	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
IS5	Action Level	--	--	--	--	--	--	--	22-11-2013	0	1
	Limit Level	--	--	--	--	--	--	--	--	0	0
IS(Mf)6	Action Level	--	--	--	--	--	--	16-09-2013 11-11-2013	11-11-2013	2	1
	Limit Level	--	--	--	--	--	--	--	--	0	0
IS7	Action Level	--	--	--	--	--	--	--	18-10-2013	0	1
	Limit Level	--	--	--	--	--	--	--	--	0	0
IS8	Action Level	--	--	--	--	--	--	--	--	0	0
	Limit Level	--	--	--	--	--	--	--	--	0	0
IS(Mf)9	Action Level	--	--	--	--	--	--	--	06-09-2013	0	1
	Limit Level	--	--	--	--	--	--	--	16-10-2013	0	1
IS10	Action Level	--	--	--	--	--	--	--	06-11-2013	0	1
	Limit Level	--	--	--	--	--	--	--	25-10-2013	0	1
SR3	Action Level	--	--	--	--	--	--	--	22-11-2013	0	1
	Limit Level	--	--	--	--	--	--	--	--	0	0
SR4	Action Level	--	--	--	--	--	--	--	18-09-2013	0	1
	Limit Level	--	--	--	--	--	--	--	--	0	0
SR5	Action Level	--	--	--	--	--	--	--	06-11-2013	0	1
	Limit Level	--	--	--	--	--	--	--	25-10-2013	0	1
SR10A	Action Level	--	--	--	--	--	--	--	--	0	0
	Limit Level	--	--	--	--	--	--	--	--	0	0
SR10B	Action Level	--	--	--	--	--	--	--	--	0	0
	Limit Level	--	--	--	--	--	--	--	--	0	0
Total	Action	0	0	0	0	0	0	2	8	10**	
	Limit	0	0	0	0	0	0	0	3	3**	

Notes:

S: Surface;

M: Mid-depth;

* The total exceedances.

4.2 Summary of Environmental Complaint, Notification of Summons and Successful Prosecution

4.2.1 There were five environmental complaints received during this reporting period. All investigation reports for exceedances of the Contract have been submitted to ENPO/IEC for comments and/or follow up to identify whether the exceedances occurred related to other HZMB contracts. The summary of environmental complaints is presented in **Table 4.2**. The details of environmental complaints are presented in **Appendix N**.

Table 4.2 Summary of Environmental Complaints for the Reporting Period

Environmental Complaint No.	Date of Complaint Received	Description of Environmental Complaints
COM-2013-033	13 September 2013	Noise
COM-2013-034	17 September 2013	Noise
COM-2013-037	8, 9 and 16 October 2013	Noise
COM-2013-041	31 October 2013	Noise
COM-2013-043	11 November 2013	Noise

4.2.2 No notification of summons and prosecution was received during the reporting period.

4.2.3 Statistics on notifications of summons and successful prosecutions are summarized in **Appendix M**.



5 COMMENTS, RECOMMENDATIONS AND CONCLUSION

5.1 Comments

5.1.1 According to the environmental site inspections undertaken during the reporting period, the following recommendations were provided:

- The Contractor was reminded to tense the slit curtain at Portion X.
- The Contractor was reminded to clean up the plastic boxes at Portion X.
- The Contractor was reminded to provide drip trays for the chemical containers at Sand Pump Barge.
- The Contractor was reminded to clean up the muddy water on public road at S11.
- The Contractor was reminded to clean up the stagnant water inside the drip tray at West Portal.
- The Contractor was reminded to clean up the stagnant water inside the I-beams at West Portal.
- The Contractor was reminded to clean up the passageway of Yao Chun 138.
- The Contractor was reminded to provide a drip tray for the chemical container at Sand Pump Barge.
- The Contractor was reminded to clean up the footprints (sand) on public road area at S11.
- The Contractor was reminded to provide a drip tray for the compressor at West Portal.
- The Contractor was reminded to clean up the passageway of LT 30.
- The Contractor was reminded to provide sand bags around the sand stockpile to prevent muddy water discharge onto the road at WA04.
- The Contractor was reminded to provide water spraying on the unpaved road regularly at N13.
- The Contractor was reminded to provide water spraying on the unpaved area regularly at S16.
- The Contractor was reminded to clean up the oil inside the drip tray at West Portal.
- The Contractor was reminded to clean up the stagnant water inside the drip tray at West Portal.
- The Contractor was reminded to provide sufficient dust mitigation measures at work area of West Portal.
- The Contractor was reminded to replace the Sand bags on Sand Pump Barge.
- The Contractor was reminded to place the sand bags beside the road at S7.
- The Contractor was reminded to provide drip trays for oil container at West Portal.
- The Contractor was reminded to provide drip trays for chemical containers at N4.
- The Contractor was reminded to provide drip trays for oil containers at S8.
- The Contractor was reminded to provide drip trays for oil containers at N13.
- The Contractor was reminded to spray water regularly on the public road at S8.
- The Contractor was reminded to clean up oil stain on the deck of YC138.
- The Contractor was reminded to clean up the excess fill materials at the barge edge of CM83.



- The Contractor was reminded to place the sand bags along the road at S7 and clean up the rocks and debris next to the sea front.
- The Contractor was reminded to provide drip trays for chemical container at S9.
- The Contractor was reminded to display the Environmental Permit at the major site exit of WA4.
- The Contractor was reminded to clean all the vehicles before leaving the construction site at WA4.
- The Contractor was reminded to clean up the stagnant water inside the I-Beams at West Portal.
- The Contractor was reminded to provide regular maintenance for silt curtains at Portion X.
- The Contractor was reminded to spray water regularly for the unpaved area at WA03.
- The Contractor was reminded to provide enough drip trays for the chemical containers at N4.
- The Contractor was reminded to clean up the sand inside the drip tray at S8.
- The Contractor was reminded to clean up the sand on the passage way at Kin Yip.
- The Contractor was reminded to provide regular maintenance for the operating machine at S9.
- The Contractor was reminded to extend the length of the blue cover for the percussive piling works at S9.
- The Contractor was reminded to provide water sprayed regularly on the unpaved area at S11.
- The Contractor was reminded to provide fence around the tree and remove the construction materials.
- The Contractor was reminded to provide drip tray for the chemical containers at N13
- The Contractor was reminded to clean up the sand on barge edge of Chung Tin.
- The Contractor was reminded to provide water spray regularly to avoid the dust emission at West Portal.
- The contractor was reminded to strengthen dust control measures at West Portal.

5.2 Recommendations

- 5.2.1 The impact monitoring programme for air quality, noise, water quality and dolphin ensured that any deterioration in environmental condition was readily detected and timely actions taken to rectify any non-compliance. Assessment and analysis of monitoring results collected demonstrated the environmental impacts of the contract. With implementation of the recommended environmental mitigation measures, the contract's environmental impacts were considered environmentally acceptable. The weekly environmental site inspections ensured that all the environmental mitigation measures recommended were effectively implemented.
- 5.2.2 The recommended environmental mitigation measures, as included in the EM&A programme, effectively minimize the potential environmental impacts from the contract. Also, the EM&A programme effectively monitored the environmental impacts from the construction activities and ensure the proper implementation of mitigation measures. No particular recommendation was advised for the improvement of the programme.

5.3 Conclusions

5.3.1 The construction phase and EM&A programme of the Contract commenced on 17 October 2012 and this is the fifth Quarterly EM&A Report summarises the monitoring results and audit findings of the EM&A programme during the reporting period from 1 September 2013 to 30 November 2013.

Air Quality

5.3.2 For air quality, there were no Action and Limit Level exceedances for 1-hr TSP or 24-hr TSP recorded during this reporting period.

Noise

5.3.3 For construction noise, there was no Action Level and Limit Level exceedances for noise were recorded at the monitoring station during the reporting period.

Water Quality

5.3.4 During the reporting period, there were 10 Action Level exceedances and 3 Limit Level exceedances of suspended solids level.

Dolphin

5.3.5 There were one Action Level exceedances of dolphin monitoring for the quarterly monitoring data (September – November 2013).

5.3.6 During this quarter of dolphin monitoring, no adverse impact from the activities of this construction project on Chinese White Dolphins was noticeable from general observations.

5.3.7 Although the dolphins rarely occurred in the area of HKLR03 construction in the past, during the baseline monitoring period and throughout the five quarters of impact monitoring period, it is apparent that dolphin usage has been significantly reduced in NEL, and many individuals have shifted away from the important habitat around the Brothers Islands.

5.3.8 It is critical to monitor the dolphin usage in North Lantau region in the upcoming months, to determine whether the dolphins are continuously affected by the various construction activities in relation to the HZMB works, and whether suitable mitigation measure can be applied to revert the situation.

Mudflat - Sedimentation Rate

5.3.9 For sedimentation rate monitoring of mudflat, was generally and relatively higher than the baseline measurement at S1 and S4. The mudflat level is continuously increased. For S2 and S3 showed that the level has increased within tolerance and their sea bed depth would not be considered as significant change. For S1 and S4, the mudflat level has been continuously increased. The increased surface level for S1, S2, S3 and S4 is 0.072, 0.052, 0.052 and 0.088 mPD when compared to the baseline monitoring results.

5.3.10 Impact water quality monitoring in San Tau (monitoring station SR3) was conducted in September 2013. The monitoring parameters included dissolved oxygen, turbidity and suspended solids.

Mudflat - Ecology

5.3.11 An active search method was adopted for horseshoe crab survey at each sampling zone. In general, horseshoe crab *Tachypleus tridentatus* was found at TC1 (10 individuals), TC2 (2 individuals), TC3 (7 individuals) and ST (94 individuals). All individuals were found on soft mud, sandy substratum or sandy substratum surrounded by small gravels. Grouping was observed while the group size ranged 2-11 individuals. Since the commencement of the survey (Sep. 2012), no individual was found at TC2. It showed that TC2 was not a suitable nursery ground for horseshoes crab. In the September 2013 survey, the search records of *Tachypleus tridentatus* were 2.50 individuals hr⁻¹ person⁻¹ (mean prosomal widths: 31.22 mm), 0.50 individuals hr⁻¹ person⁻¹ (25.51 mm) and 1.75 individuals hr⁻¹ person⁻¹ (30.87 mm) at TC,

- TC2 and TC3 respectively. Similar to previous surveys, the highest search record of 15.67 individuals hr⁻¹ person⁻¹ (40.39 mm) was reported at ST. According to Li (2008), the prosomal width of *Tachypleus tridentatus* recorded ranged 19.33 - 68.01 mm that corresponded to an estimated age of 2.6 - 8.0 years old. It was obvious that ST was an important nursery ground for horseshoe crab especially newly hatched individuals due to larger area of suitable substratum (fine sand or soft mud) and less human disturbance (far from urban district).
- 5.3.12 Another less common species *Carcinoscorpius rotundicauda* was not found during the whole survey period except the survey conducted in December 2012 at ST (4 individuals). This species was believed present in ST at very low number while encounter was very rare.
- 5.3.13 An active search method was adopted for seagrass bed survey at each sampling zone. Seagrass was recorded in ST only while the largest patch was *Halophila ovalis* located nearby the mangrove vegetation on sandy substratum at tidal level 2 m above C.D.. The estimated total area was 758.9 m² with estimated coverage ranged 85-90%. It was a long seagrass strand merged by the growth of 2 to 3 smaller patches recorded in previous surveys from September 2012 to June 2013. Moreover, six small patches of *H. ovalis* were recorded on soft mud at tidal level between 1.0 m and 1.5 m above C.D.. The estimated total area of each patch ranged 1.2 - 8.0 m² with estimated coverage ranging 15-70%. These small patches were yet recorded in previous surveys and were distant from the largest strand. Seasonal recruitment of *H. ovalis* was believed occurred between June and September. One small patch of *Zostera japonica* was found within the long strand of *Halophila ovalis*. The estimated area was 3.7 m² while the estimated coverage was about 95%. For seagrass *Halophila ovalis*, the total area and estimated coverage increased gradually. It showed that the seagrass was in scattered patches during dry season then grew and merged into single patch during wet season. Seasonal recruitment during wet season further increased the total area of seagrass. However it was doubt that the newly recruited patches of seagrass would survive the natural heat stress, predation and wave action. For seagrass *Zostera japonica*, it was not reported in the surveys of September and December 2012. Seasonal recruitment of few patches was reported between December and March. Then the patch size increased and merged gradually with the warmer climate. However the patch size decreased sharply in the present survey. The patch might not overcome the high heat stress exerted on shore between June and September 2013.
- 5.3.14 The intertidal soft shore community surveys were conducted in low tide period on 1st (for ST), 7th (for TC3), 8th (for TC1) and 14th September 2013 (for TC2). A total of 19329 individuals were recorded. Mollusks were significantly the most abundant phylum (total individuals 18738, density 625 individuals m⁻², relative abundance 96.9%). The second abundant group was arthropod (total individuals: 421, density 14 individuals m⁻², 2.2%) respectively. Relatively other phyla were very low in abundance ($\leq 0.6\%$). Similarly, the most diverse phylum were mollusks (37 taxa) followed by arthropods (13 taxa) and annelids (8 taxa). The taxa of other phyla were relatively less (≤ 1 taxon).
- 5.3.15 The present survey was the fourth time of sampling of the EM&A programme during the construction period. Based on the results, impacts of the HKLR project were not detected on intertidal soft shore community. In case, abnormal phenomenon (e.g. rapid reduction of seagrass patch size) was observed, it would be reported as soon as possible.
- 5.3.16 There was no consistent zonation pattern of species distribution observed across sampling zones and tidal levels in Tung Chung Wan and San Tau. The species distribution should be determined by the type of substratum primarily. In general, gastropods *Batillaria multiformis* (6055 individuals, 35%), *Cerithidea djarjariensis* (3721 individuals, 21%), rock oyster *Saccostrea cucullata* (1829 individuals, 11%), gastropods *Monodonta labio* (1489 individuals, 9%) and *Cerithidea cingulata* (1031 individuals, 6%) were the most common occurring species among the four sampling zones.
- 5.3.17 The September 2013 survey results indicate that the impacts of the HKLR project could not be detected on horseshoe crabs, seagrass and intertidal soft shore community.



Environmental Site inspection and Audit

- 5.3.18 Environmental site inspection was carried out on 3, 10, 18 and 27 September 2013, 2, 9, 16, 22 and 29 October 2013, and 6, 13, 20 and 29 November 2013. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.
- 5.3.19 There were five environmental complaints received during this reporting period.
- 5.3.20 No notification of summons and prosecution was received during the reporting period.



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office


Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

FIGURES



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

LEGEND

 Site Boundary of Contract HY/2011/03

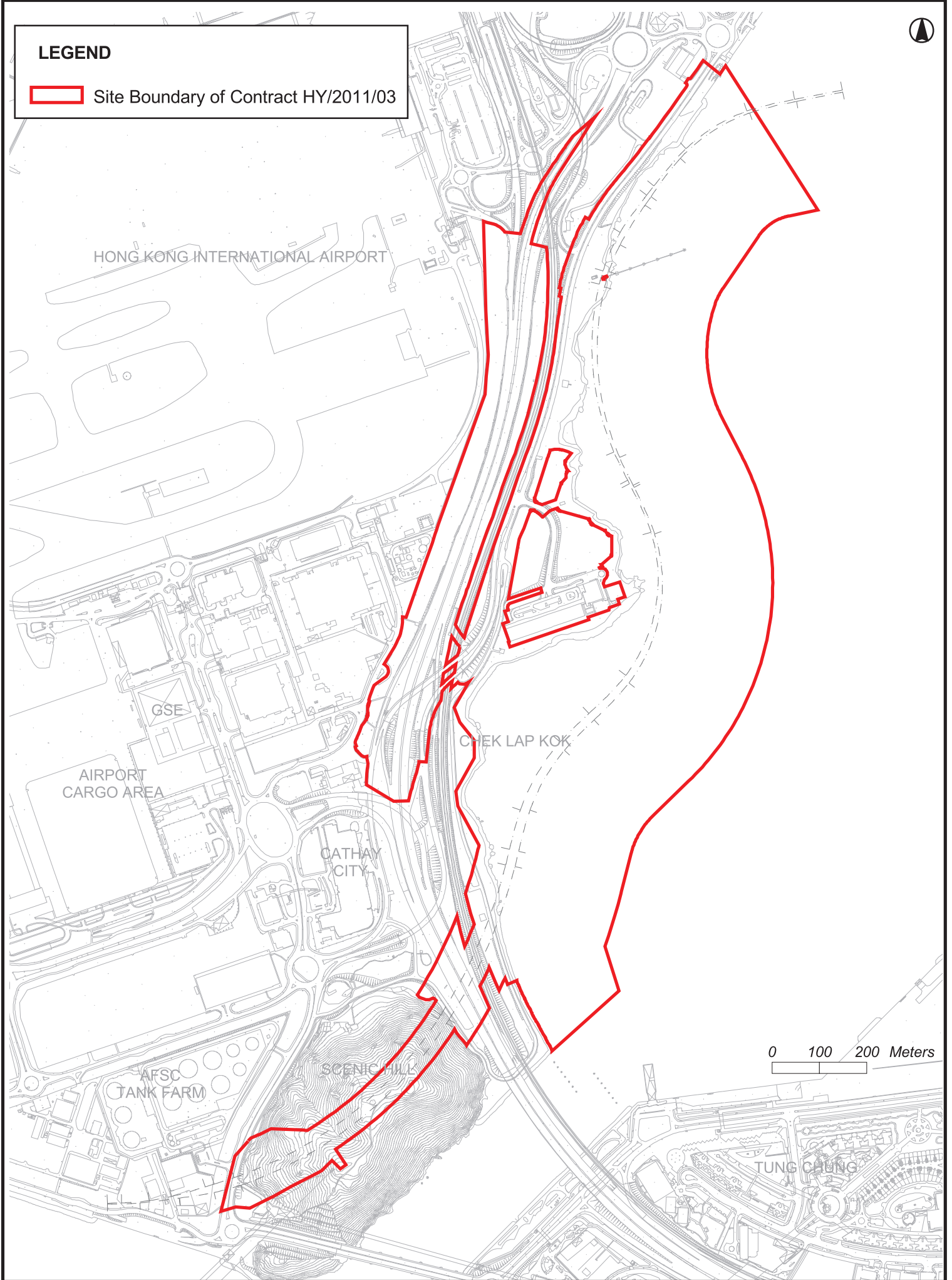
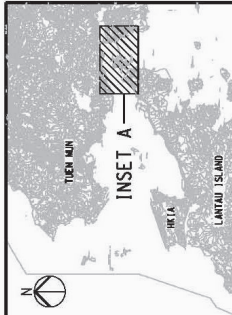


Figure 1.1 Location of the Site



KEY PLAN

NOTES

1. EXACT LOCATIONS OF MONITORING STATIONS ARE SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE ENVIRONMENTAL PROJECT OFFICE (EPMO) AND INDEPENDENT ENVIRONMENTAL CHECKER (IEC) AND ENVIRONMENTAL PROJECT OFFICE (EPMO) AND INDEPENDENT ENVIRONMENTAL CHECKER (IEC) TO DETERMINE THE PROPOSED LOCATION OF THE MONITORING STATIONS.
2. THE LOCATION AND EXTENT OF MUDFLAT SURVEY SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. THE CONTRACTOR AND IEC SHALL DETERMINE AND AGREE THE DETAILS OF THE MUDFLAT SURVEY IN ACCORDANCE WITH THE REQUIREMENTS STIPULATED IN THE EIA REPORTS AND ESM MANUALS.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS STIPULATED IN THE EIA REPORTS AND ESM MANUALS TO CONDUCT THE ENVIRONMENTAL MONITORING AND AUDIT WORKS.

- LEGEND**
- WORKS BOUNDARY OF CONTRACT (HY2011/03)
 - IS IMPACT STATIONS (WATER QUALITY)
 - CS CONTROL/FIELD STATIONS (WATER QUALITY)
 - SR SENSITIVE RECEIVERS STATIONS (WATER QUALITY)
 - ST STATION FOR SENSITIVITY TEST RESULT (WATER QUALITY)
 - AMS MONITORING STATIONS (AIR QUALITY)
 - NMS MONITORING STATIONS (NOISE)
 - MUDFLAT ECOLOGICAL SAMPLING LOCATION

Rev	Description	AW	By	Date
A	TENDER ADDENDUM ISSUE	AW		11/11

ARUP 威雅納工程顧問
One Arup & Partners Hong Kong Limited

Contract No. and Title
Hong Kong-Zhuhai-Macao Bridge
 Hong Kong Link Road -
 Section Between Scenic Hill and
 Hong Kong Boundary Crossing Facilities

Contract No. HX/2011/03

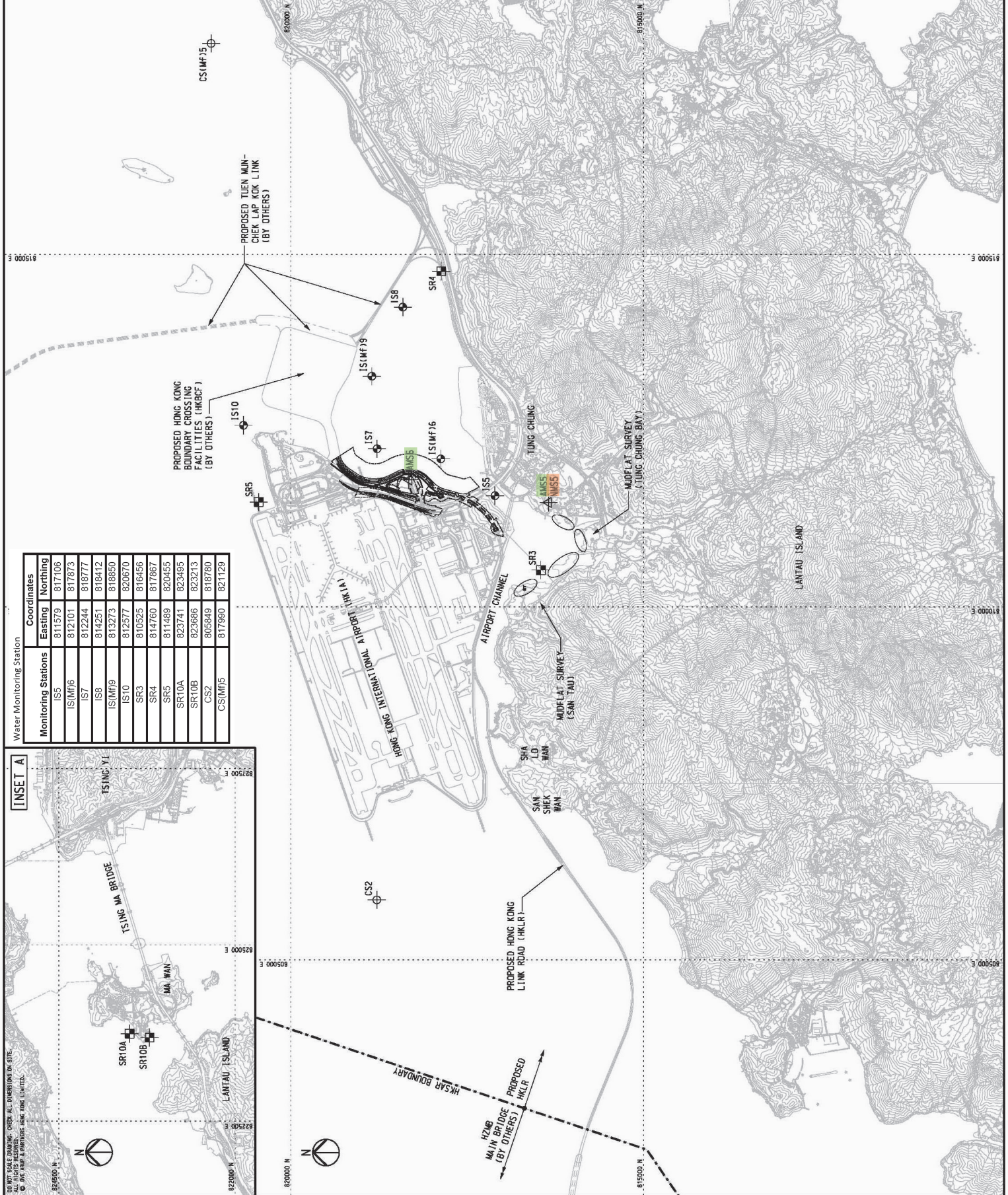
Contract No. HX/2011/03
 Hong Kong-Zhuhai-Macao Bridge
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 Section Between Scenic Hill and
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Drawing Title
ENVIRONMENTAL MONITORING STATIONS

Drawing	Figure 2.1	Rev.	A
Drawn		Date	11/11
Scale	AS SHOWN	Checked	Approved
		Status	OK

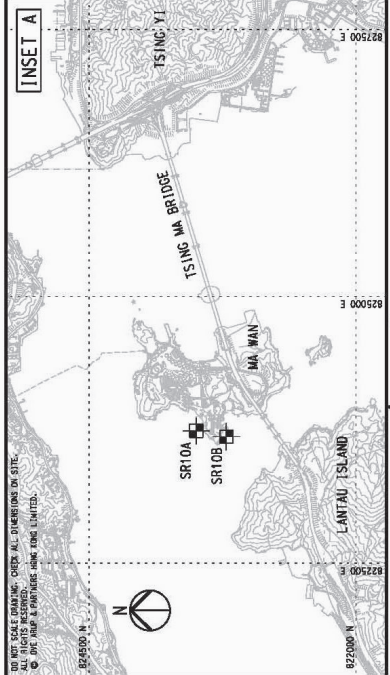
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HONG KONG HIGHWAYS DEPARTMENT
 香港公路局
 Hong Kong-Zhuhai-Macao Bridge
 Hong Kong Project Management Office



Water Monitoring Station

Monitoring Stations	Coordinates	
	Easting	Northing
IS5	811579	817106
IS(MT)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(MT)9	813273	818850
IS10	812577	820670
SR3	810525	816456
SR4	814760	817867
SR5	811489	820455
SR10A	823741	823495
SR10B	823686	823213
CS2	805949	818780
CS(MT)5	817990	821129



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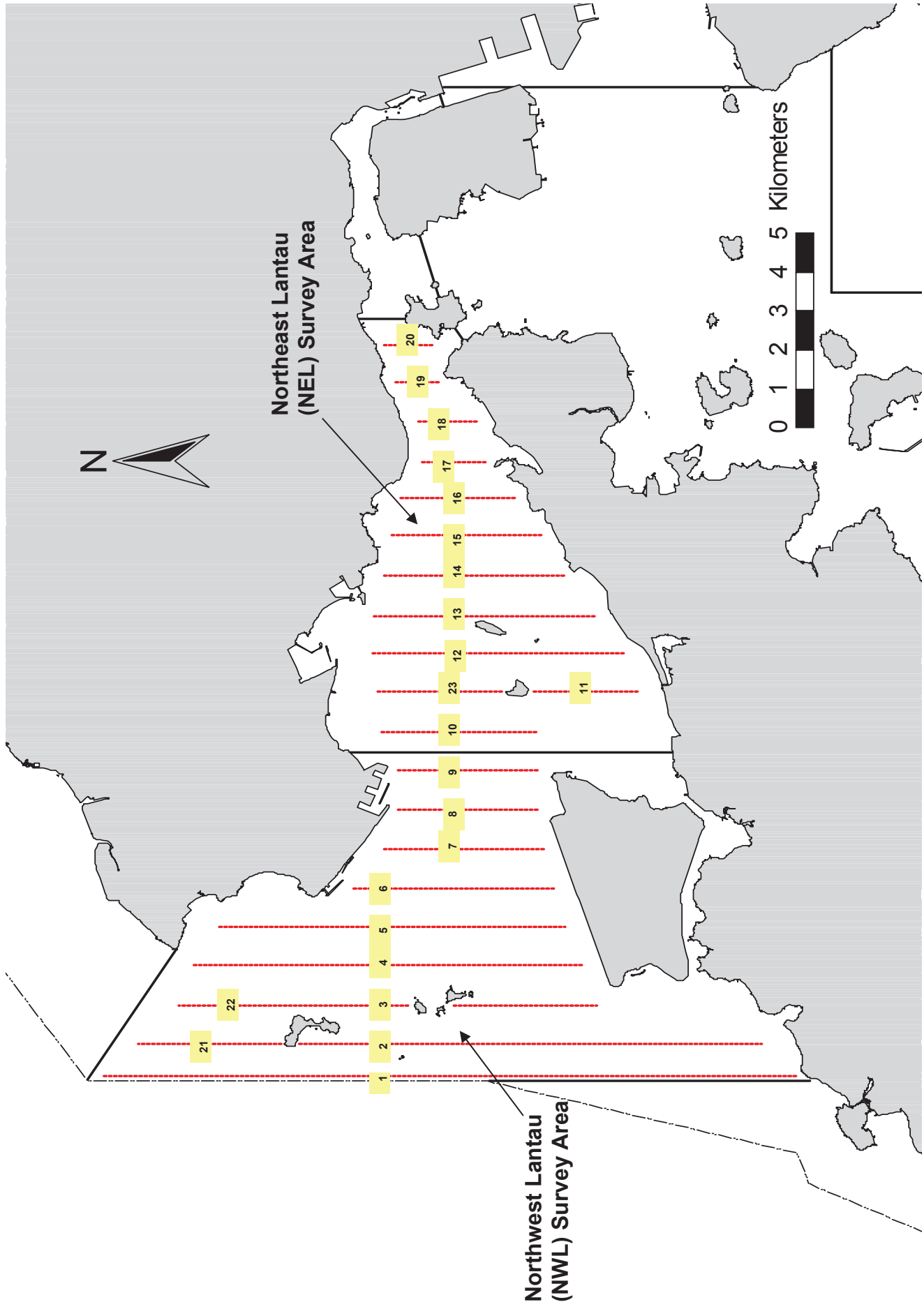


Figure 2.2 Transect Line Layout in Northwest and Northeast Lantau Survey Areas



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX A

Environmental Management Structure



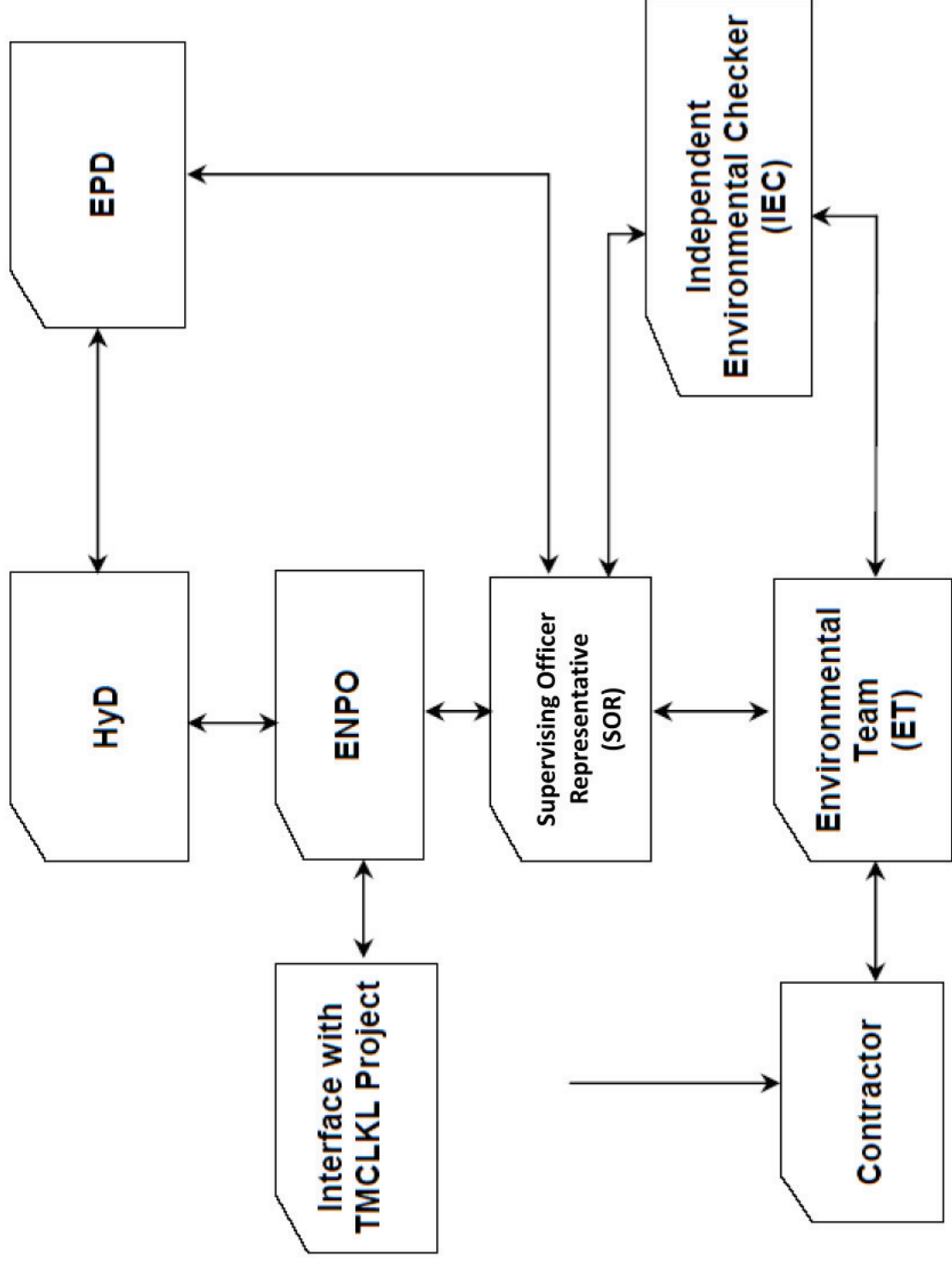
中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Supervising Officer's Representative (Ove Arup & Partners Hong Kong Limited)	(Chief Resident Engineer, CRE)	Robert Antony Evans	3968 0801	2109 1882
Environmental Project Office / Independent Environmental Checker (Environ Hong Kong Limited)	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899
	Independent Environmental Checker	Antony Wong	3465 2888	3465 2899
Contractor (China State Construction Engineering (Hong Kong) Ltd)	Project Manager	S. Y. Tse	3968 7002	2109 2588
	Environmental Officer	Federick Wong	3968 7117	2109 2588
Environmental Team (BMT Asia Pacific)	Environmental Team Leader	Claudine Lee	2241 9847	2815 3377
24 hours complaint hotline	---	---	5699 5730	---

Project Organization for Environmental Works

Line of communication



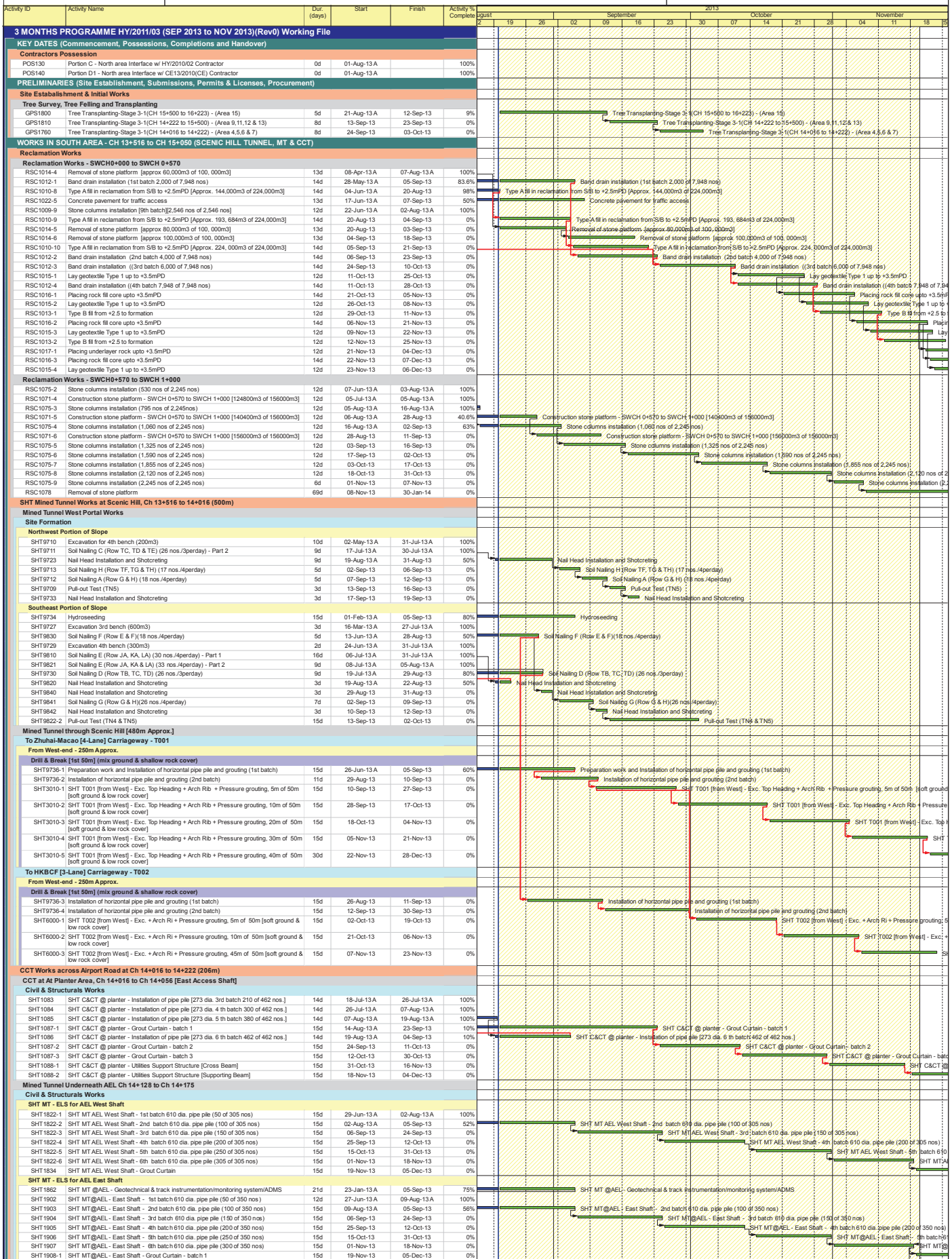


APPENDIX B

Construction Programme



(September 2013 to November 2013)



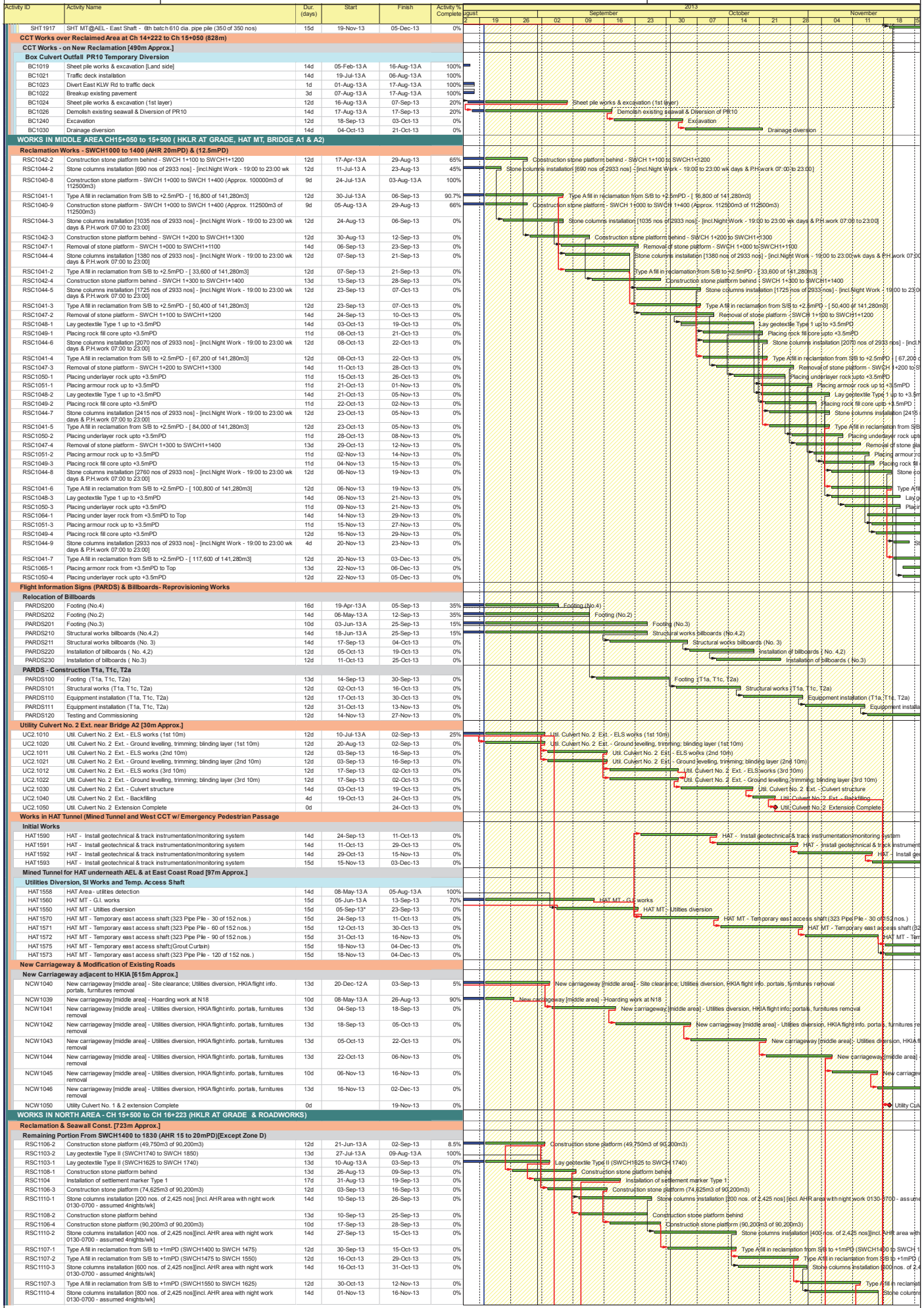
- Works Programme
- Works Programme
- Works Programme
- Milestone
- Milestone

China State Construction Engineering (Hong Kong) Ltd -
 Contract No. HY2011/03 - HZMB, Hong Kong Link Road
 , Section between Scenic Hill and HKBCF

Prepared by WC/CCK			
Date	Revision	Che...	Approved
27-Aug...		HKC	SYT



(September 2013 to November 2013)





APPENDIX C

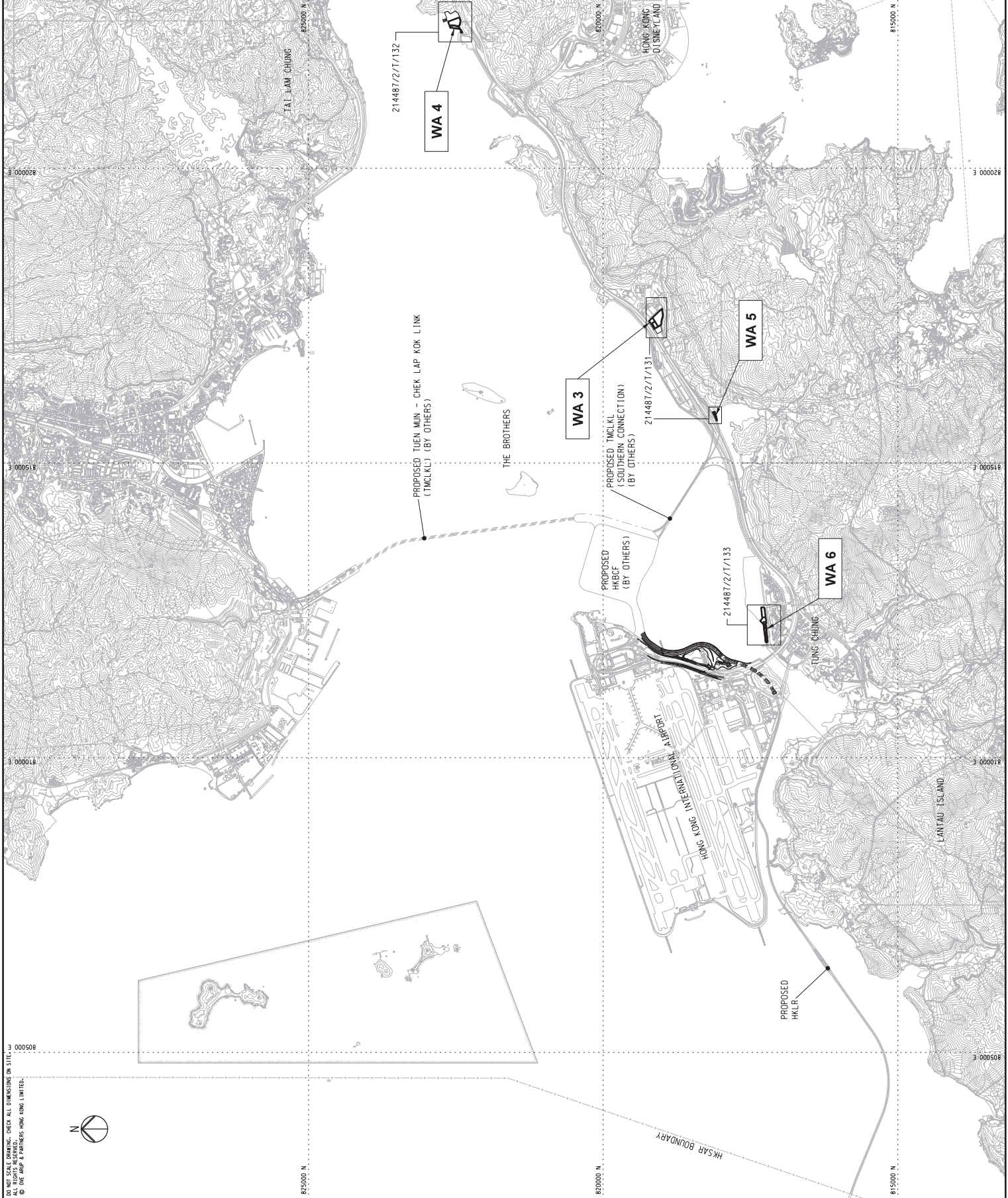
Location of Works Areas



NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. NOS. 214487/2/T/131 - 133.

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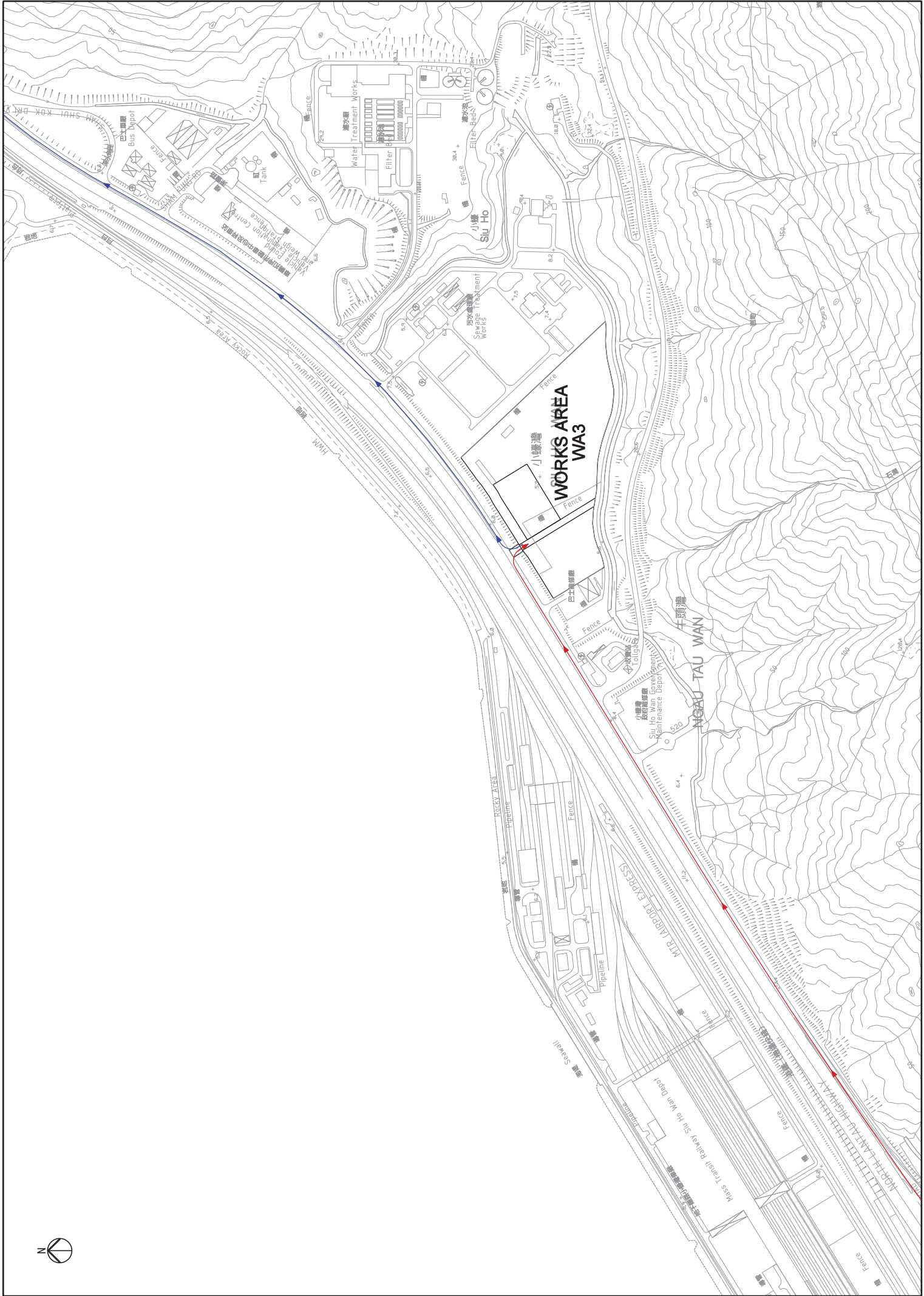
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 奧雅納工程顧問
 One Arup & Partners Hong Kong Limited

Contract No. and Title
 Contract No. HY/2011/03
 Hong Kong-Zhuhai-Macao Bridge
 Hong Kong Link Road -
 Section Between Scenic Hill and
 Hong Kong Boundary Crossing Facilities

Drawing Title
**WORKS AREAS
 KEY PLAN**

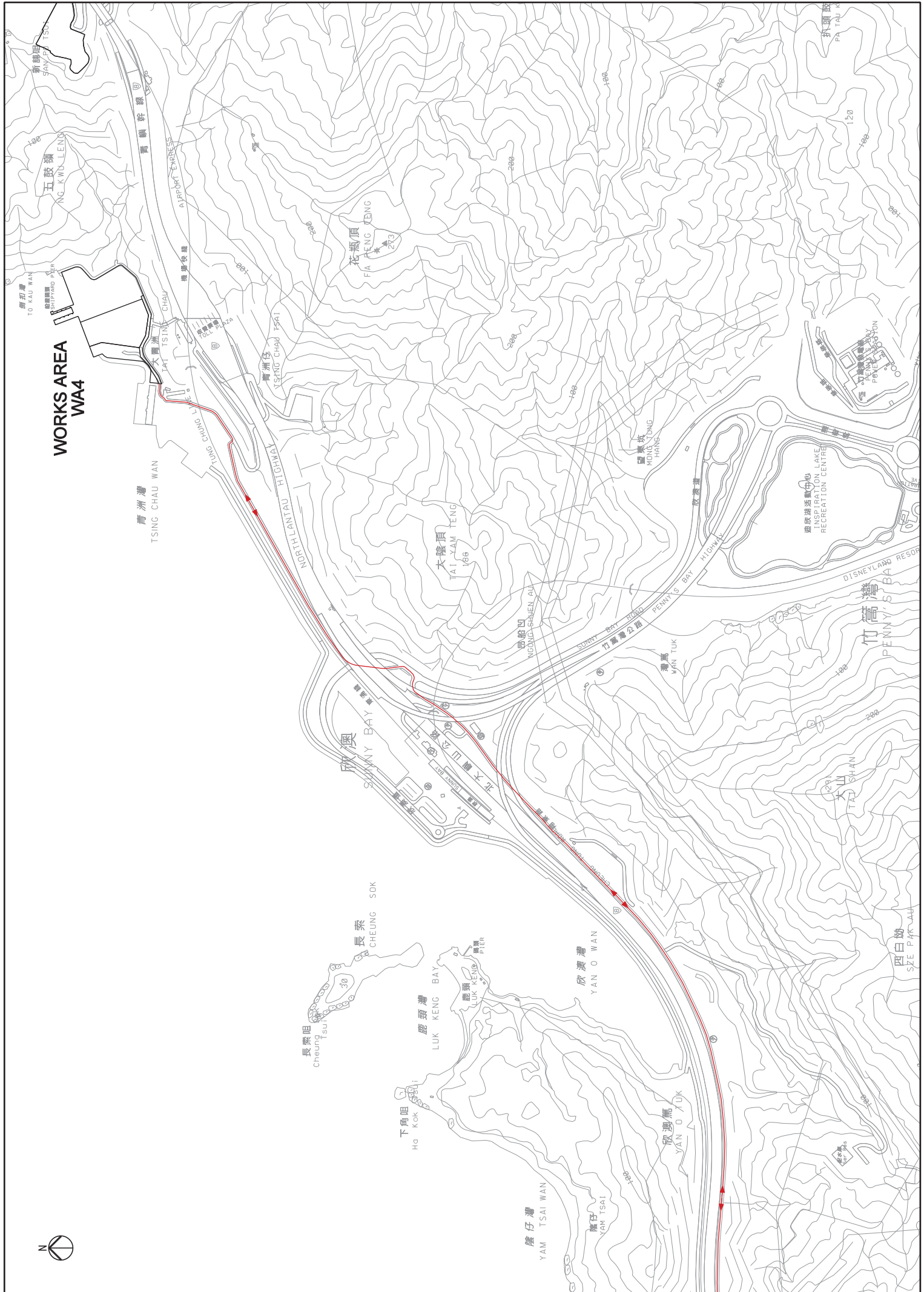
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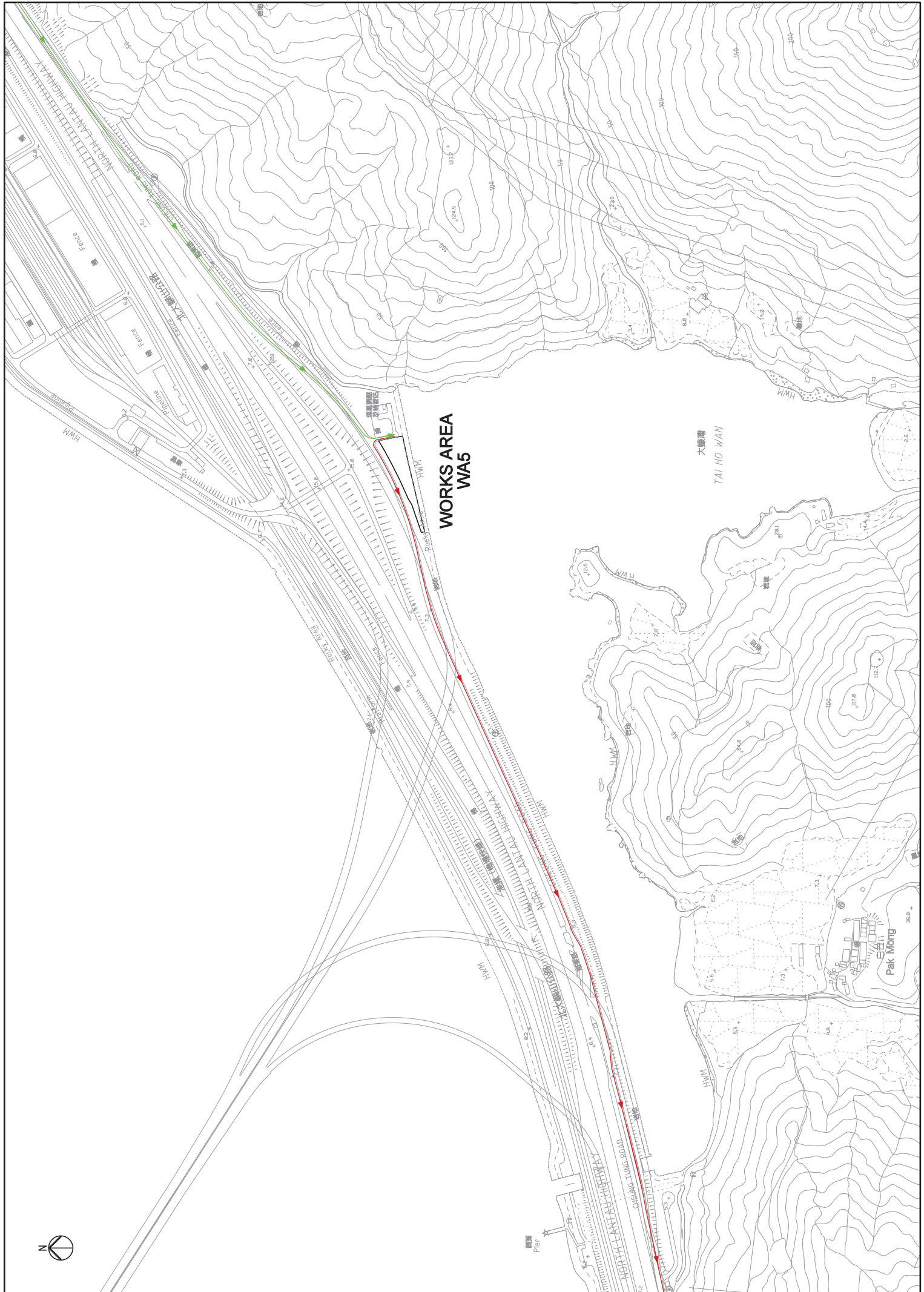






WORKS AREA WA4





NOTES

1. FOR GENERAL NOTES AND LEGEND, REFER TO DRG. NO. 214487/2/T/121.

SETTING OUT CO-ORDINATES OF SITE PORTION C

POINT	CO-ORDINATES	
	EASTING	NORTHING
C1	812097.481	819361.966
C2	812254.199	819116.562
C3	812178.695	819101.208
C4	811970.282	819189.551
C5	811941.125	819235.206

SETTING OUT CO-ORDINATES OF SITE PORTION D1

POINT	CO-ORDINATES	
	EASTING	NORTHING
D1-1	812059.460	819421.497
D1-2	812014.853	819351.273
D1-3	812026.200	819329.938

Rev	Description	By	Date
A	TENDER ISSUE	IL	02/12

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顧問
ARUP 工程師有限公司
One Arup & Partners Hong Kong Limited

Contract No. and Title

Contract No. HY/2011/03

Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road -
Section Between Scenic Hill and
Hong Kong Boundary Crossing Facilities

Drawing title

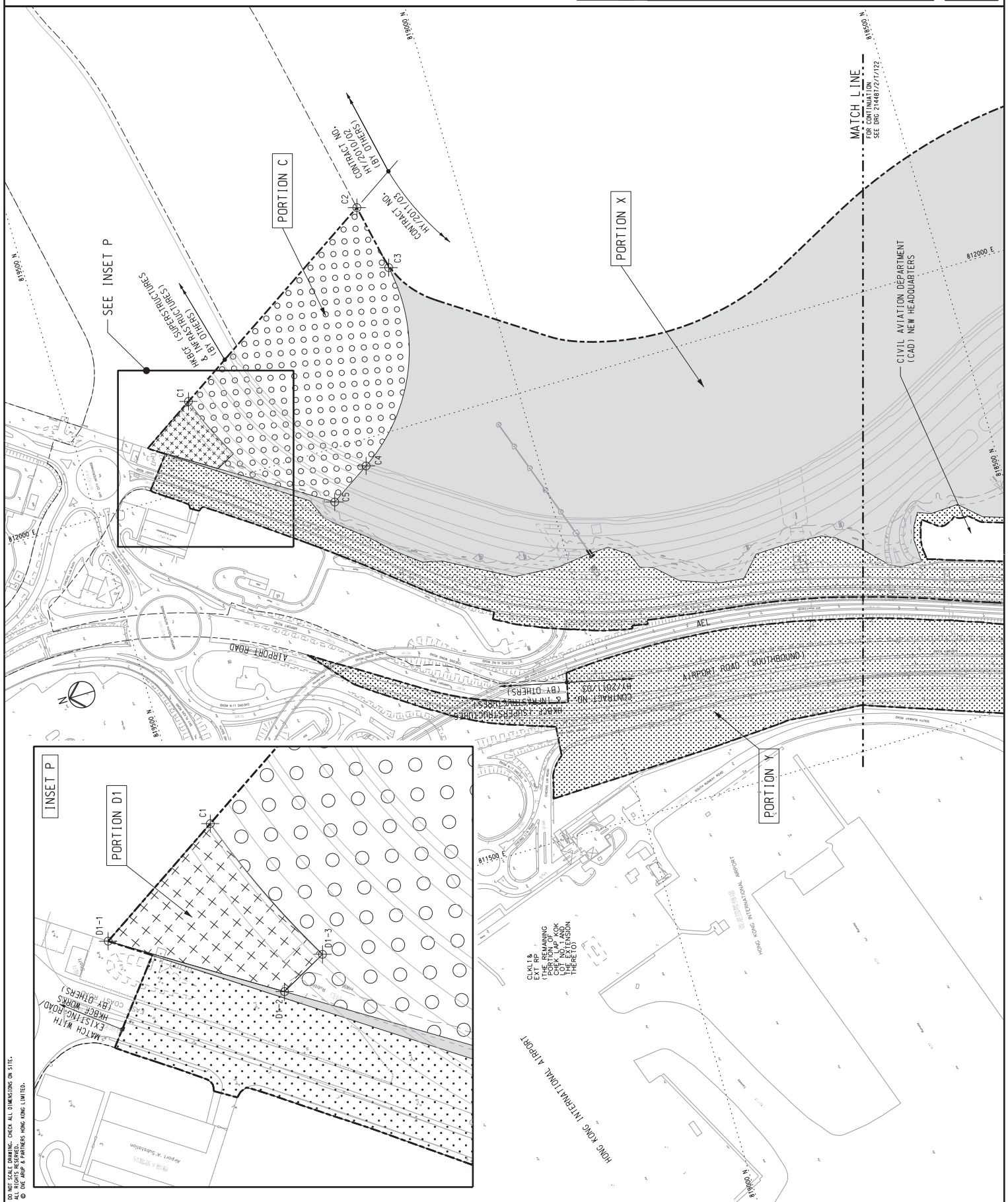
PORTION OF SITE
(SHEET 3 OF 3)

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高路局
DEPARTMENT
OF HIGHWAYS
香港公路局
香港工程師有限公司
香港-珠海-澳門大橋
香港連接路
香港連接路工程



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PLEASE NOTE THAT THE REMAINING PORTION OF THE HONG KONG LINK ROAD LOT NO. 1 AND LOT NO. 2 ARE NOT TO BE USED FOR THE PROJECT.

NOTES

1. FOR GENERAL NOTES AND LEGEND, REFER TO DRG. NO. 214487/2/1/21.

FOR CONTINUATION
SEE DRG. 214487/2/1/23

MATCH LINE

CIVIL AVIATION DEPARTMENT
(CAD) NEW HEADQUARTERS

FUNG FAI ROAD

EXISTING
BUILDING
EXISTING
ROAD

PORTION X

KWO LO WAN ROAD

AIRPORT ROAD (SOUTHBOUND)
AIRPORT ROAD (NORTHBOUND)

PORTION Y

MATCH LINE

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Consultant
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Ove Arup & Partners Hong Kong Limited

Contract No. and Title
Contract No. HY/2011/03
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road -
Section Between Scenic Hill and
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Drawing title

PORTION OF SITE
(SHEET 2 OF 3)

Drawn	Date	Checked	Rev.
SK	12/12	SK	A

1:2000 MAT TENDER

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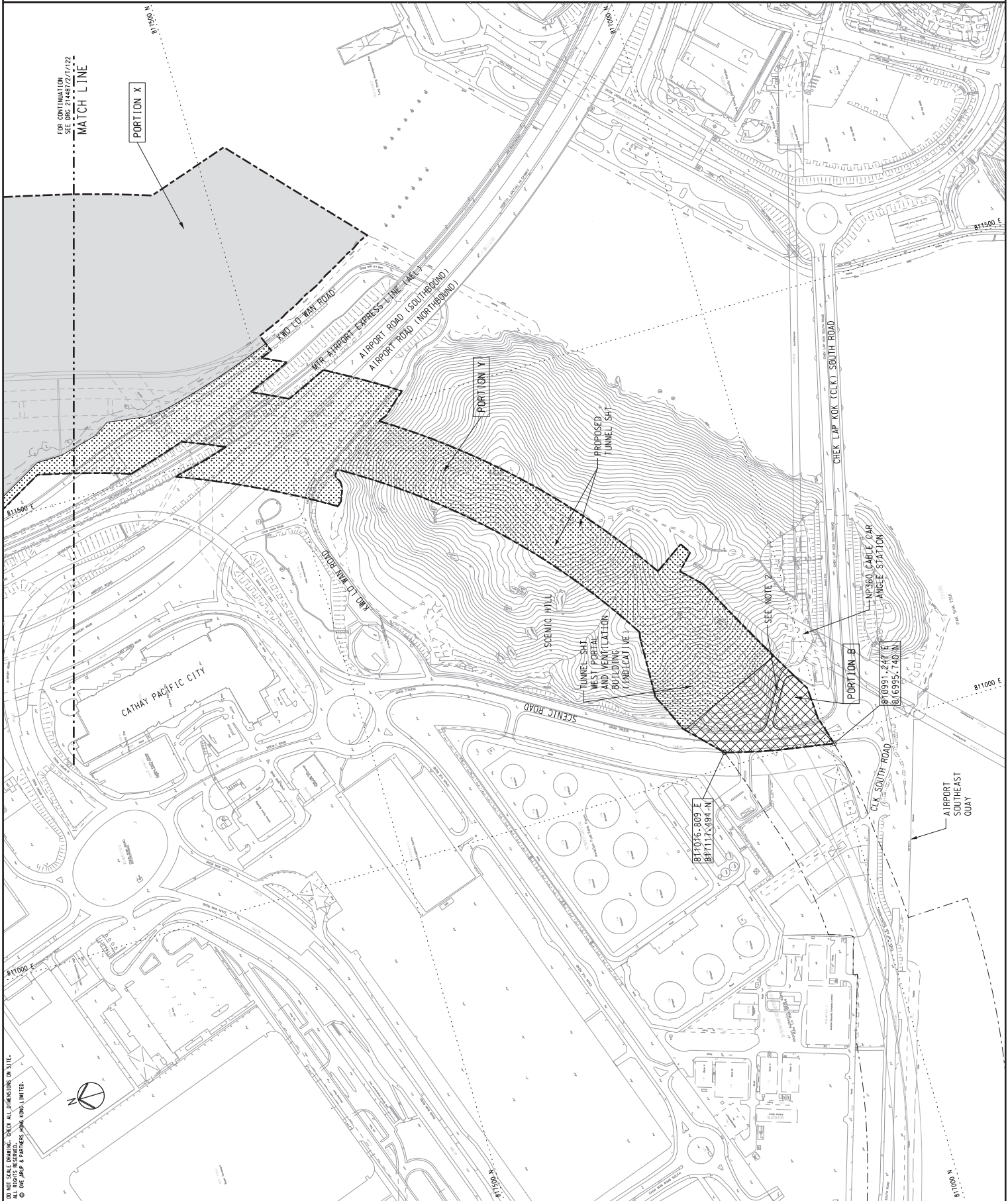
HIGHWAYS DEPARTMENT
運輸及交通局
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

NOTES

- FOR DETAILED DESCRIPTION OF PORTION OF SITE, REFER TO ER PART 2 GENERAL SITE DATA.
- ACCESS ROAD TO NP360 CABLE CAR ANGLE STATION SHALL BE MAINTAINED AT ALL TIMES.

LEGEND

	SITE BOUNDARY
	PORTION X
	PORTION Y
	PORTION B
	PORTION C
	PORTION D1



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ARUP 奧雅納工程顧問
 Ove Arup & Partners Hong Kong Limited

Contract No. and Title
Hong Kong-Zhuhai-Macao Bridge
 Hong Kong Link Road -
 Section Between Scenic Hill and
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PORTION OF SITE
 (SHEET 1 OF 3)

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HONG KONG HIGHWAYS DEPARTMENT
 香港公路局
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office



APPENDIX D

Event and Action Plan



Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	SO	Contractor
Exceedance of Action Level for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and SO; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Exceedance of Action Level for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and SO; 3. Advise the SO on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and SO; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 	<ol style="list-style-type: none"> 1. Submit proposals for remedial to SO within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET	IEC	SO	Contractor
Exceedance of Limit Level for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform SO, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SO informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the SO on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Exceedance of Limit Level for two or more consecutive samples	<ol style="list-style-type: none"> 1. Notify IEC, SO, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and SO to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SO informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst SO, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the SO until the exceedance is abated.

Event and Action Plan for Noise

Event	Action			
	ET	IEC	SO	Contractor
Exceedance of Action Level	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Notify IEC and Contractor; 3. Report the results of investigation to the IEC, SO and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the SO accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Exceedance of Limit Level	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, SO, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, SO and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SO informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst SO, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the SO until the exceedance is abated.

Event and Action Plan for Water Quality

Event	Action			
	ET Leader	IEC	SO	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat in situ measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and SO; 4. Check monitoring data, all plant, equipment and Contractor's working methods. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor's working methods. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of non-compliance in writing; 2. Notify Contractor. 	<ol style="list-style-type: none"> 1. Inform the SO and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SO and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Ensure mitigation measures are implemented; 6. Increase the monitoring frequency to daily until no exceedance of Action level. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the SO accordingly; 4. Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Ensure mitigation measures are properly implemented; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of additional mitigation measures to SO within 3 working days of notification and discuss with ET, IEC and SO; 5. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SO and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SO and Contractor; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the SO accordingly. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to review the working methods. 	<ol style="list-style-type: none"> 1. Inform the SO and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of mitigation measures to SO within 3 working days of notification and discuss with ET, IEC and SO.

Event	Action			
	ET Leader	IEC	SO	Contractor
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SO and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SO and Contractor; 6. Ensure mitigation measures are implemented; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the SO accordingly; 4. Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposal of mitigation measures to SO within 3 working days of notification and discuss with ET, IEC and SO; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Event and Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	ER / SOR	Contractor
Action Level	<ol style="list-style-type: none"> 1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor; 5. Check monitoring data. 6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor. 	<ol style="list-style-type: none"> 1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR; 3. Implement the agreed measures.
Limit Level	<ol style="list-style-type: none"> 1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor of findings; 5. Check monitoring data; 6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor; 3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and Contractor and advise ER/SOR of the results and findings accordingly; 5. Supervise / Audit the 	<ol style="list-style-type: none"> 1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures; 3. Supervise the implementation of additional monitoring 	<ol style="list-style-type: none"> 1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures; 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary; 4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.

Event	ET Leader	IEC	ER / SOR	Contractor
	<p>7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.</p>	<p>implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.</p>	<p>and/or any other mitigation measures.</p>	

Event and Action Plan for Mudflat Monitoring

Event	ET Leader	IEC	SO	Contractor
Density or the distribution pattern of horseshoe crab, seagrass or intertidal soft shore communities recorded in the impact or post-construction monitoring are significantly lower than or different from those recorded in the baseline monitoring.	<p>Review historical data to ensure differences are as a result of natural variation or previously observed seasonal differences;</p> <p>Identify source(s) of impact;</p> <p>Inform the IEC, SO and Contractor;</p> <p>Check monitoring data;</p> <p>Discuss additional monitoring and any other measures, with the IEC and Contractor.</p>	<p>Discuss monitoring with the ET and the Contractor;</p> <p>Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SO accordingly.</p>	<p>Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</p> <p>Make agreement on the measures to be implemented.</p>	<p>Inform the SO and in writing;</p> <p>Discuss with the ET and the IEC and propose measures to the IEC and the ER;</p> <p>Implement the agreed measures.</p>



APPENDIX E

Implementation Schedule of Environmental Mitigation Measures



Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Air Quality							
S5.5.6.1	A1	1) The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	✓
S5.5.6.2	A2	2) Proper watering of exposed spoil should be undertaken throughout the construction phase: <ul style="list-style-type: none"> Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones. The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; 	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	✓
S5.5.6.2	A2	<ul style="list-style-type: none"> When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are 	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	✓

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S5.5.6.2	A2	<p>properly maintained throughout the construction period;</p> <ul style="list-style-type: none"> The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport should be totally enclosed by impervious sheeting; Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and Exposed earth should be properly treated by 	Good site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	N/A

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		compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					
S5.5.6.3	A3	3) The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.	Control construction dust	Contractor	All construction sites	Construction stage	✓
S5.5.6	A5	5) Implement regular dust monitoring under EM&A programme during the construction stage.	Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period.	Contractor	Selected representative dust monitoring station	Construction stage	✓
S5.5.7.1	A6	The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant: <ul style="list-style-type: none"> • Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system; • All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP; • Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system; • The materials which may generate airborne dusty emissions should be wetted by water spray system; • All receiving hoppers should be enclosed on three sides up to 3m above unloading point; • All conveyor transfer points should be totally 	Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period.	Contractor	Selected representative dust monitoring station	Construction stage	✓

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S5.5.2.7	A7	<p>enclosed;</p> <ul style="list-style-type: none"> All access and route roads within the premises should be paved and wetted; and Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body. <p>The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point:</p> <ul style="list-style-type: none"> All road surface within the barging facilities will be paved; Dust enclosures will be provided for the loading ramp; Vehicles will be required to pass through designated wheels wash facilities; and Continuous water spray at the loading points. 	Control construction dust	Contractor	All construction sites	Construction stage	✓
S6.4.10	N1	<p>1) Use of good site practices to limit noise emissions by considering the following:</p> <ul style="list-style-type: none"> only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works mobile plant should be sited as far away from NSRs as possible and practicable; material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	Control construction airborne noise by means of good site practices	Contractor	All construction sites	Construction stage	✓

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S6.4.11	N2	2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites	Construction stage	✓
S6.4.12	N3	3) Install movable noise barriers (typically density @ 14kg/m ²), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.	Screen the noisy plant items to be used at all construction sites	Contractor	For plant items listed in Appendix 6D of the EIA report at all construction sites	Construction stage	✓
S6.4.13	N4	4) Select Quiet plants. which comply with the BS 5228 Part 1 or TM standards.	Reduce the noise levels of plant items	Contractor	For plant items listed in Appendix 6D of the EIA report at all construction sites	Construction stage	✓
S6.4.14	N5	5) Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction stage	✓
	N6	6) Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring station	Construction stage	✓
Waste Management (Construction Waste)							
S8.3.8	WM1	<u>Construction and Demolition Material</u>	Good site practice to minimize the waste	Contractor	All construction sites	Construction stage	✓

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		<p>The following mitigation measures should be implemented in handling the waste:</p> <ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; Carry out on-site sorting; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; Adopt .Selective Demolition. technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005. Environmental Management on Construction Sites. to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. In addition, disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation 	<p>generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal</p>				
S8.3.9 - S8.3.11	WM2	<p><u>C&D Waste</u></p> <ul style="list-style-type: none"> Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The 	<p>Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final</p>	Contractor	All construction sites	Construction stage	✓

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S8.2.12 - S8.3.15	WM3	<p>purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage.</p> <ul style="list-style-type: none"> The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage. <p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation.. The storage area for chemical wastes should be clearly labeled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. 	Control the chemical waste and ensure proper storage, and handling and disposal.	Contractor	All construction sites	Construction stage	✓

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S8.3.16	WM4	<p>Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.</p> <p><u>Sewage</u></p> <ul style="list-style-type: none"> Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state, which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly. 	Proper handling of sewage from worker to avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	✓
S8.3.17	WM5	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible. Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor. In addition, waste separation facilities for paper, aluminium cans, plastic bottles etc., should be provided. Training should be provided to workers about the concepts of site cleanliness and appropriate 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	✓

Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Water Quality (Construction Phase)							
S9.11.1 S9.11.1.2	- W1	<p>waste management procedure, including reduction, reuse and recycling of wastes.</p> <ul style="list-style-type: none"> Mitigation during the marine works to reduce impacts to within acceptable levels have been recommended and will comprise a series of measures that restrict the method and sequencing of dredging/backfilling, as well as protection measures. Details of the measures are provided below and summarised in the Environmental Mitigation Implementation Schedule in EM&A Manual. Construction of seawalls to be advanced by at least 100-200m before the main reclamation dredging and filling can commence. It should be noted that the protection by advanced seawall is a dynamic process depending on the progress of the construction activities and the stage when such protection could be realised is illustrated in Figure 9.2 and detailed in Appendix 9D6 of the EIA Report. The part of the works where such measures can be undertaken for the majority of the time includes the following locations: <ul style="list-style-type: none"> - TMCLKL northern reclamation; - TMCLKL southern reclamation (after formation of the nips); - Reclamation dredging and filling for Portion 1 of HKLR; Export for dredged spoils from NWWCZ avoiding exerting high demand on the disposal facilities in the NWWCZ and, hence, minimise potential cumulative impacts; For the marine viaducts of HKLR, the bored piling will be undertaken within a metal casing. A maximum of 30% public fill shall be used for all backfilling below -2.5mPD for the southern reclamation of TMCLKL, HKBCF and HKLR projects; where public fill is proposed for filling below -2.5mPD, the fine content in the public fill will be 	To control construction water quality	Contractor	During seawall dredging and filling	Construction stage	✓
S9.11.1 S9.11.1.2	- W1	<ul style="list-style-type: none"> Export for dredged spoils from NWWCZ avoiding exerting high demand on the disposal facilities in the NWWCZ and, hence, minimise potential cumulative impacts; For the marine viaducts of HKLR, the bored piling will be undertaken within a metal casing. A maximum of 30% public fill shall be used for all backfilling below -2.5mPD for the southern reclamation of TMCLKL, HKBCF and HKLR projects; where public fill is proposed for filling below -2.5mPD, the fine content in the public fill will be 	To control construction water quality	Contractor	During seawall dredging and filling	Construction stage	✓

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S9.11.1.1.2	-	<p>controlled to 25%;</p> <ul style="list-style-type: none"> silt curtains (cage type) will be applied round all grab dredgers during the HKLR southern reclamation works; single layer silt curtains will be applied around all works; during the first two months of dredging work for HKLR, the silt-removal efficiency of the silt-curtains shall be verified by examining the results of water quality monitoring points. The water quality monitoring points to be selected for the above shall be those close to the locations of the initial period of dredging work. Details in this regard shall be determined by the ENPO to be established, taking account of the Contractor's proposed actual locations of his initial period of dredging work. silt curtain shall be fully maintained throughout the works. 		Contractor	During seawall dredging and filling	Construction stage	✓
S9.11.1.1.2	W1	<p>In addition, dredging operations should be undertaken in such a manner as to minimize resuspension of sediments. Standard good dredging practice measures should, therefore, be implemented including the following requirements which should be written into the dredging contract.</p> <ul style="list-style-type: none"> trailer suction hopper dredgers shall not allow mud to overflow; use of Lean Material Overboard (LMOB) systems shall be prohibited; mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted; barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material; any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes; loading of barges and hoppers shall be controlled to prevent splashing of dredged 	To control construction water quality	Contractor			✓

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S9.11.1.3	W2	<p>material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;</p> <ul style="list-style-type: none"> • excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved; • adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; • all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and • the works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site. <p><u>Land Works</u></p> <p>General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:</p> <ul style="list-style-type: none"> • wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters; • sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided; • storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal 	To control construction water quality	Contractor	During seawall dredging and filling	Construction stage	✓

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		<p>facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;</p> <ul style="list-style-type: none"> • silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly including specifically at the onset of and after each rainstorm; • temporary access roads should be surfaced with crushed stone or gravel; • rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; • measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system; • open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms; • manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm runoff from getting into foul sewers; • discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system; 					

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S9.11.1.3	W2	<ul style="list-style-type: none"> all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit; wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain; the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel; wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects; vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal; the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately; waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance; all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system. 	To control construction water quality	Contractor	During seawall dredging and filling	Construction stage	✓
S9.14	W3	Implement a water quality monitoring programme	Control water quality	Contractor	At identified monitoring	During construction	✓

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Ecology (Construction Phase)							
S10.7	E1	<ul style="list-style-type: none"> Good site practices to avoid runoff entering woodland habitats in Scenic Hill Reinstate works areas in Scenic Hill Avoid stream modification in Scenic Hill 	Avoid potential disturbance on habitat of Romer's Tree Frog in Scenic Hill	Designer; Contractor	Scenic Hill	During construction	✓
S10.7	E2	<ul style="list-style-type: none"> Use closed grab in dredging works. Install silt curtain during the construction. Limit dredging and works fronts. Construct seawall prior to reclamation filling where practicable. Good site practices Strict enforcement of no marine dumping. Site runoff control Spill response plan 	Minimise marine water quality impacts	Contractor	Seawall, reclamation area	During construction	✓
S10.7	E4	<ul style="list-style-type: none"> Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater 	Prevent Sedimentation from Land-based works areas	Contractor	Land-based works areas	During construction	✓
S10.7	E5	<ul style="list-style-type: none"> Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time 	Prevent disturbance to terrestrial fauna and habitats	Contractor	Land-based works areas	During construction	✓
S10.7	E6	<ul style="list-style-type: none"> Dolphin Exclusion Zone; Dolphin watching plan 	Minimize temporary marine habitat loss impact to dolphins	Contractor	Marine works	During marine works	✓
S10.7	E7	<ul style="list-style-type: none"> Decouple compressors and other equipment on working vessels Avoidance of percussive piling Marine underwater noise monitoring 	Minimise marine noise impacts on dolphins	Contractor	Marine works	During marine works	✓

Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S10.7	E8	<ul style="list-style-type: none"> Temporal suspension of drilling bored pile casing in rock during peak dolphin calving season in May and June; Handling with care for the installation of sheet piling for reclamation site Control vessel speed Skipper training, Predefined and regular routes for working vessels; avoid Brothers Islands. 	Minimise marine traffic disturbance dolphins	Contractor	Marine traffic	During marine works	✓
S10.10	E9	<ul style="list-style-type: none"> Dolphin vessel monitoring Mudflat ecological monitoring 	Minimise marine traffic disturbance dolphins	Contractor	North Lantau and West Lantau	Prior to construction, during construction, and 1 year after operation	✓
Ecology (Operation Phase)							
S10.7	E10	<ul style="list-style-type: none"> Preconstruction dive survey for corals 	Minimise impacts on marine ecology	Contractor	The marine pier sites nearest to intertidal zone and along the shore of the HKLR reclamation site	Prior to marine construction works in these locations	✓
Fisheries							
S11.7	F2	<ul style="list-style-type: none"> Reduce re-suspension of sediments Limit dredging and works fronts. Good site practices Strict enforcement of no marine dumping. Spill response plan 	Minimise water quality impacts	Contractor	Seawall, reclamation area	During construction	✓
S11.7	F3	<ul style="list-style-type: none"> Install silt-grease trap in the drainage system collecting surface runoff 	Minimise impacts on marine water quality	Designer	Reclamation area	During construction	✓

Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S11.7	F4	<ul style="list-style-type: none"> Maritime Oil Spill Response Plan (MOSRP); Contingency plan. 	Minimise impacts on marine water quality	Management	HKLR	During operation	✓
Landscape & Visual (Detailed Design Phase)							
S14.3.3.1	LV1	<p>General design measures include:</p> <ul style="list-style-type: none"> Roadside planting and planting along the edge of the reclamation is proposed; Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory hydro-seeding and planting; Protection measures for the trees to be retained during construction activities; Optimizing the sizes and spacing of the bridge columns; Fine-tuning the location of the bridge columns to avoid visually sensitive locations; Aesthetic design of the bridge form and its structural elements for HKLR, e.g. parapet, soffit, columns, lightings and so on; Considering the decorative urban design elements for HKLR, e.g. decorative road lightings; Maximizing new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed; Providing planting area around peripheral of HKLR for tree planting screening effect; Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline. Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline. For HKLR, providing aesthetic design on the viaduct, tunnel portals, at-grade roads and 	Minimise visual & landscape impact	Detailed designer	HKLR	Design Stage	
S14.3.3.1			Minimise visual & landscape impact	Detailed designer	HKLR	Design Stage	

Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Landscape & Visual (Construction Phase)							
S14.3.3.3	LV2	<p>Mitigate both Landscape and Visual Impacts</p> <p>G1. Grass-hydroseed bare soil surface and stock pile areas.</p> <p>G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge or footbridge to screen bridge and traffic.</p> <p>G3. For HKLR, providing aesthetic design on the viaduct, tunnel portals, at-grade roads and reclamation (e.g. subtle colour tone and slim form for viaduct, featured form of tunnel portals, roadside planting along at-grade roads and landscape berm on & planting along the HKLR alignment).</p> <p>G4. Vegetation reinstatement and upgrading to disturbed areas.</p> <p>G5. Maximize new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed.</p> <p>G6. Provide planting area around peripheral of and within HKLR for tree screening buffer effect.</p> <p>G7. Plant salt tolerant native tree and shrubs etc along the planterstrip at affected seawall.</p> <p>G8. Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt .natural-look. by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance .natural-look. of the new coastline (see Figure 14.4.2 for example).</p>	Minimise visual & landscape impact	Contractor	HKLR	Construction stage	✓
S14.3.3.3	LV3	<p>Mitigate Visual Impacts</p> <p>V1. Minimize time for construction activities during construction period.</p>					✓

Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
EM&A S15.5 - S15.6	EM2	<p>V2. Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKLR construction.</p> <p>1) An Environmental Team needs to be employed as per the EM&A Manual.</p> <p>2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.</p> <p>3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with.</p>	Perform environmental monitoring & auditing	Contractor	All construction sites	Construction stage	✓



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HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
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Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX F

Site Audit Findings and Corrective Actions



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Appendix F – Site Audit Findings and Corrective Actions

1.1.1 Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. During the reporting month, four site inspections were carried out on 3, 10, 18 and 27 September 2013; 2, 9, 16, 22 and 29 October 2013 and 6, 13, 20 and 29 November 2013.

1.1.2 Particular observations during the site inspections are described below.

3 September 2013

- (a) The construction materials were placed near the tree fence at S8. The Contractor removed construction materials inside the tree fence at S8. (This observation was found on 30 August 2013 and closed on 3 September 2013.)
- (b) A section of silt curtain close to the opening/entrance was shifted and the overlapping section of silt curtain for the opening/entrance became shorter when compared to the original configuration. The section of silt curtain close to the entrance was realigned to the original configuration at Portion X. (This observation was closed on 10 September 2013.)
- (c) Some of the plastic boxes were found to drift inside the silt curtain at Portion X. The Contractor cleaned up the plastic boxes which were inside the silt curtain at Portion X. (This observation was closed on 10 September 2013.)
- (d) The chemical container was found to be without the drip trays at San Pump Barge. The Contractor removed chemical container at San Pump Barge. (This observation was closed on 10 September 2013.)
- (e) Muddy water was found leaking from the site area to public road at S11. The Contractor cleaned muddy water on the public road at S11. (This observation was closed on 10 September 2013.)
- (f) The stagnant water was found inside a drip tray at West Portal. The Contractor cleaned up stagnant water inside the drip tray at West Portal. (This observation was closed on 10 September 2013.)
- (g) The stagnant water was found inside I-beams at West Portal. The Contractor cleaned up stagnant water inside I-beams at West Portal. (This observation was closed on 10 September 2013.)

10 September 2013

- (a) Sand was found at the passageway of Yao Chun 138. The Contractor cleaned up the sand at Yao Chun 138 (This observation was closed on 18 September 2013.)
- (b) The chemical container was found without drip tray at Sand Pump Barge. The Contractor removed chemical container at Sand Pump Barge. (This observation was closed on 18 September 2013.)
- (c) There were some footprints (sand) on the public road area at S11. The footprints (sand) were cleaned by the street cleaning vehicle at S11. (This observation was closed on 18 September 2013.)
- (d) No drip tray was provided for the operating compressor at West Portal. The Contractor provided a drip tray for the operating compressor at West Portal. (This observation was closed on 18 September 2013.)

18 September 2013

- (a) Sand was found at the passageway LT30. The Contractor cleaned up the passageway of LT30. (This observation was closed on 27 September 2013.)
- (b) No sand bags were placed around the sand stockpile at WA04 to prevent muddy water discharge onto the road. The Contractor provided sand bags around the sand stockpile to prevent muddy water discharge on to the road at WA04. (This observation was closed on 27 September 2013.)
- (c) The unpaved road was found to be dry at N13. The Contractor provided water spraying on the unpaved road regularly at N13. (This observation was closed on 27 September 2013.)
- (d) The unpaved area was found to be dry at S16. The Contractor provided water spraying on the unpaved road regularly at S16. (This observation was closed on 27 September 2013.)
- (e) Oil was found inside a drip tray at West Portal. The Contractor cleaned up the oil inside the drip tray at West Portal. (This observation was closed on 27 September 2013.)

27 September 2013

- (a) Stagnant water was found inside a drip tray at West Portal. The Contractor was reminded to clean up stagnant water inside the drip tray at West Portal.
- (b) Dust emission was found at work area of West Portal. The Contractor was reminded to provide sufficient dust mitigation measures at work area of West Portal.

2 October 2013

- (a) Stagnant water was found inside a drip tray at West Portal. The stagnant water inside the drip tray was cleaned up by the contractor at West Portal. (This observation was found on 27 September 2013 and closed on 2 October 2013.)
- (b) Dust emission was found at work area of West Portal. Water spraying system was implemented by the contractor to prevent dust emission at West Portal. (This observation was found on 27 September 2013 and closed on 2 October 2013.)
- (c) Sand bags were found without well maintenance on the Sand pump barge. Sand bags were found well maintained on the sand pump barge. (This observation was closed on 09 October 2013.)
- (d) No sand bags were placed beside the road to avoid the muddy water leak out into the sea at S7. The Sand bags were placed along the road to avoid the muddy water leak out into the sea at S7. However, rocks and debris were still found next to sea front. (This observation was closed on 16 October 2013.)
- (e) The oil container was found to be without drip tray at West Portal. The oil container was removed at West Portal (This observation was closed on 09 October 2013.)
- (f) The chemical containers were found to be without drip trays at N5. Drip trays were provided for the chemical containers at N5. (This observation was closed on 09 October 2013.)
- (g) Oil containers were found to be without a drip tray at S8. Drip trays were provided for the oil containers at S8. (This observation was closed on 09 October 2013.)
- (h) The oil containers were found without drip trays at N13. The oil container was removed at N13. (This observation was closed on 09 October 2013.)
- (i) The dust emission was found on the public road. The public road was watered to avoid dust emission at S8. (This observation was closed on 09 October 2013.)

9 October 2013

- (a) Oil Stain was found on the deck of YC138. The oil stain was cleaned up on the deck of YC 138. (This observation was closed on 16 October 2013.)
- (b) Excess fill materials were found along the barge edge of CM83. The excess fill material along the barge edge was cleaned up at CM83. (This observation was closed on 16 October 2013.)
- (c) No sand bags were placed along the road to avoid the muddy water leak out into the sea at S7. The sand bags were placed along the road to avoid the muddy water leak out into the sea at S7. (This observation was closed on 16 October 2013.)
- (d) The chemical container was found to be without drip trays at S9. The chemical container was removed at S9. (This observation was closed on 16 October 2013.)
- (e) No Environmental Permit was displayed at the major site exit of WA04. The Environmental Permit was displayed at the major site exit of WA04. (This observation was closed on 16 October 2013.)
- (f) Muddy track was found at the access road of WA04. The Contractor cleaned up the muddy track at the access road of WA04 (This observation was closed on 16 October 2013.)
- (g) Stagnant water was found inside the I-beams at West Portal. The stagnant water inside the I-Beams was cleaned up at West Portal. (This observation was closed on 16 October 2013.)

16 October 2013

- (a) There were gaps between sections of silt curtain at Portion X. The black cover was used to enshroud the gaps between the silt curtains at Portion X. (This observation was closed on 22 October 2013.)
- (b) The unpaved area was found to be dry at WA03. The water vehicle was arranged by the contractor to spray water on the unpaved area at WA03. (This observation was closed on 22 October 2013.)
- (c) Chemical containers were accumulated in one drip tray at N4. Some of chemical containers were put over the top of the other chemical containers. The excess chemical containers were removed by the contractor at N4. (This observation was closed on 22 October 2013.)
- (d) The drip tray for generator was filled up by sand at S8. The sand inside the drip tray was cleaned up at S8. (This observation was closed on 22 October 2013.)
- (e) Sand was found on the passage way at Kin Yip. The excess fill materials on the passage way were cleaned up by the contractor at Kin Yip. (This observation was closed on 22 October 2013.)
- (f) Black smoke was generated by the operating machine at S9. The contractor provided well maintenance for the construction machine to avoid the black smoke generation at S9. (This observation was closed on 22 October 2013.)
- (g) The length of blue cover for the tube was not enough to avoid dust generation from the percussive piling works at S9. The green cover was extended to create an enclose area so as to avoid the dust emission from the piling work at S9. (This observation was closed on 22 October 2013.)

22 October 2013

- (a) The unpaved area was found to dry at S11. The contractor provided water spraying on the dry unpaved area. (This observation was closed on 29 October 2013.)
- (b) The construction material was placed near the tree at S9. The contractor removed the material. (This observation was closed on 29 October 2013.)

- (c) The chemical containers were found to be without drip tray at N13. Drip trays were provided for the chemical containers. (This observation was closed on 29 October 2013.)
- (d) Excess fill materials were found along the barge edge of Chung Tin. The contractor cleaned up the fill materials. (This observation was closed on 29 October 2013.)
- (e) The dust emission was generated from the concrete breaking activities at West Portal. The contractor provided water spraying for the concrete breaking activities. (This observation was closed on 29 October 2013.)

29 October 2013

- (a) Oil drums without drip tray were found at S8/S9 and West Portal. The contractor was reminded to provide drip trays to oil drums.
- (b) The door of engine of a mobile crane at S8/S9 was unable to close. The contractor was reminded to provide proper maintenance to the equipment.

6 November 2013

- (a) Oil drums without drip tray were found at S8/S9 and West Portal. The oil drums were removed by the contractor at S8/S9 and West Portal. (This observation was found on 29 October 2013 and closed on 6 November 2013.)
- (b) The door of engine of a mobile crane at S8/S9 was unable to close. The door of engine of a mobile crane was closed at S8/S9. (This observation was found on 29 October 2013 and closed on 6 November 2013.)
- (c) Excess fill materials were found on the passage way of Chung Shing 2002. Excess fill materials were cleaned up on the passage way of Chung Shing 2002. (This observation was closed on 13 November 2013.)
- (d) Stagnant water was found inside a drip tray at S8. Stagnant water was cleaned up by contractor at S8. (This observation was closed on 13 November 2013.)
- (e) Oil containers were found to be without drip trays at S8. The oil drums were removed at S8. (This observation was closed on 13 November 2013.)
- (f) Oil containers were found to be without drip trays at West Portal. The oil drums were removed at West Portal. (This observation was closed on 13 November 2013.)
- (g) Stagnant water was found inside a drip tray at West Portal. Stagnant water was cleaned up at West Portal. (This observation was closed on 13 November 2013.)
- (h) Stagnant water was found inside a rubbish container at West Portal. Stagnant water inside the rubbish containers was cleaned up at West Portal. (This observation was closed on 13 November 2013.)
- (i) Oil leakage was found on the ground at N4. Oil leakage was cleaned up at N4. (This observation was closed on 13 November 2013.)
- (j) Oil slicks were found inside the wheel washing tank at West Portal. The waste oil was cleaned up at West Portal. (This observation was closed on 13 November 2013.)
- (k) No clear label was provided for chemical waste containers at N4. Clear labels were provided for chemical waste containers at N4. (This observation was closed on 13 November 2013.)

13 November 2013

- (a) Stagnant water was found inside the recesses for lifting eyes of concrete blocks at S16. Stagnant water inside the recesses for lifting eyes of concrete blocks were filled up by the rubbles at S16. (This observation was closed on 20 November 2013.)
- (b) A gap was found between the silt curtains at Portion X. A black cover was used to overlay the gap between each silt curtains at Portion X. (This observation was closed on 20 November 2013.)
- (c) Waste chemical containers were found to be without clear labels at West Portal. Clear labels were provided for the waste chemical containers at West Portal. (This observation was closed on 20 November 2013.)
- (d) Oil container was found to be without drip tray at Sand Pump Barge. Oil container was removed at Sand Pump Barge. (This observation was closed on 20 November 2013.)
- (e) Oil containers were found to be without drip trays at N4. Oil containers were removed at N4. (This observation was closed on 20 November 2013.)
- (f) Oil container was found to be without drip tray at S11. Oil containers were removed at S11. (This observation was closed on 20 November 2013.)
- (g) Waste oil was found inside the wheel washing tank at West Portal. The new wheel washing tank was available to replace the old wheel washing tanks to avoid the waste oil leak out into it at West Portal. (This observation was closed on 20 November 2013.)

20 November 2013

- (a) Stagnant water was found inside the recesses for lifting eyes of concrete blocks at the S11. Stagnant water inside the recesses for lifting eyes of concrete blocks were filled up by the rubbles at S11. (This observation was closed on 29 November 2013.)
- (b) Stagnant water was found inside the drip tray for the generation at N4. Stagnant water was cleared inside the drip tray for the generation at N4. (This observation was closed on 29 November 2013.)
- (c) Waste chemical containers were found to be without drip trays at S15. Waste chemical containers were removed at S15. (This observation was closed on 29 November 2013.)
- (d) Unpaved area was found to be dry at S17. Unpaved area was found to be wet at S17. (This observation was closed on 29 November 2013.)
- (e) No sand bags were placed along the road to avoid the muddy water leaking out into the sea at S7. Sand bags was placed along road to avoid muddy water leaking into the sea at S7. (This observation was closed on 29 November 2013.)
- (f) Excess fill materials were found on the passage way of vessel at S7. Excess fill materials were cleared up on the passage way of vessel at S7. (This observation was closed on 29 November 2013.)
- (g) Chemical container was found to be without drip tray at S11. Drip tray was provided for chemical container at S11. (This observation was closed on 29 November 2013.)

29 November 2013

- (a) Dusty bare ground and temporary stockpile of dusty material without cover at West Portal were observed. The contractor was reminded to strengthen dust control measures.

1.1.3 The Contractor has rectified all of the observations (except the observation recorded on 29 November 2013) as identified during environmental site inspections during the reporting period. Follow-up actions for outstanding observation on 29 November 2013 will be inspected during the next site inspections.



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APPENDIX G

Air Quality Monitoring Data and Graphical Plots



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Air Quality Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Station	Time	Parameter	Results	Unit
HKLR	HY/2011/03	2013-09-04	AMS5	09:35	1-hr TSP	44	ug/m ³
HKLR	HY/2011/03	2013-09-04	AMS5	10:35	1-hr TSP	29	ug/m ³
HKLR	HY/2011/03	2013-09-04	AMS5	11:35	1-hr TSP	16	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS5	13:35	1-hr TSP	21	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS5	14:35	1-hr TSP	22	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS5	15:35	1-hr TSP	22	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS5	09:30	1-hr TSP	32	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS5	10:30	1-hr TSP	35	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS5	11:30	1-hr TSP	47	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS5	09:25	1-hr TSP	24	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS5	10:25	1-hr TSP	22	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS5	11:25	1-hr TSP	21	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS5	09:12	1-hr TSP	22	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS5	10:12	1-hr TSP	20	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS5	11:12	1-hr TSP	20	ug/m ³
HKLR	HY/2011/03	2013-10-02	AMS5	15:05	1-hr TSP	52	ug/m3
HKLR	HY/2011/03	2013-10-02	AMS5	16:05	1-hr TSP	51	ug/m3
HKLR	HY/2011/03	2013-10-02	AMS5	17:05	1-hr TSP	52	ug/m3
HKLR	HY/2011/03	2013-10-07	AMS5	08:54	1-hr TSP	105	ug/m3
HKLR	HY/2011/03	2013-10-07	AMS5	09:54	1-hr TSP	110	ug/m3
HKLR	HY/2011/03	2013-10-07	AMS5	10:54	1-hr TSP	104	ug/m3
HKLR	HY/2011/03	2013-10-11	AMS5	08:38	1-hr TSP	65	ug/m3
HKLR	HY/2011/03	2013-10-11	AMS5	09:38	1-hr TSP	59	ug/m3
HKLR	HY/2011/03	2013-10-11	AMS5	10:38	1-hr TSP	47	ug/m3
HKLR	HY/2011/03	2013-10-17	AMS5	09:15	1-hr TSP	78	ug/m3
HKLR	HY/2011/03	2013-10-17	AMS5	10:15	1-hr TSP	76	ug/m3
HKLR	HY/2011/03	2013-10-17	AMS5	11:15	1-hr TSP	83	ug/m3
HKLR	HY/2011/03	2013-10-23	AMS5	09:35	1-hr TSP	96	ug/m3
HKLR	HY/2011/03	2013-10-23	AMS5	10:35	1-hr TSP	84	ug/m3
HKLR	HY/2011/03	2013-10-23	AMS5	11:35	1-hr TSP	105	ug/m3
HKLR	HY/2011/03	2013-10-29	AMS5	09:15	1-hr TSP	217	ug/m3
HKLR	HY/2011/03	2013-10-29	AMS5	10:15	1-hr TSP	212	ug/m3
HKLR	HY/2011/03	2013-10-29	AMS5	11:15	1-hr TSP	202	ug/m3
HKLR	HY/2011/03	2013-11-04	AMS5	09:20	1-hr TSP	126	ug/m3
HKLR	HY/2011/03	2013-11-04	AMS5	10:20	1-hr TSP	124	ug/m3
HKLR	HY/2011/03	2013-11-04	AMS5	11:20	1-hr TSP	127	ug/m3
HKLR	HY/2011/03	2013-11-08	AMS5	09:25	1-hr TSP	71	ug/m3
HKLR	HY/2011/03	2013-11-08	AMS5	10:25	1-hr TSP	58	ug/m3
HKLR	HY/2011/03	2013-11-08	AMS5	11:25	1-hr TSP	45	ug/m3
HKLR	HY/2011/03	2013-11-14	AMS5	09:20	1-hr TSP	50	ug/m3
HKLR	HY/2011/03	2013-11-14	AMS5	10:20	1-hr TSP	47	ug/m3
HKLR	HY/2011/03	2013-11-14	AMS5	11:20	1-hr TSP	49	ug/m3
HKLR	HY/2011/03	2013-11-20	AMS5	13:40	1-hr TSP	55	ug/m3
HKLR	HY/2011/03	2013-11-20	AMS5	14:40	1-hr TSP	54	ug/m3
HKLR	HY/2011/03	2013-11-20	AMS5	15:40	1-hr TSP	59	ug/m3
HKLR	HY/2011/03	2013-11-26	AMS5	08:50	1-hr TSP	39	ug/m3
HKLR	HY/2011/03	2013-11-26	AMS5	09:50	1-hr TSP	37	ug/m3
HKLR	HY/2011/03	2013-11-26	AMS5	10:50	1-hr TSP	35	ug/m3
HKLR	HY/2011/03	2013-09-03	AMS5	08:00	24-hr TSP	15	ug/m ³
HKLR	HY/2011/03	2013-09-09	AMS5	08:00	24-hr TSP	37	ug/m ³
HKLR	HY/2011/03	2013-09-13	AMS5	08:00	24-hr TSP	26	ug/m ³
HKLR	HY/2011/03	2013-09-18	AMS5	08:00	24-hr TSP	64	ug/m ³
HKLR	HY/2011/03	2013-09-24	AMS5	08:00	24-hr TSP	27	ug/m ³
HKLR	HY/2011/03	2013-09-30	AMS5	08:00	24-hr TSP	56	ug/m ³
HKLR	HY/2011/03	2013-10-04	AMS5	08:00	24-hr TSP	138	ug/m ³
HKLR	HY/2011/03	2013-10-10	AMS5	08:00	24-hr TSP	54	ug/m ³
HKLR	HY/2011/03	2013-10-16	AMS5	08:00	24-hr TSP	114	ug/m ³

Air Quality Monitoring Data

HKLR	HY/2011/03	2013-10-22	AMS5	08:00	24-hr TSP	129	ug/m ³
HKLR	HY/2011/03	2013-10-28	AMS5	08:00	24-hr TSP	89	ug/m ³
HKLR	HY/2011/03	2013-11-01	AMS5	08:00	24-hr TSP	97	ug/m ³
HKLR	HY/2011/03	2013-11-07	AMS5	08:00	24-hr TSP	90	ug/m ³
HKLR	HY/2011/03	2013-11-13	AMS5	08:00	24-hr TSP	12	ug/m ³
HKLR	HY/2011/03	2013-11-21	AMS5(3)	14:30	24-hr TSP	65	ug/m ³
HKLR	HY/2011/03	2013-11-25	AMS5	08:00	24-hr TSP	93	ug/m ³
HKLR	HY/2011/03	2013-11-29	AMS5	08:00	24-hr TSP	62	ug/m ³
HKLR	HY/2011/03	2013-09-04	AMS6	13:30	1-hr TSP	19	ug/m ³
HKLR	HY/2011/03	2013-09-04	AMS6	14:30	1-hr TSP	16	ug/m ³
HKLR	HY/2011/03	2013-09-04	AMS6	15:30	1-hr TSP	14	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS6	08:10	1-hr TSP	47	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS6	09:10	1-hr TSP	39	ug/m ³
HKLR	HY/2011/03	2013-09-10	AMS6	10:10	1-hr TSP	38	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS6	13:40	1-hr TSP	28	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS6	14:40	1-hr TSP	28	ug/m ³
HKLR	HY/2011/03	2013-09-16	AMS6	15:40	1-hr TSP	32	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS6	13:11	1-hr TSP	25	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS6	14:11	1-hr TSP	32	ug/m ³
HKLR	HY/2011/03	2013-09-19	AMS6	15:11	1-hr TSP	39	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS6	13:05	1-hr TSP	31	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS6	14:05	1-hr TSP	33	ug/m ³
HKLR	HY/2011/03	2013-09-25	AMS6	15:05	1-hr TSP	25	ug/m ³
HKLR	HY/2011/03	2013-10-02	AMS6	08:11	1-hr TSP	80	ug/m ³
HKLR	HY/2011/03	2013-10-02	AMS6	09:11	1-hr TSP	71	ug/m ³
HKLR	HY/2011/03	2013-10-02	AMS6	10:11	1-hr TSP	66	ug/m ³
HKLR	HY/2011/03	2013-10-07	AMS6	12:28	1-hr TSP	79	ug/m ³
HKLR	HY/2011/03	2013-10-07	AMS6	13:28	1-hr TSP	71	ug/m ³
HKLR	HY/2011/03	2013-10-07	AMS6	14:28	1-hr TSP	66	ug/m ³
HKLR	HY/2011/03	2013-10-11	AMS6	12:45	1-hr TSP	85	ug/m ³
HKLR	HY/2011/03	2013-10-11	AMS6	13:45	1-hr TSP	96	ug/m ³
HKLR	HY/2011/03	2013-10-11	AMS6	14:45	1-hr TSP	93	ug/m ³
HKLR	HY/2011/03	2013-10-17	AMS6	13:05	1-hr TSP	92	ug/m ³
HKLR	HY/2011/03	2013-10-17	AMS6	14:05	1-hr TSP	101	ug/m ³
HKLR	HY/2011/03	2013-10-17	AMS6	15:05	1-hr TSP	104	ug/m ³
HKLR	HY/2011/03	2013-10-23	AMS6	13:30	1-hr TSP	104	ug/m ³
HKLR	HY/2011/03	2013-10-23	AMS6	14:30	1-hr TSP	98	ug/m ³
HKLR	HY/2011/03	2013-10-23	AMS6	15:30	1-hr TSP	92	ug/m ³
HKLR	HY/2011/03	2013-10-29	AMS6	13:05	1-hr TSP	191	ug/m ³
HKLR	HY/2011/03	2013-10-29	AMS6	14:05	1-hr TSP	179	ug/m ³
HKLR	HY/2011/03	2013-10-29	AMS6	15:05	1-hr TSP	229	ug/m ³
HKLR	HY/2011/03	2013-11-04	AMS6	13:30	1-hr TSP	87	ug/m ³
HKLR	HY/2011/03	2013-11-04	AMS6	14:30	1-hr TSP	94	ug/m ³
HKLR	HY/2011/03	2013-11-04	AMS6	15:30	1-hr TSP	119	ug/m ³
HKLR	HY/2011/03	2013-11-08	AMS6	13:00	1-hr TSP	70	ug/m ³
HKLR	HY/2011/03	2013-11-08	AMS6	14:00	1-hr TSP	84	ug/m ³
HKLR	HY/2011/03	2013-11-08	AMS6	15:00	1-hr TSP	80	ug/m ³
HKLR	HY/2011/03	2013-11-14	AMS6	13:24	1-hr TSP	71	ug/m ³
HKLR	HY/2011/03	2013-11-14	AMS6	14:24	1-hr TSP	130	ug/m ³
HKLR	HY/2011/03	2013-11-14	AMS6	15:24	1-hr TSP	132	ug/m ³
HKLR	HY/2011/03	2013-11-20	AMS6	08:15	1-hr TSP	61	ug/m ³
HKLR	HY/2011/03	2013-11-20	AMS6	09:15	1-hr TSP	60	ug/m ³
HKLR	HY/2011/03	2013-11-20	AMS6	10:15	1-hr TSP	62	ug/m ³
HKLR	HY/2011/03	2013-11-26	AMS6	12:58	1-hr TSP	35	ug/m ³
HKLR	HY/2011/03	2013-11-26	AMS6	13:58	1-hr TSP	38	ug/m ³
HKLR	HY/2011/03	2013-11-26	AMS6	14:58	1-hr TSP	39	ug/m ³
HKLR	HY/2011/03	2013-09-03	AMS6(1)	08:00	24-hr TSP	-	ug/m ³
HKLR	HY/2011/03	2013-09-09	AMS6(2)	08:00	24-hr TSP	-	ug/m ³
HKLR	HY/2011/03	2013-09-13	AMS6	08:00	24-hr TSP	45	ug/m ³
HKLR	HY/2011/03	2013-09-18	AMS6	08:00	24-hr TSP	125	ug/m ³

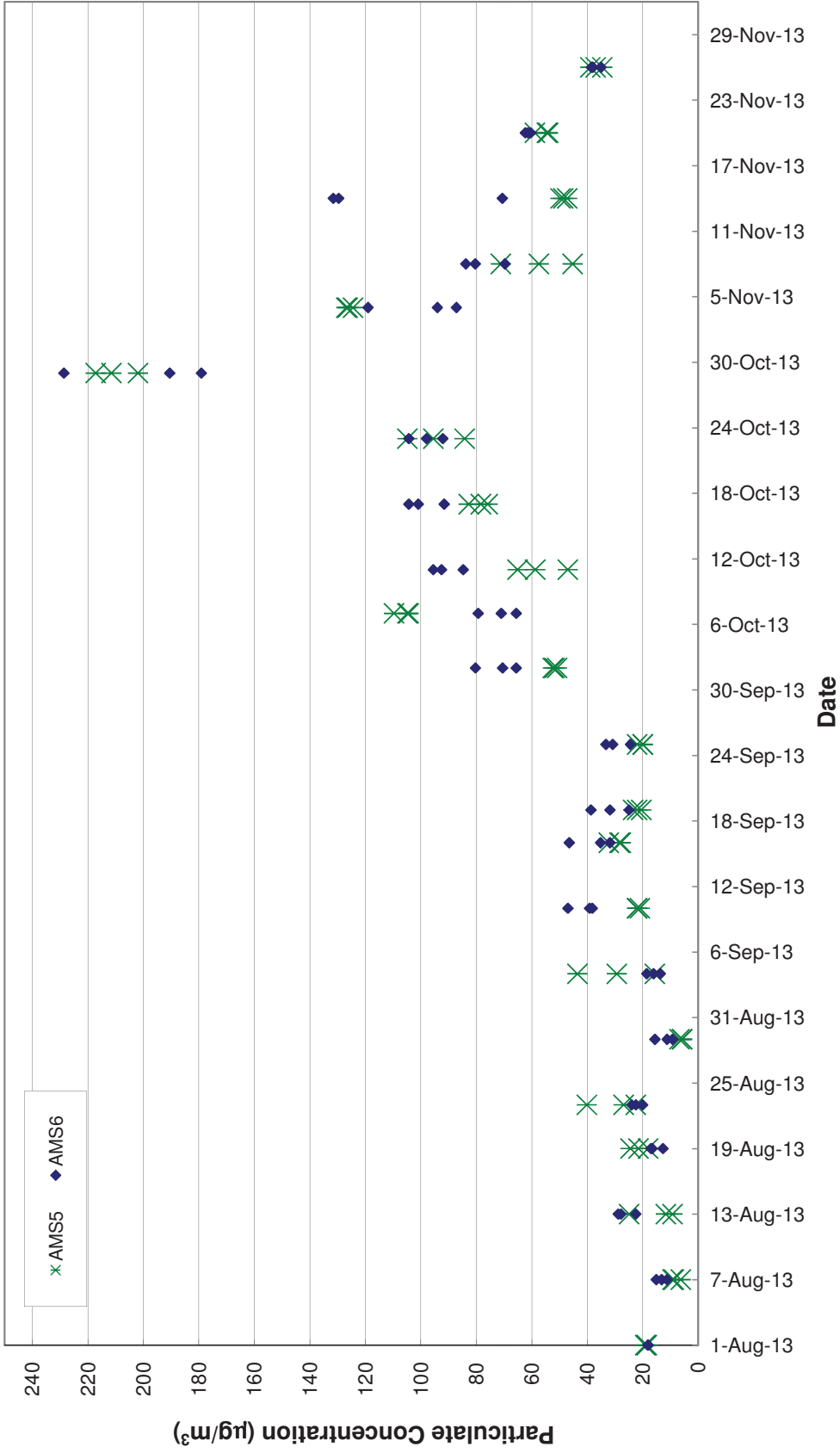
Air Quality Monitoring Data

HKLR	HY/2011/03	2013-09-24	AMS6	08:00	24-hr TSP	56	ug/m ³
HKLR	HY/2011/03	2013-09-30	AMS6	08:00	24-hr TSP	71	ug/m ³
HKLR	HY/2011/03	2013-10-04	AMS6	08:00	24-hr TSP	160	ug/m ³
HKLR	HY/2011/03	2013-10-10	AMS6	08:00	24-hr TSP	83	ug/m ³
HKLR	HY/2011/03	2013-10-16	AMS6	08:00	24-hr TSP	145	ug/m ³
HKLR	HY/2011/03	2013-10-22	AMS6	08:00	24-hr TSP	170	ug/m ³
HKLR	HY/2011/03	2013-10-28	AMS6	08:00	24-hr TSP	150	ug/m ³
HKLR	HY/2011/03	2013-11-01	AMS6	08:00	24-hr TSP	160	ug/m ³
HKLR	HY/2011/03	2013-11-07	AMS6	08:00	24-hr TSP	101	ug/m ³
HKLR	HY/2011/03	2013-11-13	AMS6	08:00	24-hr TSP	88	ug/m ³
HKLR	HY/2011/03	2013-11-19	AMS6	08:00	24-hr TSP	159	ug/m ³
HKLR	HY/2011/03	2013-11-25	AMS6	08:00	24-hr TSP	134	ug/m ³
HKLR	HY/2011/03	2013-11-29	AMS6	08:00	24-hr TSP	98	ug/m ³

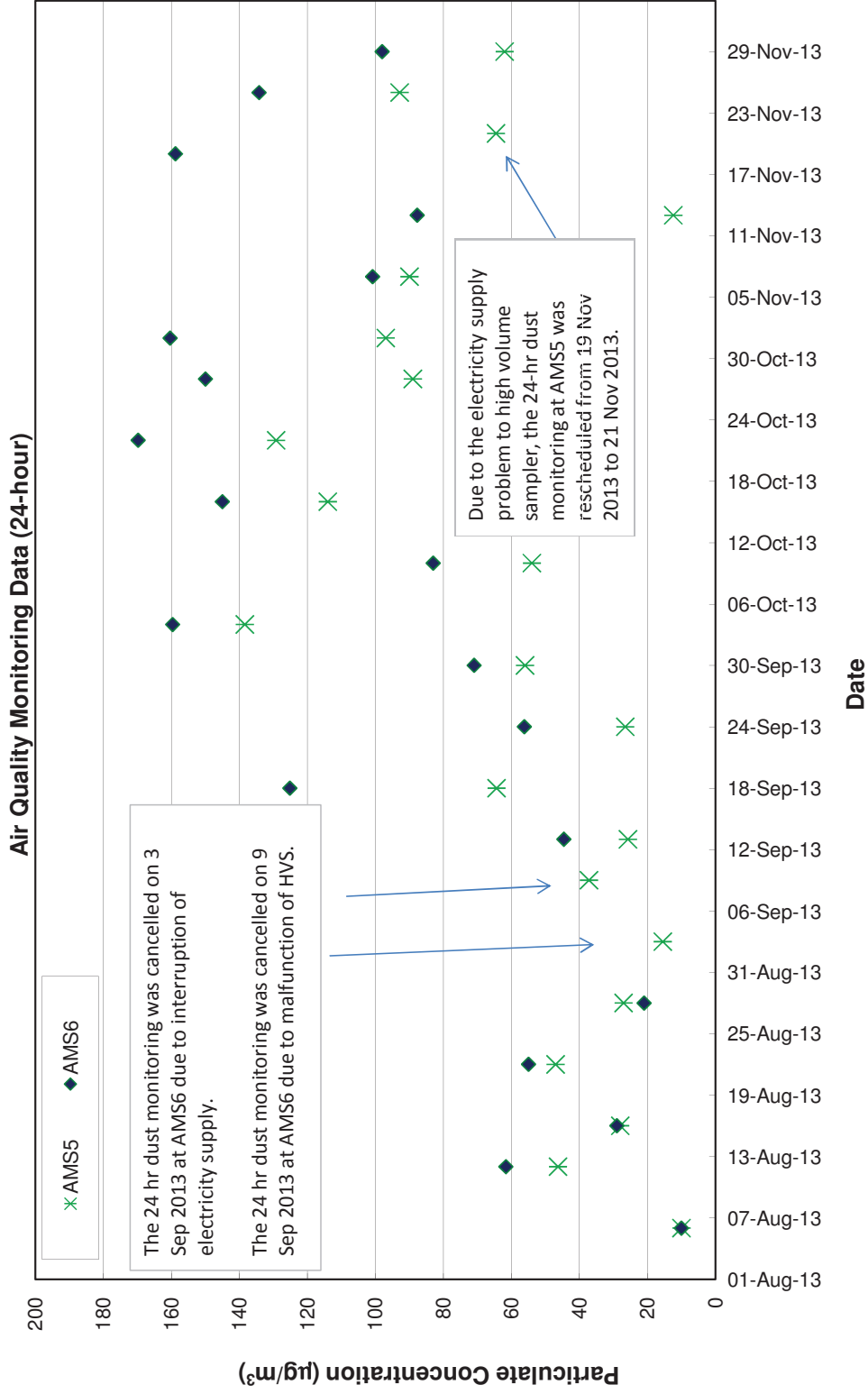
Remarks:

1. The 24-hr dust monitoring was cancelled on 3 Sep 2013 at AMS6 due to interruption of electricity supply.
2. The 24-hr dust monitoring was cancelled on 9 Sep 2013 at AMS6 due to malfunction of HVS.
3. Due to the electricity supply problem to high volume sampler, the 24-hr dust monitoring at AMS5 was rescheduled from 19 Nov 2013 to 21 Nov 2013.

Air Quality Monitoring Data (1-hour)



Graphical Plot of 24-hour TSP at AMS5 and AMS6





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HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX H

Noise Monitoring Data and Graphical Plots



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Noise Monitoring Result of NMS5 from September to November 2013

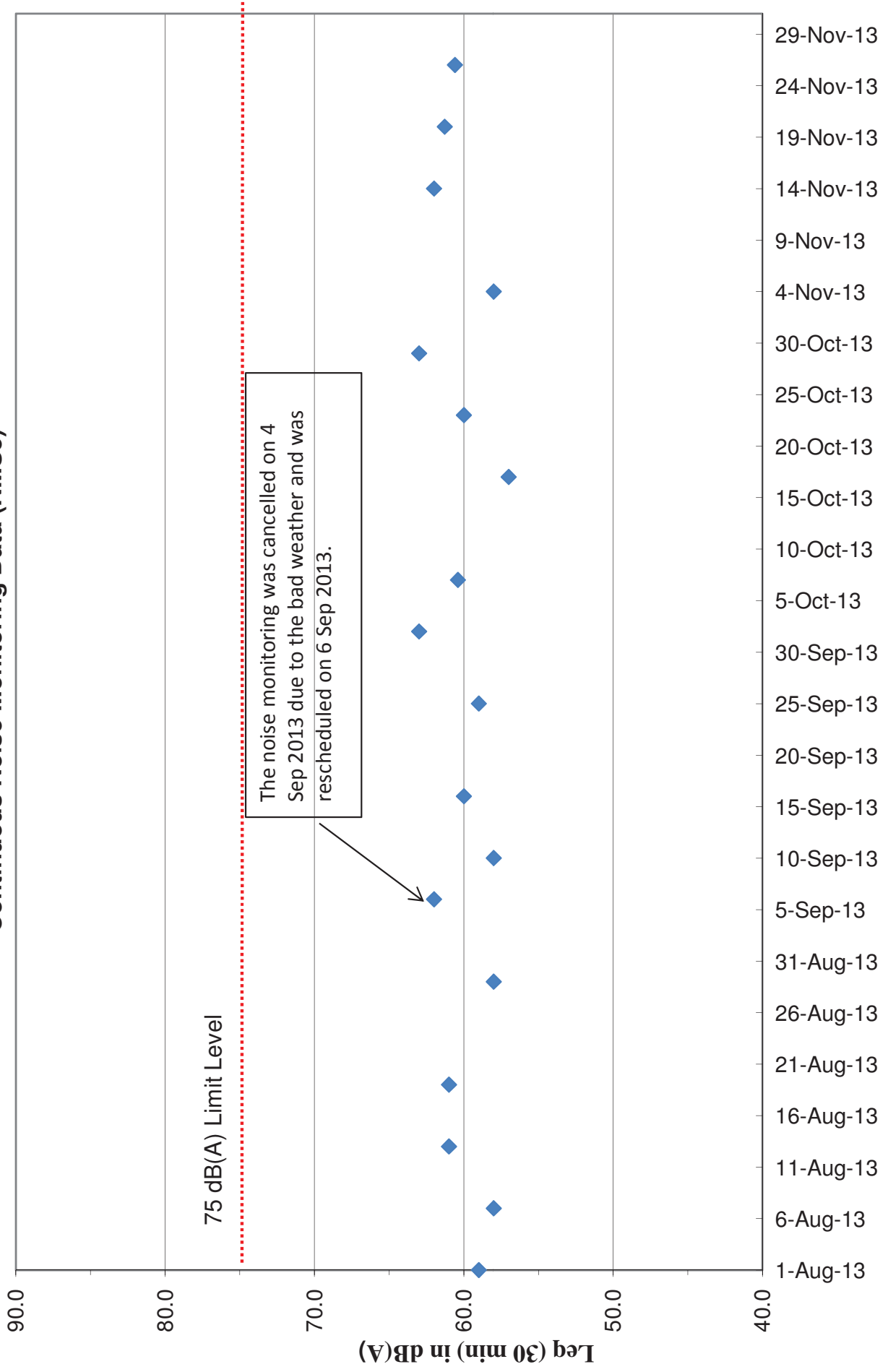
Project	Works	Date (yyyy-mm-dd)	Station	Time	Wind Speed, m/s	Parameter	Results*	Unit
HKLR	HY/2011/03	2013-09-06	NMS5(1)	15:05	<5	L eq 30 min	62	dB(A)
HKLR	HY/2011/03	2013-09-10	NMS5	13:50	<5	L eq 30 min	58	dB(A)
HKLR	HY/2011/03	2013-09-16	NMS5	10:10	<5	L eq 30 min	60	dB(A)
HKLR	HY/2011/03	2013-09-25	NMS5	9:50	<5	L eq 30 min	59	dB(A)
HKLR	HY/2011/03	2013-10-02	NMS5	15:45	<5	L eq 30 min	63	dB(A)
HKLR	HY/2011/03	2013-10-07	NMS5	9:37	<5	L eq 30 min	60	dB(A)
HKLR	HY/2011/03	2013-10-17	NMS5	9:35	<5	L eq 30 min	57	dB(A)
HKLR	HY/2011/03	2013-10-23	NMS5	10:00	<5	L eq 30 min	60	dB(A)
HKLR	HY/2011/03	2013-10-29	NMS5	9:25	<5	L eq 30 min	63	dB(A)
HKLR	HY/2011/03	2013-11-04	NMS5	9:40	<5	L eq 30 min	58	dB(A)
HKLR	HY/2011/03	2013-11-14	NMS5	9:45	<5	L eq 30 min	62	dB(A)
HKLR	HY/2011/03	2013-11-20	NMS5	14:10	<5	L eq 30 min	61	dB(A)
HKLR	HY/2011/03	2013-11-26	NMS5	9:19	<5	L eq 30 min	61	dB(A)

Noted: * +3dB(A) Facade correction included.

Remark:

(1) The noise monitoring was cancelled on 4 Sep 2013 due to the bad weather and was rescheduled on 6 Sep 2013.

Continuous Noise Monitoring Data (NMS5)





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HIGHWAYS DEPARTMENT

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Hong Kong Project Management Office

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and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX I

Water Quality Monitoring Data and Graphical Plots



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:17:48	1.0	Surface	1	1	28.92	7.99	14.97	82.8	5.87	6.5	3.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:18:32	1.0	Surface	1	2	28.91	8	14.98	84	5.96	6.7	3.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:17:30	4.3	Middle	2	1	26.93	7.79	28.32	72.9	5.17	12.4	4.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:18:12	4.3	Middle	2	2	26.91	7.79	28.38	73.5	5.22	12.4	3.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:18:02	7.6	Bottom	3	1	26.87	7.8	29.15	71.7	4.86	11.2	3.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS5	12:17:19	7.6	Bottom	3	2	26.87	7.81	29.18	76.4	5.18	11.4	4.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F6	12:10:03	1.0	Surface	1	1	28.96	7.95	16.21	88.6	6.23	13.9	2.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F6	12:09:41	1.0	Surface	1	2	29	7.95	16.41	89.4	6.28	13.8	3.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F6	12:09:52	2.3	Bottom	3	1	28.48	7.88	18.77	85.5	5.98	14.6	3.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F6	12:09:24	2.3	Bottom	3	2	28.31	7.84	20.59	82.8	5.75	14.5	3.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS7	12:03:37	1.0	Surface	1	1	28.53	7.87	16.17	80.7	5.72	7.4	2.9
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS7	12:03:11	1.0	Surface	1	2	28.49	7.87	16.26	79.6	5.65	7.4	3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS7	12:03:25	2.3	Bottom	3	1	28.16	7.8	18.59	76.5	5.38	9.2	3.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS7	12:02:57	2.3	Bottom	3	2	28.13	7.78	18.86	75.5	5.31	9.2	3.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS8	11:40:00	1.0	Surface	1	1	28.47	7.92	16.83	82.1	5.8	5.9	5.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS8	11:39:29	1.0	Surface	1	2	28.22	7.9	17.02	81.9	5.81	6.1	6.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS8	11:39:23	2.8	Bottom	3	1	28.2	7.88	19.03	77.9	5.49	6.1	5.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS8	11:39:50	2.8	Bottom	3	2	28	7.83	18.87	76.6	5.4	6.1	5.9
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F9	11:56:54	1.0	Surface	1	1	28.3	7.93	17.4	83.8	5.92	5.5	3.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F9	11:56:33	1.0	Surface	1	2	28.26	7.91	17.6	81	5.72	5.4	3.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F9	11:56:43	2.5	Bottom	3	1	27.87	7.84	20.79	80.4	5.62	5.8	5.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS(M)F9	11:56:23	2.5	Bottom	3	2	27.73	7.83	20.28	78.3	5.5	5.7	4.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:13:25	1.0	Surface	1	1	28.47	8	14.74	79.3	5.68	3.4	2.5
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:14:23	1.0	Surface	1	2	28.2	7.99	15.26	80.5	5.76	3.7	2.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:14:01	5.3	Middle	2	1	27.29	7.92	25.34	76.2	5.46	4.7	2.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:12:58	5.3	Middle	2	2	27.66	7.92	24.09	76.7	5.43	5	2.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:13:46	9.6	Bottom	3	1	27	7.87	27.37	76	5.33	9.1	3.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	IS10	11:12:37	9.6	Bottom	3	2	26.96	7.88	27.25	76.3	5.36	9.6	2.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR3	12:25:15	0.6	Middle	2	1	29.06	8	14.51	101.6	7.2	4.5	2.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR3	12:25:07	0.6	Middle	2	2	29.03	8	14.59	101	7.17	4.5	2.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR4	11:45:57	1.0	Surface	1	1	28.32	7.81	17.27	76.9	5.42	6.1	1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR4	11:45:39	1.0	Surface	1	2	28.41	7.83	17.51	78.3	5.52	6.2	1.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR4	11:45:45	2.7	Bottom	3	1	28.24	7.81	18.05	75.5	5.34	7.4	1.5
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR4	11:45:25	2.7	Bottom	3	2	28.77	7.81	18.52	77.9	5.49	7.1	1.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR5	11:25:41	1.0	Surface	1	1	28.77	8.07	11.21	81.2	5.8	3.9	1.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR5	11:26:06	1.0	Surface	1	2	28.66	8.05	11.32	81.3	5.81	3.8	1.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR5	11:25:26	4.5	Bottom	3	1	27.16	7.88	25.9	77.9	5.55	4.4	1.9
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR5	11:25:50	4.5	Bottom	3	2	27.79	7.88	24.6	78.4	5.59	4.3	1.5
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:54	1.0	Surface	1	1	28.11	7.81	15.6	85.8	6.15	2.5	0.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:25	1.0	Surface	1	2	28.11	7.82	15.59	85.4	6.12	2.6	0.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:43	3.2	Middle	2	1	27.79	7.81	17.38	84.3	6.02	2.5	1.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:13	3.2	Middle	2	2	27.65	7.81	17.37	83.4	5.97	2.6	1.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:02	5.3	Bottom	3	1	27.64	7.8	18.13	84.2	6	2.5	1.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10A	10:23:33	5.3	Bottom	3	2	27.82	7.79	18.2	84.9	6.03	2.5	1.4
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10B	10:16:14	1.0	Surface	1	1	27.13	7.81	19.15	74.2	5.3	3.7	1.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10B	10:15:59	1.0	Surface	1	2	27.57	7.83	17.94	74.4	5.31	3.8	1.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10B	10:15:47	3.8	Bottom	3	1	26.33	7.76	24.62	72.7	5.11	3.9	1.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	SR10B	10:16:07	3.8	Bottom	3	2	26.85	7.78	23.04	74.6	5.24	3.8	1.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:38:39	1.0	Surface	1	1	28.66	8	13.93	76.9	5.49	3.2	1.3
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:39:34	1.0	Surface	1	2	28.66	8	13.97	76.9	5.47	3.3	1.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:38:23	3.3	Middle	2	1	28.37	8	14.79	72.9	5.18	3.6	2.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:39:19	3.3	Middle	2	2	28.43	8.01	14.56	73	5.19	3.7	2.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:39:00	5.5	Bottom	3	1	27.57	7.9	25.42	71.8	5.12	5.2	3.1
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS2	12:38:05	5.5	Bottom	3	2	27.51	7.87	23.37	73.1	5.18	5.2	2.7
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:03:34	1.0	Surface	1	1	28.41	7.85	14.27	78	5.6	3.9	2.5
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:02:46	1.0	Surface	1	2	28.35	7.86	14.38	78.5	5.64	3.9	2.9
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:03:13	6.5	Middle	2	1	26.39	7.78	25.03	70.8	5.1	5.7	2.6
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:02:24	6.5	Middle	2	2	26.34	7.78	25.02	70.5	5.07	5.6	3.8
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:03:01	11.9	Bottom	3	1	24.64	7.71	31.94	69.4	4.81	6.6	3.2
HCLR	HY/2011/03	2013-09-02	Mid-Ebb	Sunny	CS(M)F5	11:02:13	11.9	Bottom	3	2	24.56	7.72	32	68.4	4.75	6.5	2.9
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:56:48	1.0	Surface	1	1	29.41	8.09	16.78	102	7.1	12.7	10.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:57:36	1.0	Surface	1	2	29.69	8.11	16.32	103.7	7.2	12.2	11.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:57:19	4.3	Middle	2	1	28.02	7.86	20.33	77.2	5.28	12.3	13.1
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:56:30	4.3	Middle	2	2	27.9	7.87	20.24	77	5.27	12.5	12.6
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:56:21	7.5	Bottom	3	1	27.18	7.82	26.64	68.3	4.79	13.4	12.9
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS5	16:57:04	7.5	Bottom	3	2	27.17	7.82	26.82	67.8	4.74	13.5	12.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F6	17:05:36	1.0	Surface	1	1	29.84	8.21	16.09	128.4	8.91	8.2	4.6
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F6	17:05:20	1.0	Surface	1	2	29.8	8.18	16.11	124.1	8.61	8.3	5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F6	17:05:10	2.1	Bottom	3	1	29.46	8.13	16.11	123.7	8.59	8.2	5.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F6	17:05:26	2.1	Bottom	3	2	29.61	8.17	17.2	127.2	8.81	8.3	6.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS7	17:12:53	1.0	Surface	1	1	29.77	8.25	15.66	137.7	9.59	5.7	4.1
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS7	17:13:12	1.0	Surface	1	2	29.79	8.25	15.81	138.9	9.66	5.7	4.8
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS7	17:13:01	2.1	Bottom	3	1	29.82	8.24	15.96	138.2	9.6	5.9	5.6
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS7	17:12:39	2.1	Bottom	3	2	29.79	8.23	15.92	135.4	9.41	5.8	4.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS8	17:37:42	1.0	Surface	1	1	28.99	8.09	15.45	109	7.7	6.2	3.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS8	17:37:13	1.0	Surface	1	2	28.95	8.09	15.67	107.6	7.59	6.3	2.1
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS8	17:37:33	2.8	Bottom	3	1	28.55	7.99	17.48	103.3	7.27	6.4	2.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS8	17:37:03	2.8	Bottom	3	2	28.45	7.98	17.96	104	7.31	6.5	2.7
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F9	17:21:00	1.0	Surface	1	1	29.11	8.08	14.98	112.5	7.95	6.2	3.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS(M)F9	17:20:44	1.0	Surface	1	2	29.03	8.07	15.02	112	7.86	8.4	4.3
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS10	18:03:21	1.0	Surface	1	1	29.13	8.11	16.06	82	5.81	14.5	15.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS10	18:03:52	5.5	Middle	2	1	26.45	7.93	25.68	74.1	5.23	15.6	20.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS10	18:03:03	5.5	Middle	2	2	26.98	7.92	26.04	74.2	5.25	16.5	21
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS10	18:03:41	10.0	Bottom	3	1	26.02	7.91	28.43	70.1	5.02	17	20
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	IS10	18:02:51	10.0	Bottom	3	2	26.02	7.91	28.43	70.9	5.04	18.3	20.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR3	16:46:07	0.7	Middle	2	1	29.73	8.17	16.29	128.4	8.91	9.5	11.7
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR3	16:46:14	0.7	Middle	2	2	29.61	8.15	16.42	125.5	8.72	9.6	10.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR4	17:31:13	1.0	Surface	1	1	29.42	8.01	13.89	103.1	7.22	4.8	4.1
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR4	17:30:54	1.0	Surface	1	2	29.41	8.02	13.92	102.2	7.23	4.8	3.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR4	17:30:44	2.7	Bottom	3	1	29.11	7.98	18.82	103.3	7.15	5.1	3.9
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR4	17:31:01	2.7	Bottom	3	2	28.26	7.97	19.3	100.8	7.13	5	3.1
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR5	17:51:15	1.0	Surface	1	1	29.09	8.09	16.09	84.3	5.98	15	14.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR5	17:50:32	1.0	Surface	1	2	29.01	8.07	16.13	84.3	5.97	15.6	15.9
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR5	17:50:17	4.7	Bottom	3	1	27.86	7.96	20.72	81.9	5.81	13	13.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR5	17:50:51	4.7	Bottom	3	2	27.73	7.96	21.03	81.5	5.77	11.8	14.8
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:50	1.0	Surface	1	1	26.29	7.81	26.2	74.2	5.27	3.4	4.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:20	1.0	Surface	1	2	26.24	7.81	26.32	76.9	5.45	3.3	3.7
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:39	3.3	Middle	2	1	26.1	7.8	26.69	73.9	5.23	3.3	2.6
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:11	3.3	Middle	2	2	26.11	7.81	26.71	74.8	5.3	3.3	2.8
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:02	5.6	Bottom	3	1	26.14	7.8	26.73	74.8	5.3	3.3	4.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10A	18:51:29	5.6	Bottom	3	2	26.04	7.8	27.43	72.8	5.17	3.3	3.7
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10B	19:01:02	1.0	Surface	1	1	26.27	7.81	26.18	75	5.33	3.6	3
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10B	19:01:18	1.0	Surface	1	2	26.29	7.81	26.06	73.9	5.25	3.5	2.8
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10B	19:01:10	4.1	Bottom	3	1	26.28	7.81	26.65	73.8	5.23	3.6	4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	SR10B	19:00:54	4.1	Bottom	3	2	26.28	7.81	26.32	75	5.32	3.6	5.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:41:56	1.0	Surface	1	1	29.22	8.08	13.51	81.1	5.77	4.1	4.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:40:50	1.0	Surface	1	2	29.28	8.04	13.51	81.1	5.77	4.1	4.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:40:25	3.4	Middle	2	1	27.59	7.81	20.66	75.4	5.4	4.3	3.7
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:41:35	3.4	Middle	2	2	27.59	7.9	20.62	76.8	5.48	4.8	4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:39:56	5.8	Bottom	3	1	27.33	7.65	23.36	75.6	5.39	6.5	3.5
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS2	16:41:13	5.8	Bottom	3	2	27.1	7.86	25.07	74.1	5.29	7	3.8
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:20:48	1.0	Surface	1	1	27.63	7.88	19.5	75.6	5.34	4.7	2.4
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:19:49	1.0	Surface	1	2	27.3	7.83	21.04	73.9	5.21	4.6	2.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:20:30	6.4	Middle	2	1	25.35	7.74	28.8	72.5	5.12	8.7	2.2
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:19:22	6.4	Middle	2	2	25.09	7.73	29.82	71.4	5.03	8.9	2.6
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:20:22	11.8	Bottom	3	1	24.89	7.74	31.07	69.1	4.88	8.6	2.3
HCLR	HY/2011/03	2013-09-02	Mid-Flood	Sunny	CS(M)F5	18:19:14	11.8	Bottom	3	2	24.83	7.73	31.02	67.2	4.73	8.8	3.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS5	13:04:25	1.0	Surface	1	1	27.15	7.85	18.62	68.6	5.18	10.6	11.4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS5	13:03:40	1.0	Surface	1	2	27.16	7.84	19.91	68.3	5.16	11.4	10.8
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS5	13:04:08	4.7	Middle	2	1	26.84	7.78	26.14	66.5	5.03	14.2	11.4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS5	13:03:28	4.7	Middle	2	2	26.77	7.77	26.98	66.8	5.05	15	9.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	ISS	13:03:14	8.3	Bottom	3	1	26.74	7.76	27.34	67.1	5.07	15.1	10.9
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	ISS	13:03:54	8.3	Bottom	3	2	26.81	7.76	27.31	66.7	5.04	14.7	11
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F6	12:55:35	1.0	Surface	1	1	27.39	7.79	20.27	71.7	5.41	19.1	8.3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F6	12:55:01	1.0	Surface	1	2	27.49	7.82	19.37	71.8	5.42	18.2	8.8
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F6	12:55:26	2.1	Bottom	3	1	27.32	7.76	22.72	71.4	5.4	19.6	8.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F6	12:54:48	2.1	Bottom	3	2	27.18	7.74	23.13	71.3	5.38	20.7	9.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS7	12:49:07	1.0	Surface	1	1	27.23	7.77	21.29	71.4	5.39	9.8	4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS7	12:48:44	1.0	Surface	1	2	26.99	7.76	21.64	71.4	5.4	10.6	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS7	12:48:36	2.5	Bottom	3	1	26.97	7.74	24.32	70.8	5.35	11.5	3.7
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS7	12:48:57	2.5	Bottom	3	2	26.97	7.75	23.5	71.1	5.38	11.1	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS8	12:26:35	1.0	Surface	1	1	27.31	7.78	20.67	69.7	5.32	8.6	5.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS8	12:26:25	1.0	Surface	1	2	27.31	7.78	20.78	69.6	5.31	8.9	4.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS8	12:26:19	2.6	Bottom	3	1	27.32	7.76	22.62	69.4	5.29	8.7	4.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS8	12:26:35	2.6	Bottom	3	1	27.22	7.75	22.89	69.5	5.31	9	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F9	12:43:02	1.0	Surface	1	1	27.12	7.78	20.38	69.5	5.29	11.1	2.7
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F9	12:43:20	1.0	Surface	1	2	27.08	7.8	20.38	69.5	5.29	11.8	3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F9	12:43:12	2.5	Bottom	3	1	26.89	7.77	21.85	69.3	5.24	13.6	3.9
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS(M)F9	12:42:54	2.5	Bottom	3	1	27.05	7.77	22.86	69.3	5.25	12.7	3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:30:14	1.0	Surface	1	1	27.16	7.86	19.28	76.4	5.45	6.7	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:29:35	1.0	Surface	1	2	27.16	7.81	19.35	74.9	5.34	6.7	2.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:30:03	5.3	Middle	2	1	27.15	7.81	21.29	71.8	5.12	8.6	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:29:23	5.3	Middle	2	1	27.16	7.74	22.13	71.6	5.11	8.9	2.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:29:54	9.5	Bottom	3	1	27.05	7.77	22.86	69.3	5.25	12.7	3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	IS10	12:29:11	9.5	Bottom	3	2	27.03	7.68	25.05	71.6	4.96	10.9	3.7
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR3	13:13:28	0.8	Middle	2	1	27.23	7.82	18.99	69.7	5.27	11.3	10.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR3	13:13:18	0.8	Middle	2	2	27.2	7.82	18.79	69.7	5.26	9.3	10.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR4	12:32:04	1.0	Surface	1	1	27	7.72	21.62	69.3	5.28	12.7	7.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR4	12:31:45	1.0	Surface	1	2	27.01	7.72	21.95	69.4	5.29	12.1	8.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR4	12:31:54	2.5	Bottom	3	1	26.88	7.69	23.98	69.2	5.27	14.1	12.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR4	12:31:37	2.5	Bottom	3	2	26.9	7.69	23.94	69.4	5.28	12.9	11.8
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR5	12:38:45	1.0	Surface	1	1	27.12	7.89	19.33	77.9	5.56	2.5	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR5	12:39:06	1.0	Surface	1	2	27.12	7.89	19.49	78.6	5.6	2.7	4.3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR5	12:38:56	3.6	Bottom	3	1	27.22	7.88	19.94	78.8	5.59	2.5	2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR5	12:38:32	3.6	Bottom	3	2	27.23	7.85	20.87	76	5.36	2.5	3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:09:30	1.0	Surface	1	1	26.27	7.78	23.73	68.2	5.17	2.7	3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:10:04	1.0	Surface	1	2	26.15	7.78	24.37	68.4	5.13	2.8	2.4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:09:18	3.4	Middle	2	1	26.07	7.77	24.94	67.7	5.13	2.9	2.8
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:09:57	3.4	Middle	2	2	26.1	7.77	24.75	67.8	5.13	2.8	2.4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:09:46	5.7	Bottom	3	1	26.11	7.77	24.82	67.6	5.13	2.9	4.9
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10A	11:09:09	5.7	Bottom	3	2	26.07	7.77	25.02	67.6	5.11	3	5.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10B	11:03:10	1.0	Surface	1	1	25.87	7.75	25.33	67.6	5.11	4.1	6.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10B	11:02:33	1.0	Surface	1	2	25.86	7.75	25.37	67.6	5.11	4.2	5.6
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10B	11:02:22	4.6	Bottom	3	1	25.84	7.75	25.44	67.3	5.08	4.2	6.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	SR10B	11:02:58	4.6	Bottom	3	2	25.79	7.75	25.69	67.1	5.07	4.6	7.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:03:43	1.0	Surface	1	1	27.14	7.91	19.29	77.4	5.53	6.4	4.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:02:54	1.0	Surface	1	2	27.11	7.9	19.38	75.4	5.38	6.1	3.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:02:45	3.9	Middle	2	1	26.93	7.84	24.92	77.5	5.4	5.4	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:03:31	3.9	Middle	2	2	26.97	7.86	24.26	72.6	5.06	8.5	3.4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:02:32	6.7	Bottom	3	1	26.93	7.82	25.23	72.3	5.05	8.3	3.7
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS2	14:03:16	6.7	Bottom	3	2	26.93	7.85	25.14	71	4.96	8.3	4.8
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:50:39	1.0	Surface	1	1	26.81	7.79	21.71	69.1	5.27	4.2	4.1
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:51:32	1.0	Surface	1	2	26.8	7.8	21.67	68.9	5.26	4.2	3.7
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:51:14	6.9	Middle	2	1	26.03	7.75	26.25	66.9	5.08	3.9	4.3
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:50:12	6.9	Middle	2	2	25.96	7.75	26.44	67.1	5.1	4	4.2
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:50:57	12.7	Bottom	3	1	25.93	7.74	26.66	66.9	5.06	3.9	4
HCLR	HY/2011/03	2013-09-04	Mid-Ebb	Rainy	CS(M)F5	11:50:02	12.7	Bottom	3	2	25.89	7.73	26.92	66.8	5.05	4	4.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:34:50	1.0	Surface	1	1	27.3	7.81	20.76	71.6	5.4	5.4	5.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:34:14	1.0	Surface	1	2	27.29	7.81	20.92	71.2	5.38	9.9	5.6
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:33:59	4.9	Middle	2	1	27.2	7.79	21.79	69.1	5.22	10.5	7.7
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:34:38	4.9	Middle	2	2	27.17	7.78	22.3	69.2	5.22	10.4	7.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:34:28	8.8	Bottom	3	1	27.19	7.78	22.32	69.6	5.24	10.4	8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	ISS	17:33:51	8.8	Bottom	3	2	27.18	7.78	22.35	69.3	5.22	11.1	8.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F6	17:42:43	1.0	Surface	1	1	27.27	7.83	21.09	72.8	5.5	12.5	6.3
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F6	17:42:07	1.0	Surface	1	2	27.26	7.83	21.1	73	5.52	12.9	6.7
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F6	17:42:35	2.1	Bottom	3	1	27.26	7.83	21.08	72.8	5.5	17.4	7.6
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F6	17:41:51	2.1	Bottom	3	2	27.26	7.82	21.08	72.7	5.48	18.1	7.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS7	17:49:24	1.0	Surface	1	1	27.17	7.82	20.99	73.8	5.57	9.3	7.6
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS7	17:49:49	1.0	Surface	1	2	27.18	7.83	20.88	73.9	5.59	9.7	7.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS7	17:49:17	2.2	Bottom	3	1	27.13	7.8	21.28	73.8	5.55	11.8	10.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS7	17:49:35	2.2	Bottom	3	2	27.18	7.81	21.27	73.7	5.54	12.1	11.5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS8	18:11:42	1.0	Surface	1	1	27	7.76	21.71	71.5	5.43	18.1	4.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS8	18:11:25	1.0	Surface	1	2	26.97	7.75	21.86	71.8	5.45	16.3	4.7
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS8	18:11:16	2.7	Bottom	3	1	26.93	7.72	24.1	71.9	5.42	17	4.5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS8	18:11:34	2.7	Bottom	3	2	26.95	7.72	24.47	71.4	5.4	15.8	4.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F9	17:54:27	1.0	Surface	1	1	27.11	7.8	20.19	73.7	5.57	9.9	2.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F9	17:54:13	1.0	Surface	1	2	27.1	7.8	20.33	73.6	5.58	10.4	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F9	17:54:20	2.3	Bottom	3	1	27	7.77	23.18	73.9	5.56	14.2	4.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS(M)F9	17:54:06	2.3	Bottom	3	2	27.08	7.78	23.11	73.8	5.57	13.3	4.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:10:15	1.0	Surface	1	1	27.18	7.89	19.71	73.6	5.24	11.4	3.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:09:28	1.0	Surface	1	2	27.19	7.88	19.6	73.1	5.21	11.2	4.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:09:07	5.3	Middle	2	1	27	7.85	22.36	71	5.06	11.2	4.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:09:52	5.3	Middle	2	2	26.99	7.86	22.59	70.7	5.03	11.3	3.3
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:08:55	9.5	Bottom	3	1	26.92	7.82	24.68	69	4.79	11.5	4.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	IS10	19:09:42	9.5	Bottom	3	2	26.9	7.83	24.57	68.5	4.76	11.3	4.7
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR3	17:23:46	0.8	Middle	2	1	27.31	7.82	20.76	73.3	5.54	9.1	9.6
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR3	17:23:37	0.8	Middle	2	2	27.29	7.81	20.88	73.4	5.54	8.8	9.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR4	18:05:10	1.0	Surface	1	1	27.27	7.77	21.1	69.3	5.24	8.7	3.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR4	18:04:40	1.0	Surface	1	2	27.1	7.75	21.33	69.4	5.24	8.5	5.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR4	18:04:35	2.7	Bottom	3	1	27.05	7.74	23.58	69.2	5.23	9.3	5.4
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR4	18:05:01	2.7	Bottom	3	2	26.93	7.71	23.49	69.1	5.22	10.1	3.3
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR5	18:58:19	1.0	Surface	1	1	27.18	7.74	20	77.3	5.49	6.3	6.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR5	18:58:36	1.0	Surface	1	2	27.16	7.78	20.66	76.5	5.42	6.4	6.5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR5	18:58:28	3.4	Bottom	3	1	27.16	7.75	21.07	77.2	5.45	6.2	5.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR5	18:58:11	3.4	Bottom	3	2	27.17	7.7	21.03	77	5.44	6.2	5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:23:18	1.0	Surface	1	1	26.18	7.75	25.79	71.9	5.46	5.3	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:22:37	1.0	Surface	1	2	26.47	7.74	25.35	71.6	5.45	5.2	2.3
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:22:23	3.6	Middle	2	1	25.91	7.75	26.76	71.1	5.4	5.8	2.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:23:00	3.6	Middle	2	2	25.89	7.75	26.82	71.3	5.4	5.8	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:22:50	6.1	Bottom	3	1	25.78	7.74	27.42	71.3	5.4	5.9	2.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10A	19:22:11	6.1	Bottom	3	2	25.78	7.75	27.37	71.1	5.39	6	2.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10B	19:34:48	1.0	Surface	1	1	26.14	7.76	25.11	71.4	5.43	5.7	3.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10B	19:35:09	1.0	Surface	1	2	26.22	7.76	25.52	71.9	5.46	5.6	3.5
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10B	19:34:38	4.8	Bottom	3	1	25.87	7.74	27.16	71.1	5.4	5.8	4
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	SR10B	19:34:57	4.8	Bottom	3	2	25.94	7.74	27.11	71.4	5.42	6.2	3.4
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:26:45	1.0	Surface	1	1	27.51	7.68	16.31	79.1	5.7	5.6	3.6
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:27:43	1.0	Surface	1	2	27.5	7.68	16.31	79.1	5.7	5.6	3.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:26:32	3.9	Middle	2	1	27.26	7.67	18.28	71.5	5.12	7	3.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:27:29	3.9	Middle	2	2	27.29	7.64	18.23	75.9	5.43	7.2	4.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:27:04	6.8	Bottom	3	1	27.06	7.51	21.79	70.3	4.96	7	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS2	17:26:12	6.8	Bottom	3	2	27.05	7.51	21.71	68.6	4.84	7.4	2.9
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:46:41	1.0	Surface	1	1	26.74	7.8	22.04	70.3	5.36	4.7	2.8
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:47:26	1.0	Surface	1	2	26.74	7.81	21.93	70.6	5.38	4.6	2.4
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:46:22	6.9	Middle	2	1	26.02	7.73	27.23	68	5.19	7	2.1
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:47:09	6.9	Middle	2	2	26.03	7.73	27.19	68.1	5.2	7.1	2.7
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:47:00	12.7	Bottom	3	1	26.05	7.73	27.25	67.5	5.11	7	3.2
HCLR	HY/2011/03	2013-09-04	Mid-Flood	Cloudy	CS(M)F5	18:46:14	12.7	Bottom	3	2	26.06	7.73	27.25	67.6	5.11	6.7	2.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:10:04	1.0	Surface	1	1	26.88	7.75	21.5	90.1	6.39	11.8	7
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:10:46	1.0	Surface	1	2	26.85	7.75	21.52	90.1	6.39	11.5	8.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:09:51	4.9	Middle	2	1	26.66	7.76	22.02	88.3	6.25	15.9	6.1
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:10:32	4.9	Middle	2	2	26.67	7.75	21.93	88.5	6.28	14.6	5.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:10:18	8.8	Bottom	3	1	26.68	7.75	22	89.5	6.34	16	5.7
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS5	14:09:42	8.8	Bottom	3	2	26.66	7.75	22.12	88.9	6.29	16.3	5.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS(M)F6	14:01:14	1.0	Surface	1	1	27.01	7.75	20.86	98.9	7.01	7.8	2.1
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS(M)F6	14:02:19	1.0	Surface	1	2	27.26	7.75	20.58	101.8	7.19	7.1	3.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)6	14:01:04	2.2	Bottom	3	1	26.9	7.75	20.96	98.6	7	15	2.7
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)6	14:02:03	2.2	Bottom	3	2	26.87	7.74	21.08	103.4	7.34	14.3	2.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS7	13:55:15	1.0	Surface	1	1	26.94	7.75	20.69	89	6.33	9.6	3.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS7	13:55:34	1.0	Surface	1	2	26.82	7.74	20.84	86.9	6.19	10.6	2.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS7	13:55:03	2.7	Bottom	3	1	26.52	7.72	23.22	86	6.06	13.8	5.1
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS7	13:55:27	2.7	Bottom	3	2	26.57	7.71	23.48	88.1	6.2	13.1	4.5
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS8	13:33:54	1.0	Surface	1	1	26.85	7.74	21.08	93.5	6.64	7.3	4.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS8	13:33:32	1.0	Surface	1	2	26.78	7.74	21.1	94	6.69	7.2	4.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS8	13:33:23	2.7	Bottom	3	1	26.67	7.74	21.4	94.4	6.71	7.9	7.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS8	13:33:43	2.7	Bottom	3	2	26.64	7.73	21.43	93	6.61	8.7	6.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)9	13:49:05	1.0	Surface	1	1	27.27	7.73	20.65	94.9	6.7	9.5	5.1
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)9	13:49:25	1.0	Surface	1	2	27.27	7.73	20.64	95	6.71	8.9	3.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)9	13:49:14	2.4	Bottom	3	1	27.11	7.73	21.04	94.4	6.68	15.1	5
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	ISM(F)9	13:48:54	2.4	Bottom	3	2	26.97	7.72	21.4	93.3	6.59	16	4.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:21:22	1.0	Surface	1	1	27.49	7.81	17.56	71.4	5.11	4	3.3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:22:18	1.0	Surface	1	2	27.53	7.8	17.56	73.1	5.23	4.1	3.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:21:07	5.4	Middle	2	1	26.96	7.8	20.52	70.3	5.03	6.5	3.3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:21:55	5.4	Middle	2	2	26.99	7.8	20.36	72.5	5.19	6.3	4.7
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:20:45	9.7	Bottom	3	1	27.05	7.77	20.9	67.3	4.78	7.6	3.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	IS10	13:21:42	9.7	Bottom	3	2	27.07	7.78	20.86	70.5	4.99	7.8	3.3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR3	14:17:37	0.8	Middle	2	1	26.9	7.75	21.47	92.3	6.54	8.4	6.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR3	14:17:43	0.8	Middle	2	2	26.91	7.75	21.48	85.3	6.55	8.3	7.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR4	13:39:19	1.0	Surface	1	1	26.8	7.71	18.81	85.3	6.14	6	3.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR4	13:38:50	2.5	Bottom	3	1	26.8	7.69	19.29	86.6	6.23	5.9	3.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR4	13:38:50	2.5	Bottom	3	2	26.75	7.67	21.05	88.1	6.26	6.4	5.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR4	13:39:09	2.5	Bottom	3	2	26.72	7.67	21.3	84.8	6.03	7.1	4.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR5	13:30:12	1.0	Surface	1	1	27.44	7.79	17.89	70.4	5.04	3.8	4.3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR5	13:29:41	1.0	Surface	1	2	27.36	7.79	18	69.9	5.01	4	3.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR5	13:29:29	3.4	Bottom	3	1	27.18	7.76	19.76	70	4.98	4.2	3.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR5	13:29:54	3.4	Bottom	3	2	27.11	7.77	20.21	69.4	4.93	4.2	3.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR5	12:17:11	1.0	Surface	1	1	25.77	7.72	26.4	72.1	5.06	4.3	3.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10A	12:18:00	1.0	Surface	1	1	25.88	7.73	26.16	72.8	5.1	4	3.4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10A	12:17:45	3.3	Middle	2	1	25.39	7.72	27.41	71.9	5.03	4.5	5.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10A	12:16:57	3.3	Middle	2	2	25.38	7.72	27.44	71.5	5.01	4.9	6.3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10A	12:16:42	5.6	Bottom	3	1	25.34	7.71	27.72	69.6	4.89	4.9	7.5
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10A	12:17:36	5.6	Bottom	3	2	25.36	7.72	27.55	69.9	4.9	4.7	8.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10B	12:11:13	1.0	Surface	1	1	25.48	7.69	27.31	71.3	5.01	6.9	8.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10B	12:11:37	1.0	Surface	1	2	25.52	7.7	27.17	71.5	5.03	6.7	9.5
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10B	12:11:24	4.1	Bottom	3	1	25.53	7.69	27.21	71	4.98	7.1	8.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	SR10B	12:11:03	4.1	Bottom	3	2	25.43	7.69	27.37	70.4	4.95	7.3	8.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	15:00:04	1.0	Surface	1	1	27.39	7.89	17.68	72.3	5.16	8.6	2.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	14:59:35	1.0	Surface	1	2	27.64	7.87	17.56	72.2	5.16	8.6	4
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	14:59:55	3.9	Middle	2	1	26.77	7.85	22.66	70.8	5.08	8.7	3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	14:59:19	3.9	Middle	2	2	26.75	7.87	22.92	71.1	5.09	8.7	3.8
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	14:58:59	6.8	Bottom	3	1	26.69	7.81	23.3	69.6	4.89	8.8	3.7
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS2	14:59:44	6.8	Bottom	3	2	27.02	7.81	23.38	71.3	4.99	8.8	3
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:57:38	1.0	Surface	1	1	26.92	7.76	20.48	82.6	5.88	4.8	4.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:58:23	1.0	Surface	1	2	26.95	7.75	20.38	83.6	5.95	4.9	3.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:58:06	6.5	Middle	2	1	25.69	7.72	26.13	72.9	5.13	5.5	5.9
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:57:22	6.5	Middle	2	2	25.67	7.73	26.21	73.1	5.15	5.3	5.2
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:57:54	12.0	Bottom	3	1	25.76	7.71	26.27	78.1	5.49	5.2	7.6
HCLR	HY/2011/03	2013-09-06	Mid-Ebb	Sunny	CS(M)F5	12:57:14	12.0	Bottom	3	2	25.7	7.72	26.38	76.6	5.38	5.3	6.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:27:30	1.0	Surface	1	1	27.31	7.72	20.71	84.7	5.98	11	11.8
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:28:03	1.0	Surface	1	2	27.13	7.72	21.02	81.5	5.76	10.7	11.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:27:14	4.7	Middle	2	1	27.2	7.72	20.93	83.7	5.92	10.7	11.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:27:53	4.7	Middle	2	2	26.96	7.71	21.4	81	5.72	11.5	12.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:27:03	8.4	Bottom	3	1	27.25	7.72	20.88	84.3	5.95	11.2	13.8
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	18:27:42	8.4	Bottom	3	2	27.05	7.71	21.28	82.9	5.86	12.1	14.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	ISM(F)6	18:34:58	1.0	Surface	1	1	27.25	7.7	20.62	84.7	5.98	15.1	11.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	ISM(F)6	18:35:18	1.0	Surface	1	2	27.26	7.7	20.61	84.5	5.97	15.1	11.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	ISM(F)6	18:34:46	2.2	Bottom	3	1	27.25	7.7	20.77	84.8	6	18.8	12.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	ISM(F)6	18:35:04	2.2	Bottom	3	2	27.25	7.7	20.74	84.5	5.96	17.9	13.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	18:41:58	1.0	Surface	1	1	27.21	7.7	20.6	80.2	5.67	9.8	14.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	18:42:20	1.0	Surface	1	2	27.2	7.7	20.53	79.8	5.64	10	15.8
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	18:41:47	2.4	Bottom	3	1	27.13	7.69	21	80	5.65	14.4	18.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	18:42:05	2.4	Bottom	3	2	27.14	7.68	22.1	79.3	5.58	15.1	17.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS8	19:06:05	1.0	Surface	1	1	26.84	7.69	21.58	75.5	5.35	10.2	5.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS8	19:06:28	1.0	Surface	1	2	26.94	7.7	21.43	75.6	5.35	9.8	5
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS8	19:05:55	2.8	Bottom	3	1	26.67	7.68	22.15	76.7	5.42	13.3	5.4
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS8	19:06:15	2.8	Bottom	3	2	26.66	7.68	22.15	75.5	5.35	12.9	5.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F9	18:49:07	1.0	Surface	1	1	27.22	7.71	20.45	83.3	5.9	11.8	18.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F9	18:48:48	1.0	Surface	1	2	27.26	7.71	20.57	84.6	5.98	11.2	18.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F9	18:48:58	2.3	Bottom	3	1	27.14	7.7	21.37	83.5	5.89	13.6	29.4
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F9	18:48:38	2.3	Bottom	3	2	27.13	7.7	21.45	84.5	5.95	14.8	30.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:53:40	1.0	Surface	1	1	27.23	7.83	18.79	72.6	5.19	8.6	9.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:54:20	1.0	Surface	1	2	27.27	7.83	20.82	72.9	5.2	8.6	10
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:53:29	5.3	Middle	2	1	26.93	7.81	20.81	72.9	5.16	8.6	10.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:54:07	5.3	Middle	2	2	26.97	7.82	20.6	72.4	5.13	8.6	9.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:53:54	9.6	Bottom	3	1	26.98	7.8	21.13	71.7	5.09	8.9	10.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS10	19:53:21	9.6	Bottom	3	2	27.02	7.8	21.14	72.1	5.12	8.9	10.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR3	18:14:05	0.9	Middle	2	1	27.34	7.73	20.65	91.2	6.44	11.1	11.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR3	18:14:13	0.9	Middle	2	2	27.35	7.72	20.64	89	6.28	11	10
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR4	18:59:32	1.0	Surface	1	1	26.86	7.74	20.93	75.8	5.38	13.7	12.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR4	18:59:18	1.0	Surface	1	2	26.8	7.75	21.33	76.5	5.42	13.4	13.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR4	18:59:10	2.5	Bottom	3	1	26.78	7.75	21.49	77.2	5.48	13.5	16.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR4	18:59:23	2.5	Bottom	3	2	26.81	7.74	21.41	75.9	5.38	13.4	14.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR5	19:42:44	1.0	Surface	1	1	27.21	7.81	19.34	74.7	5.32	9.2	10
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR5	19:42:25	1.0	Surface	1	2	27.22	7.81	19.26	75.6	5.39	8.7	10
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR5	19:42:18	3.6	Bottom	3	1	27.24	7.81	19.34	75.9	5.41	8.7	11.4
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR5	19:42:34	3.6	Bottom	3	2	27.16	7.8	19.8	75.1	5.34	9.1	11.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:17:45	1.0	Surface	1	1	26.31	7.7	24.27	70.8	5.13	6.9	6.8
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:18:24	1.0	Surface	1	2	26.12	7.7	24.63	71.8	5.07	6.8	8.4
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:17:29	3.4	Middle	2	1	25.87	7.71	25.6	71.2	5.02	8	9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:18:10	3.4	Middle	2	2	25.85	7.71	25.69	71.2	5.01	8	8.2
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:17:17	5.7	Bottom	3	1	25.81	7.71	25.85	71.3	5.02	8.3	8.4
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10A	20:17:58	5.7	Bottom	3	2	25.87	7.7	25.75	71.7	5.04	7.9	8.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10B	20:27:17	1.0	Surface	1	1	25.99	7.71	25.01	71.2	5.02	7.2	7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10B	20:26:50	1.0	Surface	1	2	25.94	7.71	25.23	71.1	5.01	7.4	6.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10B	20:27:02	4.3	Bottom	3	1	25.85	7.71	25.71	70.8	4.98	7.6	6.8
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	SR10B	20:26:35	4.3	Bottom	3	2	25.87	7.71	25.69	70.8	4.99	7.7	6.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:11:12	1.0	Surface	1	1	27.25	7.89	17.94	74.6	5.34	8.8	4.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:11:50	1.0	Surface	1	2	27.47	7.83	17.94	77	5.5	8.5	4.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:11:36	3.8	Middle	2	1	27.31	7.83	19.05	77.2	5.49	8.5	5.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:11:03	3.8	Middle	2	2	27.25	7.87	18.51	74.3	5.32	8.7	5
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:11:23	6.5	Bottom	3	1	27.25	7.83	19.67	75.3	5.36	8.8	4.7
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS2	18:10:48	6.5	Bottom	3	2	27.05	7.9	19.71	70.4	5.02	8.8	4.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS(M)F5	19:44:06	1.0	Surface	1	1	27.1	7.71	20.39	77.4	5.49	5.3	4.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS(M)F5	19:43:07	1.0	Surface	1	2	27.12	7.71	20.46	77	5.46	5.4	4.5
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	CS(M)F5	19:43:29	12.4	Bottom	3	1	26.18	7.69	24.21	68.9	4.86	7.8	5
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:30:13	1.0	Surface	1	1	28	7.73	20.45	78.8	5.51	8.5	9.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:31:10	1.0	Surface	1	2	27.99	7.73	20.47	78.5	5.49	8.9	10.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:29:53	4.5	Middle	2	1	27.94	7.73	20.54	77.9	5.45	9.8	10.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:30:52	4.5	Middle	2	2	27.94	7.73	20.54	77.9	5.45	9.8	10.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:29:33	8.0	Bottom	3	1	27.85	7.73	20.6	78.1	5.47	10.3	9.3
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS5	14:30:35	8.0	Bottom	3	2	27.85	7.73	20.58	78.5	5.49	10.1	10.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F6	14:38:18	1.0	Surface	1	1	28.33	7.7	19.09	83.5	5.84	4.7	6.1
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F6	14:39:09	1.0	Surface	1	2	28.16	7.71	19.11	84.1	5.89	4.6	6.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F6	14:37:58	2.2	Bottom	3	1	28.16	7.68	19.45	83	5.8	5.3	6.9
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS(M)F6	14:38:44	2.2	Bottom	3	2	28.21	7.7	19.44	83.7	5.85	5.1	5.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	14:46:51	1.0	Surface	1	1	28.09	7.7	19.27	84.4	5.93	5.6	6.6
HCLR	HY/2011/03	2013-09-06	Mid-Flood	Sunny	IS7	14:46:14	1.0	Surface	1	2	28.14	7.7	19.23	84.4	5.9	5.7	5.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS7	14:45:54	2.3	Bottom	3	1	27.96	7.69	19.37	83.1	5.84	6.6	5.7
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS7	14:46:33	2.3	Bottom	3	2	27.89	7.69	19.36	82.5	5.8	6.5	5
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS8	15:19:39	1.0	Surface	1	1	28.01	7.62	19.27	80.5	5.65	5.3	6.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS8	15:20:14	1.0	Surface	1	2	28.01	7.63	19.29	79.8	5.6	5.4	6.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS8	15:19:56	2.5	Bottom	3	1	27.93	7.62	19.72	79.7	5.59	5.7	6.9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS8	15:19:12	2.5	Bottom	3	2	27.88	7.61	19.72	80.5	5.65	5.7	6.5
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS(M)F9	14:56:03	1.0	Surface	1	1	28.19	7.71	19.3	84.4	5.91	5.9	6.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS(M)F9	14:55:16	1.0	Surface	1	2	28.18	7.7	19.31	84.2	5.89	5.7	4.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS(M)F9	14:55:43	2.4	Bottom	3	1	28.01	7.7	19.33	84	5.89	6.2	10.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS(M)F9	14:54:57	2.4	Bottom	3	2	28.03	7.69	19.36	84.1	5.9	6.2	9.9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:20:05	1.0	Surface	1	1	27.92	7.86	17.83	73.3	5.25	10.5	5.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:19:28	1.0	Surface	1	2	27.98	7.86	17.81	73.8	5.28	10.5	5
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:19:54	5.1	Middle	2	1	27.28	7.82	21.15	72.7	5.15	10.5	5.3
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:19:15	5.1	Middle	2	2	27.16	7.82	21.32	72.3	5.12	10.4	5.2
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:19:41	9.2	Bottom	3	1	27.22	7.8	22.31	70.8	5.04	11	6.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	IS10	15:19:07	9.2	Bottom	3	2	27.19	7.8	22.28	70.6	5.03	10.6	7.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR3	14:11:30	0.6	Middle	2	1	28.05	7.69	20.44	80.8	5.65	7.4	6.3
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR3	14:11:47	0.6	Middle	2	2	28.06	7.7	20.39	80.9	5.65	7.6	7.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR4	15:11:15	1.0	Surface	1	1	28.65	7.65	17.43	78.3	5.5	5.6	6.9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR4	15:10:34	1.0	Surface	1	2	28.62	7.64	17.48	78.7	5.56	5.6	7.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR4	15:10:59	2.4	Bottom	3	1	28.31	7.64	18.87	79.2	5.53	6.8	7.7
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR4	15:10:09	2.4	Bottom	3	2	28.26	7.62	18.86	79.6	5.58	6.7	9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR5	15:06:15	1.0	Surface	1	1	27.91	7.85	17.81	71.2	5.02	6.4	5.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR5	15:06:32	1.0	Surface	1	2	27.92	7.84	17.86	70.8	5.02	6.3	5.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR5	15:06:07	3.5	Bottom	3	1	27.7	7.83	19.9	69.3	4.88	6.1	5.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR5	15:06:23	3.5	Bottom	3	2	27.72	7.82	19.91	69.3	4.88	6.6	6.3
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:16:26	1.0	Surface	1	1	26.86	7.75	23.47	74	5.16	3.9	4.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:15:16	1.0	Surface	1	2	26.88	7.75	23.51	73.8	5.16	4	4.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:16:05	3.2	Middle	2	1	26.55	7.75	25.44	73	5.08	3.9	4.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:14:49	3.2	Middle	2	2	26.56	7.74	25.39	73	5.08	3.7	5.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:14:30	5.4	Bottom	3	1	26.52	7.74	25.57	74.3	5.16	3.7	5.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10A	16:15:36	5.4	Bottom	3	2	26.51	7.74	25.65	73.9	5.14	3.8	5
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10B	16:28:54	1.0	Surface	1	1	27.13	7.76	23.95	73.3	5.11	3.2	3.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10B	16:28:16	1.0	Surface	1	2	27.17	7.76	23.95	73.5	5.12	3.3	3.2
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10B	16:27:56	4.2	Bottom	3	1	26.55	7.75	26.2	73.3	5.09	3.4	3.9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	SR10B	16:28:34	4.2	Bottom	3	2	26.57	7.75	26.2	72.7	5.05	3.4	3.3
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:42:10	1.0	Surface	1	1	28.2	7.96	17.19	72.2	5.12	9.5	3.4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:41:35	1.0	Surface	1	2	27.8	8.03	17.38	70.7	5.04	9.9	2.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:41:29	3.9	Middle	2	1	27.5	8.01	21.18	71.6	5.02	9.6	4
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:41:58	3.9	Middle	2	2	27.58	7.96	19.95	72	5.11	9.3	2.9
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:41:50	6.8	Bottom	3	1	27.59	7.94	21.57	71.2	4.98	9.8	5.1
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS2	13:41:13	6.8	Bottom	3	2	27.42	8.05	21.67	69.7	4.89	9.8	4.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS(M)F5	15:52:20	1.0	Surface	1	1	27.64	7.77	18.53	81.3	5.74	4.5	4.8
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS(M)F5	15:51:20	1.0	Surface	1	2	27.73	7.76	18.47	80.8	5.7	4.4	5.5
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS(M)F5	15:51:02	6.5	Middle	2	1	26.85	7.73	23.45	74.1	5.17	5.1	6
HCLR	HY/2011/03	2013-09-09	Mid-Ebb	Sunny	CS(M)F5	15:52:01	6.5	Middle	2	2	26.87	7.73	23.52	73.9	5.16	5	6.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS5	09:58:11	1.0	Surface	1	2	27.53	7.69	20.14	74.8	5.28	6.9	10.9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS5	09:57:48	4.7	Middle	2	1	27.5	7.68	20.36	73.8	5.2	7.3	10.6
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS5	09:56:32	4.7	Middle	2	2	27.52	7.68	20.33	74	5.21	7.5	9.7
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS5	09:56:07	8.4	Bottom	3	1	27.33	7.67	20.65	73.1	5.15	8.4	9.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS5	09:57:29	8.4	Bottom	3	2	27.33	7.67	20.65	72.9	5.14	8.4	9.5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)F6	09:46:17	1.0	Surface	1	1	27.64	7.67	19.15	77.2	5.47	6.2	3.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)F6	09:46:59	1.0	Surface	1	2	27.65	7.67	19.12	77.1	5.46	6.1	4.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)F6	09:45:58	2.3	Bottom	3	1	27.64	7.67	19.43	77.1	5.45	6.4	4.9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)F6	09:46:35	2.3	Bottom	3	2	27.64	7.67	19.39	77.1	5.46	6.5	5.5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS7	09:36:20	1.0	Surface	1	1	27.57	7.65	19.31	75.5	5.35	6.6	7.3
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS7	09:36:59	1.0	Surface	1	2	27.55	7.65	19.27	75.4	5.34	6.5	8.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS7	09:36:02	2.4	Bottom	3	1	27.47	7.64	19.71	75.9	5.38	7.7	7.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS7	09:36:41	2.4	Bottom	3	2	27.45	7.65	19.73	75.3	5.33	7.6	8.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS8	09:09:51	1.0	Surface	1	1	27.42	7.61	19.23	71.9	5.11	6.4	3.6
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS8	09:09:08	1.0	Surface	1	2	27.43	7.59	19.24	71.3	5.06	6.2	3.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS8	09:08:45	2.7	Bottom	3	1	27.4	7.58	19.45	71.2	5.05	6.6	3.6
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS8	09:09:31	2.7	Bottom	3	2	27.41	7.6	19.43	71.7	5.08	7	4.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)/9	09:28:17	1.0	Surface	1	1	27.52	7.62	19.03	70.7	5.02	6.2	5.5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)/9	09:28:56	1.0	Surface	1	2	27.5	7.63	19.11	71.5	5.06	6.3	5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)/9	09:27:59	2.5	Bottom	3	1	27.48	7.61	19.69	71.1	5.03	6.7	5.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS(M)/9	09:28:39	2.5	Bottom	3	2	27.45	7.61	19.76	71.5	5.05	6.7	5.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:18:56	1.0	Surface	1	1	27.5	7.83	18.37	70.8	5.04	10.2	3.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:20:09	1.0	Surface	1	2	27.5	7.83	18.33	70.5	5.03	10.3	4.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:19:55	5.3	Middle	2	1	27.29	7.82	20.26	70.6	5.02	10.5	5.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:18:45	5.3	Middle	2	2	27.3	7.82	20.19	70.6	5	10.4	7.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:19:10	9.5	Bottom	3	1	27.25	7.79	21.83	68.9	4.83	10.6	6.5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	IS10	09:18:12	9.5	Bottom	3	2	27.28	7.79	21.79	69.4	4.88	10.7	6.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR3	10:09:41	0.7	Middle	2	1	27.52	7.62	20.04	79.5	5.61	8.4	8.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR3	10:09:17	0.7	Middle	2	2	27.53	7.6	20.06	80.1	5.65	8.2	8.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR4	09:18:59	1.0	Surface	1	1	27.41	7.58	18.31	72.7	5.19	7.3	9.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR4	09:18:14	1.0	Surface	1	2	27.41	7.56	18.31	73	5.21	7.5	10.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR4	09:18:34	2.5	Bottom	3	1	27.41	7.57	18.28	71.9	5.13	7.8	9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR4	09:17:48	2.5	Bottom	3	2	27.41	7.55	18.28	71.8	5.13	7.9	10.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR5	09:26:34	1.0	Surface	1	1	27.57	7.8	17.01	70.2	5.04	9.8	9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR5	09:26:17	1.0	Surface	1	2	27.58	7.81	17.18	70.2	5.03	9.5	9.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR5	09:26:26	3.6	Bottom	3	1	27.48	7.78	19.2	69.7	4.95	11.5	10.7
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR5	09:26:07	3.6	Bottom	3	2	27.47	7.79	19.28	69.9	4.96	11.8	10.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:12:40	1.0	Surface	1	1	27.18	7.67	22.07	72.7	5.13	4.8	5.3
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:13:44	1.0	Surface	1	2	27.15	7.67	22.11	73.1	5.16	4.8	5.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:13:25	3.3	Middle	2	1	26.83	7.67	22.71	71.5	5.01	4.5	6.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:12:21	3.3	Middle	2	2	26.85	7.67	22.74	71.5	5.02	4.5	6.5
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:13:03	5.6	Bottom	3	1	26.79	7.67	23.23	70.7	4.95	4.7	7.6
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10A	08:12:01	5.6	Bottom	3	2	26.78	7.66	23.26	70.8	4.96	4.7	8.6
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10B	07:57:31	1.0	Surface	1	1	26.29	7.73	25.95	72.2	5.03	13.9	18.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10B	07:56:40	1.0	Surface	1	2	26.29	7.72	25.96	72.7	5.07	14.2	19.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10B	07:57:11	4.4	Bottom	3	1	26.24	7.72	26.11	71.9	5.01	14.5	19.9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	SR10B	07:56:21	4.4	Bottom	3	2	26.24	7.71	26.11	72.4	5.04	14.7	21.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:50:38	1.0	Surface	1	1	27.6	7.83	17.55	74.4	5.36	8.8	7.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:49:47	1.0	Surface	1	2	27.56	7.83	17.73	74.2	5.35	8.8	7
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:50:23	4.0	Middle	2	1	27.29	7.81	20.93	73.1	5.2	10.5	10.1
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:49:33	4.0	Middle	2	2	27.28	7.81	21.16	73.1	5.19	10.6	11.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:49:16	6.9	Bottom	3	1	27.28	7.79	21.27	72.6	5.17	11.8	12.3
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS2	10:50:06	6.9	Bottom	3	2	27.29	7.78	21.22	72.8	5.19	11.4	11
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:38:57	1.0	Surface	1	1	27.29	7.68	20.09	74.4	5.27	5.4	5.7
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:40:00	1.0	Surface	1	2	27.25	7.69	20.12	74.1	5.25	5.5	6.8
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:39:39	6.7	Middle	2	1	26.77	7.67	23.44	72.4	5.1	5.8	6.2
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:38:34	6.7	Middle	2	2	26.74	7.66	23.36	72.2	5.07	5.7	5.4
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:38:11	12.4	Bottom	3	1	26.48	7.64	24.72	72.1	5.03	6.4	6.9
HCLR	HY/2011/03	2013-09-09	Mid-Flood	Sunny	CS(M)/5	08:39:19	12.4	Bottom	3	2	26.43	7.64	24.69	72.1	5.02	6.5	7.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:20:33	1.0	Surface	1	1	28.46	7.81	20.39	90.3	6.26	6.3	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:19:48	1.0	Surface	1	2	28.57	7.82	20.3	92.2	6.38	6.3	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:19:34	4.6	Middle	2	1	28.32	7.79	20.56	88.6	6.15	6.7	3.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:20:24	4.6	Middle	2	2	28.36	7.79	20.53	90.1	6.25	6.3	3.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:19:25	8.1	Bottom	3	1	28.22	7.79	20.76	87.7	6.09	6.6	3.8
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS5	16:20:06	8.1	Bottom	3	2	28.31	7.8	20.62	89.2	6.18	6.6	5.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)/6	16:26:59	1.0	Surface	1	1	28.83	7.81	18.57	97.6	6.78	4.3	2.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)/6	16:26:45	1.0	Surface	1	2	28.85	7.81	18.55	97.5	6.75	4.4	3.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)/6	16:26:52	2.5	Bottom	3	1	28.88	7.8	18.71	97	6.75	4.4	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)/6	16:26:35	2.5	Bottom	3	2	28.77	7.8	19.71	97	6.74	4.4	3.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS7	16:33:50	1.0	Surface	1	1	28.62	7.8	19.01	96.4	6.71	4.3	5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS7	16:34:17	1.0	Surface	1	2	28.92	7.81	18.71	97	6.73	4.4	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS7	16:34:03	2.3	Bottom	3	1	28.65	7.8	19.07	95.9	6.67	4.8	5.8
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS7	16:33:46	2.3	Bottom	3	2	28.61	7.8	19.12	96.1	6.69	4.5	5.3
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS8	15:54:49	1.0	Surface	1	1	28.59	7.75	18.81	90.3	6.29	4.8	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS8	15:54:24	1.0	Surface	1	2	28.48	7.75	18.96	89.7	6.25	4.6	4.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS8	15:54:36	2.4	Bottom	3	1	28.51	7.75	18.99	89.3	6.23	4.8	4.3
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS8	15:54:18	2.4	Bottom	3	2	28.47	7.75	19.08	89.1	6.22	4.9	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)F9	16:41:51	1.0	Surface	1	1	28.82	7.8	18.87	96.7	6.71	4.2	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)F9	16:42:15	1.0	Surface	1	2	28.81	7.8	18.87	96.1	6.67	4.3	3.7
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)F9	16:41:34	2.4	Bottom	3	1	28.69	7.79	18.96	96.2	6.69	4.6	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS(M)F9	16:42:01	2.4	Bottom	3	2	28.68	7.79	18.96	95.9	6.67	4.6	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:52:22	1.0	Surface	1	1	28.27	7.92	18.45	72.5	5.1	5.2	4.7
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:53:04	1.0	Surface	1	2	28.27	7.92	18.44	72.2	5.08	5.1	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:52:01	5.1	Middle	2	1	27.69	7.92	20.58	71.3	5.02	5.7	5.8
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:52:45	5.1	Middle	2	2	27.63	7.9	20.58	71.4	5.02	5.5	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:51:45	9.2	Bottom	3	1	27.49	7.89	22.31	68.4	4.77	5.7	4.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	IS10	16:52:35	9.2	Bottom	3	2	27.57	7.88	22.29	69.6	4.85	5.7	4.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR3	16:14:13	0.6	Middle	2	1	28.66	7.86	20.24	98.7	6.82	4.8	5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR3	16:14:12	0.6	Middle	2	2	28.66	7.87	20.24	98.3	6.82	4.1	3.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR4	15:47:12	1.0	Surface	1	1	28.98	7.8	18.22	91.3	6.34	4.2	7.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR4	15:46:57	1.0	Surface	1	2	29.07	7.82	18.04	94.5	6.54	4.4	7.7
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR4	15:46:46	2.4	Bottom	3	1	28.97	7.85	19.05	91.8	6.37	4.6	6.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR4	15:47:02	2.4	Bottom	3	2	28.91	7.81	18.46	90.8	6.31	4.5	6.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR5	16:41:19	1.0	Surface	1	1	28.11	7.96	18.47	73.9	5.2	4.5	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR5	16:40:56	1.0	Surface	1	2	28.04	7.99	18.5	73.7	5.18	4.6	3.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR5	16:41:06	3.5	Bottom	3	1	27.99	7.96	19.95	73.7	5.19	4.8	4.7
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR5	16:40:46	3.5	Bottom	3	2	27.77	8	19.98	73.5	5.15	4.7	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:40:03	1.0	Surface	1	1	27.62	7.82	24.21	81.6	5.61	1.7	2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:40:24	1.0	Surface	1	2	27.65	7.81	24.13	80.9	5.57	1.8	1.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:40:17	3.1	Middle	2	1	27.61	7.81	24.22	80.2	5.52	1.9	2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:39:58	3.1	Middle	2	2	27.6	7.82	24.29	81.2	5.59	1.7	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:40:10	5.2	Bottom	3	1	27.63	7.81	24.25	80.6	5.55	1.9	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10A	17:39:54	5.2	Bottom	3	2	27.63	7.82	24.27	81.1	5.58	1.8	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10B	17:49:26	1.0	Surface	1	1	27.63	7.81	24.12	80.2	5.52	1.9	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10B	17:49:50	1.0	Surface	1	2	27.64	7.8	24.09	80.1	5.51	1.7	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10B	17:49:15	3.6	Bottom	3	1	27.63	7.81	24.14	80.2	5.52	1.9	5.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	SR10B	17:49:34	3.6	Bottom	3	2	27.6	7.81	24.21	79.9	5.5	1.9	6.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:16:24	1.0	Surface	1	1	28.52	8.11	16.7	77.8	5.5	7.7	2.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:16:24	1.0	Surface	1	2	28.61	8.17	16.71	78.3	5.52	7.9	3.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:16:11	3.9	Middle	2	1	27.82	8.17	20.74	76.2	5.32	10.1	3.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:16:46	3.9	Middle	2	2	27.93	8.08	20.31	75.3	5.45	10.2	3.4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:16:34	6.8	Bottom	3	1	28.06	8.09	20.91	78.7	5.3	11.6	5.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS2	15:15:52	6.8	Bottom	3	2	27.76	8.25	21.24	73.9	5.17	11.2	5.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:15:51	1.0	Surface	1	1	28.36	7.83	20.5	83.4	5.79	3.1	3.3
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:15:15	1.0	Surface	1	2	28.23	7.83	20.62	81.1	5.63	3	4.9
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:15:37	6.7	Middle	2	1	27.08	7.81	25.11	80.5	5.51	3.2	4
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:15:00	6.7	Middle	2	2	27.03	7.81	25.78	76.6	5.26	3.4	3.5
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:14:50	12.3	Bottom	3	1	27.06	7.79	25.97	76.8	5.31	3.5	4.6
HCLR	HY/2011/03	2013-09-11	Mid-Ebb	Sunny	CS(M)F5	17:15:29	12.3	Bottom	3	2	27.32	7.79	26.18	74.5	5.13	3.4	4.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:34:08	1.0	Surface	1	1	28.13	7.72	19.64	87.6	6.12	4.3	5.4
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:33:29	1.0	Surface	1	2	28.03	7.71	19.75	80.9	5.66	4.3	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:33:51	4.6	Middle	2	1	27.74	7.69	20.31	84.9	5.92	4.7	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:33:20	4.6	Middle	2	2	27.74	7.68	20.2	77.2	5.39	4.6	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:33:15	8.2	Bottom	3	1	27.72	7.68	21.16	76.4	5.36	4.8	5.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS5	11:33:46	8.2	Bottom	3	2	27.76	7.69	21.14	81.8	5.74	4.6	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F6	11:26:35	1.0	Surface	1	1	28.21	7.71	18.98	88.8	6.22	5	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F6	11:26:14	1.0	Surface	1	2	28.21	7.69	18.77	88.8	6.23	4.9	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F6	11:26:28	2.5	Bottom	3	1	28.19	7.7	19.42	88.6	6.2	5.3	4.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS7	11:20:22	1.0	Surface	1	2	28.26	7.69	19.61	88.9	6.2	5.2	3.5
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS7	11:20:22	1.0	Surface	1	1	28.17	7.7	19.14	88.7	6.21	6.2	4
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS7	11:20:07	1.0	Surface	1	2	28.14	7.7	19.21	88.9	6.23	6.4	5.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS7	11:20:03	2.4	Bottom	3	1	28.17	7.7	19.19	88.9	6.23	6.6	4.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS8	10:58:47	1.0	Surface	1	2	27.96	7.7	19.32	88.7	6.21	6.32	4.9
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS8	10:58:56	1.0	Surface	1	1	27.96	7.63	18.66	81	5.7	6.2	2.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS8	10:58:56	1.0	Surface	1	2	27.96	7.63	18.83	80.2	5.65	6.1	2.9
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS8	10:58:39	2.6	Bottom	3	1	27.96	7.64	18.79	80.4	5.67	6.2	2.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS8	10:58:51	2.6	Bottom	3	2	27.96	7.63	18.76	80	5.63	6.4	3.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F9	11:14:29	1.0	Surface	1	1	28.04	7.66	18.85	81.9	5.74	5.6	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F9	11:14:14	1.0	Surface	1	2	28.06	7.66	18.75	82.6	5.81	5.6	2.5
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F9	11:14:03	2.3	Bottom	3	1	28.03	7.66	18.88	82.2	5.78	6	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS(M)F9	11:14:22	2.3	Bottom	3	2	28.03	7.65	19.36	81.7	5.75	5.9	2.7
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:04:29	1.0	Surface	1	1	28.02	7.87	18.62	72.1	5.08	10.3	4.7
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:05:04	1.0	Surface	1	2	27.99	7.87	18.7	71.9	5.07	10.2	5.7
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:04:52	5.4	Middle	2	1	27.75	7.87	19.69	71.1	5.02	10.8	6.4
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:04:17	5.4	Middle	2	2	27.79	7.87	19.69	71.4	5.04	11.4	7.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:04:05	9.7	Bottom	3	1	27.76	7.85	21.67	71.6	4.99	12.3	9.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	IS10	11:04:44	9.7	Bottom	3	2	27.72	7.84	21.72	71	4.95	11.8	8.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR3	11:39:47	0.8	Middle	2	1	28.15	7.73	19.63	91.9	6.42	4.2	5.5
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR3	11:39:41	0.8	Middle	2	2	28.15	7.73	19.63	91.8	6.42	4.3	4.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR4	11:04:37	1.0	Surface	1	1	28.05	7.63	18.08	82.7	5.84	5.6	5.3
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR4	11:04:25	1.0	Surface	1	2	28.05	7.63	18.07	83.9	5.92	5.6	4.9
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR4	11:04:20	2.3	Bottom	3	1	28.05	7.63	18.09	83.3	5.88	5.6	4.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR4	11:04:31	2.3	Bottom	3	2	28.05	7.63	18.07	82.4	5.82	5.7	5.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR5	11:12:23	1.0	Surface	1	1	28.06	7.86	18.69	73.7	5.2	7.3	7.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR5	11:12:04	1.0	Surface	1	2	28	7.86	18.84	73.7	5.2	7.4	8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR5	11:11:58	3.5	Bottom	3	1	27.96	7.86	19.22	73.6	5.18	7.6	7.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR5	11:12:11	3.5	Bottom	3	2	27.99	7.85	19.08	73.6	5.18	7.6	6.4
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:30	1.0	Surface	1	1	27.49	7.71	21.45	74.7	5.21	2.8	2.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:52	1.0	Surface	1	2	27.53	7.71	21.23	74.6	5.22	2.6	2.3
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:47	3	Middle	2	1	27.44	7.71	21.54	74.4	5.19	2.7	2.3
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:24	3	Middle	2	2	27.38	7.71	22.18	74.4	5.2	3	2.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:18	5	Bottom	3	1	27.4	7.7	22.49	74.3	5.19	3.1	2.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10A	10:04:40	5	Bottom	3	2	27.43	7.7	22.57	74.2	5.18	2.9	3.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10B	09:58:48	1.0	Surface	1	1	27.47	7.73	20.95	75.9	5.29	2.7	2.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10B	09:59:02	1.0	Surface	1	2	27.57	7.72	20.81	75.7	5.31	2.7	2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10B	09:58:55	4.0	Bottom	3	1	27.57	7.72	21.8	75.8	5.28	2.8	2.5
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	SR10B	09:58:43	4.0	Bottom	3	2	27.46	7.72	22.06	75.3	5.28	2.9	3.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:44:17	1.0	Surface	1	1	28.09	7.87	17.97	72.3	5.12	9.1	5.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:43:37	1.0	Surface	1	2	28.1	7.87	17.86	71.9	5.09	9.5	6.6
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:43:20	4.0	Middle	2	1	27.61	7.85	21.16	71	5.02	10.2	7.2
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:43:59	4.0	Middle	2	2	27.63	7.85	21	71.7	5.07	10.3	8.3
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:43:09	6.9	Bottom	3	1	27.6	7.83	21.26	71.3	4.99	10.6	15.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS2	12:43:49	6.9	Bottom	3	2	27.68	7.84	21.11	70.5	4.93	10.3	16.8
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:26	1.0	Surface	1	1	27.61	7.72	20.06	74.8	5.16	3.1	2.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:58	1.0	Surface	1	2	27.52	7.72	20.35	73.3	5.08	3	2.1
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:16	6.8	Middle	2	1	27	7.71	23.93	73.3	5.16	3.3	4.4
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:48	6.8	Middle	2	2	26.99	7.71	23.82	72.3	5.05	3.2	3.3
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:08	12.5	Bottom	3	1	27.19	7.67	25.2	72.1	5.02	3.5	3.5
HCLR	HY/2011/03	2013-09-11	Mid-Flood	Sunny	CS(M)F5	10:31:39	12.5	Bottom	3	2	27.19	7.68	25.15	71.1	4.95	3.6	4.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:37:11	1.0	Surface	1	1	28.03	7.83	20.93	77.6	5.4	6.4	2.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:37:36	1.0	Surface	1	2	28.06	7.83	20.97	78	5.43	6.5	2.2
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:37:02	4.2	Middle	2	1	27.88	7.85	21.67	75.7	5.26	7.6	2.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:37:26	4.2	Middle	2	2	27.77	7.84	21.97	76.2	5.3	7.7	3.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:36:53	7.3	Bottom	3	1	27.77	7.82	24.53	76.8	5.26	7.8	2.7
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS5	07:37:20	7.3	Bottom	3	2	27.86	7.81	24.35	77.9	5.34	7.9	2.5
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F6	07:29:45	1.0	Surface	1	1	28.44	7.8	19.97	83.9	5.84	12.2	6.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F6	07:30:08	1.0	Surface	1	2	28.43	7.78	20.01	84	5.84	12.3	6.5
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F6	07:29:57	2.3	Bottom	3	1	28.42	7.78	21.04	84.4	5.83	14.7	6.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F6	07:29:37	2.3	Bottom	3	2	28.43	7.78	20.59	83.5	5.79	14.5	6.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS7	07:23:49	1.0	Surface	1	1	28.32	7.78	20.39	80.4	5.59	6	3.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS7	07:23:29	1.0	Surface	1	2	28.33	7.77	20.67	77.9	5.4	6.1	3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS7	07:23:15	2.2	Bottom	3	1	28.04	7.75	21.77	75.1	5.21	8.1	2
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS7	07:23:37	2.2	Bottom	3	2	28.23	7.76	21.17	77.9	5.4	8.3	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS8	07:01:19	1.0	Surface	1	1	28.29	7.81	20.12	81.6	5.68	7.4	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS8	07:01:40	1.0	Surface	1	2	28.3	7.82	20.13	85.4	5.95	7.4	2.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS8	07:01:28	2.8	Bottom	3	1	28.21	7.81	21.15	84.2	5.84	7.6	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS8	07:01:08	2.8	Bottom	3	2	28.08	7.77	21.53	78.6	5.45	7.4	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F9	07:17:33	1.0	Surface	1	1	28.31	7.79	20.59	82.6	5.74	10.6	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F9	07:17:08	1.0	Surface	1	2	28.26	7.79	20.5	82.2	5.71	10.5	3.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F9	07:17:00	2.6	Bottom	3	1	28.18	7.78	21.47	82.7	5.73	10.8	2.6
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS(M)F9	07:17:19	2.6	Bottom	3	2	28.09	7.77	21.54	80.9	5.61	10.8	2.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:49	1.0	Surface	1	1	28.25	7.89	17.22	79.1	5.6	1.5	0.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:18	1.0	Surface	1	2	28.26	7.89	17.18	79	5.59	1.5	0.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:38	5.6	Middle	2	1	28.2	7.89	17.37	78.9	5.58	1.5	0.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:07	5.6	Middle	2	2	28.2	7.89	17.43	78.9	5.59	1.5	0.7
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:28	10.1	Bottom	3	1	28.19	7.88	17.9	78.6	5.55	1.5	0.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	IS10	06:33:01	10.1	Bottom	3	2	28.24	7.89	17.41	78.7	5.57	1.4	0.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR3	07:46:22	0.7	Middle	2	1	28.15	7.8	20.75	82	5.7	4.4	4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR3	07:46:13	0.7	Middle	2	2	28.16	7.8	20.81	81.8	5.69	4.2	3.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR4	07:06:08	1.0	Surface	1	1	28.29	7.75	20.07	75.2	5.24	9	5.2
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR4	07:06:31	1.0	Surface	1	2	28.29	7.74	20.18	75.3	5.24	8.9	5.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR4	07:05:59	2.7	Bottom	3	1	28.26	7.73	21.18	75.5	5.23	10.8	5.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR4	07:06:21	2.7	Bottom	3	2	28.27	7.73	21.03	75.7	5.25	10.5	5.7
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR5	06:37:45	1.0	Surface	1	1	28.22	7.89	16.82	78.9	5.6	1.3	1.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR5	06:37:25	1.0	Surface	1	2	28.23	7.88	17.28	78.8	5.58	1.3	1.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR5	06:37:15	4.1	Bottom	3	1	28.19	7.88	17.55	78.3	5.54	1.4	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR5	06:37:39	4.1	Bottom	3	2	28.19	7.88	17.6	78.5	5.55	1.3	2.7
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:48:33	1.0	Surface	1	1	27.94	7.79	21.44	82.1	5.71	1.8	0.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:47:59	1.0	Surface	1	2	27.95	7.79	21.45	82	5.7	1.9	0.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:48:18	3.2	Middle	2	1	27.94	7.79	21.64	81.9	5.69	1.8	1.8
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:47:51	3.2	Middle	2	2	27.94	7.79	21.74	81.9	5.68	1.8	1.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:47:44	5.3	Bottom	3	1	27.94	7.79	21.76	81.9	5.69	1.8	1.5
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10A	05:48:09	5.3	Bottom	3	2	27.96	7.79	21.58	81.9	5.69	1.8	1.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10B	05:41:45	1.0	Surface	1	1	27.81	7.82	22.86	81.2	5.61	2.5	2.6
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10B	05:42:05	1.0	Surface	1	2	27.8	7.82	23.12	80.7	5.58	2.5	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10B	05:41:35	3.9	Bottom	3	1	27.8	7.82	23.43	81.3	5.6	2.6	2.6
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	SR10B	05:41:57	3.9	Bottom	3	2	27.79	7.82	23.46	80.8	5.57	2.5	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:46:47	1.0	Surface	1	1	28.3	7.88	17.11	75.7	5.36	1.7	1.7
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:47:14	1.0	Surface	1	2	28.34	7.88	16.84	75.8	5.37	1.7	1.6
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:47:05	4.1	Middle	2	1	28.27	7.88	17.55	75.5	5.36	1.7	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:46:41	4.1	Middle	2	2	28.26	7.87	17.45	75.8	5.34	1.6	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:46:55	7.2	Bottom	3	1	28.26	7.87	18.01	75.4	5.32	1.8	2.4
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS2	07:46:34	7.2	Bottom	3	2	28.25	7.86	18	75.1	5.29	1.7	2.2
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:27:20	1.0	Surface	1	1	27.87	7.79	20.38	73	5.11	4.3	3.1
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:26:49	1.0	Surface	1	2	27.91	7.78	20.35	74.9	5.24	4.3	2.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:26:33	6.2	Middle	2	1	27.7	7.77	22.78	72.4	5.07	5.7	2.2
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:27:10	6.2	Middle	2	2	27.58	7.79	23.04	74.2	5.05	6	2.9
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:27:00	11.3	Bottom	3	1	27.66	7.74	26.08	71.2	4.94	5.9	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Ebb	Fine	CS(M)F5	06:26:13	11.3	Bottom	3	2	27.53	7.75	26.09	72.9	4.97	6	2.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:22:38	1.0	Surface	1	1	28.77	7.85	20.97	87.8	6.04	8.3	3.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:22:05	1.0	Surface	1	2	28.68	7.84	21.06	84.7	5.83	8.2	3.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:21:56	4.2	Middle	2	1	28.32	7.82	21.52	80.4	5.56	8.4	4.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:22:27	4.2	Middle	2	2	28.43	7.82	21.36	81.9	5.65	8.6	4.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:22:17	7.4	Bottom	3	1	28.22	7.82	22.58	84.8	5.84	8.9	4.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS5	13:21:47	7.4	Bottom	3	2	28.17	7.81	22.9	83.1	5.71	9.2	4.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F6	13:31:14	1.0	Surface	1	1	28.81	7.86	20.27	96.3	6.65	8.4	6.9
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F6	13:31:27	1.0	Surface	1	2	28.8	7.86	20.18	96.2	6.64	8.8	6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F6	13:31:20	2.1	Bottom	3	1	28.82	7.85	20.96	96.2	6.61	11.4	4.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F6	13:31:06	2.1	Bottom	3	2	28.84	7.85	20.72	96.1	6.61	11.7	4.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS7	13:37:35	1.0	Surface	1	1	28.81	7.84	19.96	93.3	6.45	8.6	5.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS7	13:37:20	1.0	Surface	1	2	28.82	7.84	20.02	93.5	6.46	8.5	5.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS7	13:37:11	2.2	Bottom	3	1	28.82	7.84	20.19	93.5	6.45	8.4	6.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS7	13:37:27	2.2	Bottom	3	2	28.82	7.84	20.21	93.4	6.44	8.5	6.7
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS8	14:02:54	1.0	Surface	1	1	28.39	7.8	19.52	86.9	6.06	5.2	5.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS8	14:02:37	1.0	Surface	1	2	28.39	7.8	19.52	87.1	6.08	5	5.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS8	14:02:28	2.9	Bottom	3	1	28.38	7.8	19.62	87.3	6.09	5.2	3.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS8	14:02:45	2.9	Bottom	3	2	28.37	7.8	19.62	87	6.07	5.4	3.9
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F9	13:44:29	1.0	Surface	1	1	28.51	7.81	19.49	88.7	6.18	5.4	3.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F9	13:45:48	1.0	Surface	1	2	28.52	7.81	19.63	88.7	6.17	5.1	3.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F9	13:45:37	2.6	Bottom	3	1	28.52	7.81	19.78	89.1	6.19	6.4	3.8
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS(M)F9	13:44:17	2.6	Bottom	3	2	28.51	7.8	19.86	88.5	6.15	6.6	3.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:46:17	1.0	Surface	1	1	28.39	8	18	83.5	5.78	7.8	4.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:45:59	1.0	Surface	1	2	28.58	8.01	17.96	83.8	5.88	7.7	4.8
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:45:46	5.6	Middle	2	1	28.05	7.96	20.52	82.9	5.72	8.1	8.7
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:46:12	5.6	Middle	2	2	28.1	7.96	20.84	82.2	5.76	8	8.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:46:08	10.1	Bottom	3	1	28.27	7.96	21.91	81.3	5.66	8.1	7.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	IS10	14:45:39	10.1	Bottom	3	2	28.05	7.94	22.48	79.5	5.54	8.3	7.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR3	13:14:39	0.8	Middle	1	1	28.76	7.94	21.03	95.6	6.58	10.5	3.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR3	13:14:47	0.8	Middle	2	2	28.72	7.93	21.08	95.3	6.55	10	3.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR4	13:57:13	1.0	Surface	1	1	28.38	7.77	19.53	83.7	5.84	10.6	5.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR4	13:56:51	1.0	Surface	1	2	28.37	7.77	19.6	84.1	5.87	10.5	5.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR4	13:56:42	2.7	Bottom	3	1	28.38	7.77	19.6	84.9	5.92	10.5	5.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR4	13:56:59	2.7	Bottom	3	2	28.37	7.77	19.62	83.8	5.84	10.9	4.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR5	14:39:47	1.0	Surface	1	1	28.46	8.01	17.97	83.4	5.86	8.1	5.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR5	14:40:24	1.0	Surface	1	2	28.53	7.99	18.23	86.7	6.07	7.6	5.7
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR5	14:39:52	4.1	Bottom	3	1	28.58	7.99	21.26	84.4	5.82	7.9	5.8
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR5	14:39:38	4.1	Bottom	3	2	28.29	7.98	21.51	84.5	5.84	8.3	5.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:27:40	1.0	Surface	1	1	27.7	7.88	25.12	74.9	5.12	3.1	2.5
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:27:09	1.0	Surface	1	2	27.72	7.88	25.07	75.9	5.19	3.2	3.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:26:59	3.3	Middle	2	1	27.65	7.87	25.48	75.8	5.18	3.3	3.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:27:29	3.3	Middle	2	2	27.57	7.88	25.61	74.4	5.08	3.2	2.5
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:26:51	5.5	Bottom	3	1	27.7	7.87	25.41	76.4	5.22	3.8	3.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10A	15:27:18	5.5	Bottom	3	2	27.59	7.87	26.5	75.3	5.12	3.7	3.2
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10B	15:33:39	1.0	Surface	1	1	27.67	7.88	25.17	74.6	5.11	2.7	3.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10B	15:33:56	1.0	Surface	1	2	27.65	7.88	25.23	74.3	5.08	2.8	1.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10B	15:33:47	3.7	Bottom	3	1	27.58	7.87	26.55	74.4	5.06	2.6	1.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	SR10B	15:33:30	3.7	Bottom	3	2	27.64	7.87	26.34	74.7	5.08	2.7	1.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:48:43	1.0	Surface	1	1	28.79	8.12	16.19	84.4	5.96	2.3	0.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:49:21	1.0	Surface	1	2	28.78	8.05	16.2	83	5.86	2.3	0.9
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:48:28	4.1	Middle	2	1	28.24	8.19	16.53	84.3	5.84	2.6	1.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:49:07	4.1	Middle	2	2	28.13	8.06	16.78	78.4	5.49	2.4	1.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:48:14	7.1	Bottom	3	1	28.06	8.23	21.64	79.2	5.63	2.7	1.8
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS2	13:49:01	7.1	Bottom	3	2	27.96	8.01	22.26	77.2	5.43	2.5	1.4
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:58:36	1.0	Surface	1	1	27.97	7.87	22.62	76.5	5.28	2.7	2.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:59:23	1.0	Surface	1	2	27.92	7.88	22.62	76.6	5.29	2.6	3.6
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:59:13	6.3	Middle	2	1	27.64	7.87	25.52	74.2	5.07	3.4	2.1
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:58:23	6.3	Middle	2	2	27.51	7.87	25.79	73.3	5.08	3.5	3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:58:13	11.6	Bottom	3	1	27.48	7.85	27.32	74.9	5.01	3.5	2.3
HCLR	HY/2011/03	2013-09-13	Mid-Flood	Sunny	CS(M)F5	14:58:52	11.6	Bottom	3	2	27.42	7.85	27.33	74	5.03	3.7	2.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:09:00	1.0	Surface	1	1	28.69	7.99	21.86	86.1	5.9	7.7	6.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:08:25	1.0	Surface	1	2	28.83	7.99	21.74	89.8	6.14	7.6	7.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:08:11	4.2	Middle	2	1	28.16	7.95	23.67	85.3	5.82	8.3	6.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:08:50	4.2	Middle	2	2	28.16	7.95	23.65	86.2	5.88	8.4	6.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:07:55	7.3	Bottom	3	1	28.13	7.96	24.33	81.6	5.59	11.1	6.5
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS5	11:07:55	7.3	Bottom	3	2	28.12	7.95	24.33	80.3	5.49	10.3	6.5
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F6	11:01:44	1.0	Surface	1	1	28.77	7.95	19.79	96.7	6.69	12.5	24.5
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F6	11:00:45	1.0	Surface	1	2	28.81	7.95	19.81	98.4	6.81	12.3	25.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS7	10:54:09	2.1	Bottom	3	1	28.79	7.94	19.83	98.1	6.78	12.2	25.1
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F6	11:01:36	2.2	Bottom	3	2	28.72	7.95	19.83	95.9	6.64	12.4	24.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS7	10:54:19	1.0	Surface	1	1	28.88	7.96	19.93	100.5	6.94	8.8	9.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS7	10:53:59	1.0	Surface	1	2	28.88	7.96	19.92	100.6	6.94	8.8	9.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS7	10:54:09	2.1	Bottom	3	1	28.85	7.96	19.95	100.5	6.94	9	11.1
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS7	10:53:49	2.1	Bottom	3	2	28.85	7.96	19.95	100	6.91	8.6	10.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS8	10:31:38	1.0	Surface	1	1	28.67	7.96	20.5	91.4	6.31	8.5	5.7
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS8	10:31:11	1.0	Surface	1	2	28.6	7.96	20.61	88.5	6.12	8.5	5.4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS8	10:31:03	3.1	Bottom	3	1	28.43	7.93	24.01	89.8	6.11	8.8	5.4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS8	10:31:27	3.1	Bottom	3	2	28.46	7.94	22.65	89.8	6.15	8.6	4.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F9	10:48:32	1.0	Surface	1	1	28.79	7.97	19.98	99.9	6.91	4.7	5.4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F9	10:48:14	1.0	Surface	1	2	28.82	7.97	19.85	98.2	6.79	4.7	5.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F9	10:47:58	2.6	Bottom	3	1	28.6	7.93	20.41	98	6.65	4.8	7.1
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS(M)F9	10:48:24	2.6	Bottom	3	2	28.73	7.96	20.39	99.6	6.88	4.6	6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:40:38	1.0	Surface	1	1	28.42	8.11	21.65	87	5.99	2.8	4.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:39:54	1.0	Surface	1	2	28.42	8.11	21.65	87.1	6	2.9	6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:39:47	5.6	Middle	2	1	28.39	8.11	21.68	86.9	5.99	2.9	4.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:40:30	5.6	Middle	2	2	28.4	8.11	21.67	86.8	5.98	2.8	5.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:39:39	10.1	Bottom	3	1	28.35	8.11	21.77	86.8	5.98	2.9	4.1
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	IS10	10:40:18	10.1	Bottom	3	2	28.38	8.11	21.7	86.8	5.98	3	4.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR3	11:16:21	0.7	Middle	2	1	28.89	8	21.78	99.1	6.77	4.2	5.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR3	11:16:13	0.7	Middle	2	2	28.88	8	21.8	98.8	6.75	4.1	4.7
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR4	10:37:52	1.0	Surface	1	1	28.84	7.91	18.91	91.2	6.33	6.2	2.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR4	10:37:33	1.0	Surface	1	2	28.89	7.92	18.81	93.8	6.52	6.2	3.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR4	10:37:44	2.8	Bottom	3	1	28.77	7.89	20.43	92.2	6.36	6.2	3.7
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR4	10:37:23	2.8	Bottom	3	2	28.81	7.89	20.34	93.6	6.46	6	4.5
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR5	10:45:49	1.0	Surface	1	1	28.43	8.1	21.65	87.2	6.01	2.9	5.3
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR5	10:46:06	1.0	Surface	1	2	28.41	8.1	21.67	87	5.99	2.9	6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR5	10:45:25	3.8	Bottom	3	1	28.41	8.1	21.66	86.8	5.98	2.9	5
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR5	10:45:58	3.8	Bottom	3	2	28.41	8.1	21.67	86.8	5.98	2.8	4.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:12:51	1.0	Surface	1	1	27.93	7.93	24.9	77.9	5.32	2.8	4.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:13:13	1.0	Surface	1	2	27.73	7.92	24.9	77.7	5.24	2.8	3.4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:12:39	3.3	Middle	2	1	27.69	7.92	27.3	76.3	5.15	2.8	3.3
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:13:07	3.3	Middle	2	2	27.71	7.91	27.43	75.8	5.13	2.8	3.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:12:32	5.6	Bottom	3	1	27.66	7.91	27.81	75.3	5.09	2.7	3.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10A	09:13:00	5.6	Bottom	3	2	27.77	7.91	27.45	76.3	5.15	2.8	4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10B	09:07:10	1.0	Surface	1	1	27.75	7.93	26.84	76.5	5.18	5.1	7
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10B	09:07:32	1.0	Surface	1	2	27.76	7.93	26.79	76.4	5.17	4.8	7.3
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10B	09:07:19	4.0	Bottom	3	1	27.75	7.93	26.84	76.3	5.17	4.9	9.9
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	SR10B	09:07:02	4.0	Bottom	3	2	27.74	7.94	26.86	76.7	5.2	5.1	9.3
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:41:11	1.0	Surface	1	1	28.57	8.09	21.05	82.3	5.68	2.7	5.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:40:15	1.0	Surface	1	2	28.5	8.12	21.17	79.6	5.49	2.9	4
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:40:44	4.0	Middle	2	1	28.28	8.11	22.82	79	5.39	3	4.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:40:05	1.0	Middle	2	2	28.3	8.12	22.84	78.1	5.36	2.9	4.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:39:56	7.0	Bottom	3	1	28.15	8.11	24.04	78	5.33	3.2	4.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS2	11:40:30	7.0	Bottom	3	2	28.19	8.1	23.91	77.9	5.34	3	4.3
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	09:56:08	1.0	Surface	1	1	28.28	7.94	20.88	80	5.55	3.6	3.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	09:49:19	1.0	Surface	1	2	28.23	7.95	20.91	79	5.49	3.8	4.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	09:49:56	6.3	Middle	2	1	27.8	7.92	26.62	76.9	5.18	4.1	6.6
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	09:49:08	6.3	Middle	2	2	27.81	7.91	26.8	78.3	5.27	4.2	5.2
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	09:48:50	11.5	Bottom	3	1	27.77	7.88	27.82	75.1	5.08	5.2	4.8
HCLR	HY/2011/03	2013-09-16	Mid-Ebb	Sunny	CS(M)F5	16:30:59	1.0	Surface	1	2	29.42	7.89	27.94	74.2	5.02	5.4	5.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:59	1.0	Surface	1	1	29.43	8.11	20.8	120	8.17	9.4	20
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:24	1.0	Surface	1	2	29.39	8.1	20.84	118.4	8.06	9.3	20.7
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:50	4.2	Middle	2	1	29.23	8.07	20.99	112.8	7.7	10.3	19.3
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:15	4.2	Middle	2	2	29.18	8.06	21.28	110.5	7.53	9.8	19.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:42	7.3	Bottom	3	1	28.95	8.04	22.05	112.3	7.65	10.6	20.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS5	16:30:02	7.3	Bottom	3	2	28.8	8.02	22.47	108.1	7.37	11.9	19.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F6	16:40:16	1.0	Surface	1	1	29.47	8.11	21.07	125.5	8.53	11.4	11
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F6	16:40:00	1.0	Surface	1	2	29.47	8.11	21.06	125.2	8.51	11.6	10.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F6	16:39:46	2.0	Bottom	3	1	29.46	8.11	21.07	124.7	8.47	11.4	14.8
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F6	16:40:07	2.0	Bottom	3	2	29.47	8.11	21.07	125.4	8.52	11.5	13.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS7	16:46:51	2.1	Bottom	3	1	29.38	8.11	21.1	124.6	8.47	11.7	11.6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS8	17:13:47	1.0	Surface	1	1	28.91	7.97	22.02	98.1	6.69	6.8	4.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS8	17:14:16	1.0	Surface	1	2	28.9	7.97	22.04	98.5	6.72	6.9	4.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS8	17:14:01	2.7	Bottom	3	1	28.88	7.96	22.28	99.3	6.76	7.2	9.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS8	17:13:31	2.7	Bottom	3	2	28.81	7.96	22.42	97.9	6.68	7.1	7.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F9	16:57:12	1.0	Surface	1	1	28.91	8.01	22.12	103.3	7.04	11.4	5.7
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F9	16:56:57	1.0	Surface	1	2	28.9	8.01	22.14	103.3	7.04	11.4	6.8
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F9	16:57:03	2.7	Bottom	3	1	28.89	8	22.28	104	7.08	11.4	7.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS(M)F9	16:56:49	2.7	Bottom	3	2	28.88	8	22.31	104	7.08	11.4	6.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:43	1.0	Surface	1	1	28.6	8.17	22.28	91.6	6.22	4	4.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:24	1.0	Surface	1	2	28.69	8.17	22	90.1	6.12	4.2	5.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:15	5.5	Middle	2	1	28.43	8.15	22.96	88.8	6.08	4.3	5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:39	5.5	Middle	2	2	28.52	8.16	22.52	89.2	6.11	4.3	4.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:32	10.0	Bottom	3	1	28.57	8.16	23.79	89.1	6.1	4.6	6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	IS10	17:34:02	10.0	Bottom	3	2	28.41	8.15	24.18	85.9	5.88	4.6	6.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR3	16:19:49	0.7	Middle	2	1	29.48	8.12	20.62	125.7	8.56	12.2	18.6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR3	16:19:58	0.7	Middle	2	2	29.47	8.12	20.63	127.2	8.66	12	17.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR4	17:07:26	1.0	Surface	1	1	28.91	7.97	22.35	94.5	6.43	7.8	8.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR4	17:06:56	1.0	Surface	1	2	28.96	7.99	22.3	95.5	6.49	7.3	9.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR4	17:06:45	2.6	Bottom	3	1	28.32	8	22.32	95.9	6.53	7.5	10.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR4	17:07:14	2.6	Bottom	3	2	28.93	7.98	22.33	95	6.47	7.6	10
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR5	17:28:05	1.0	Surface	1	1	28.62	8.17	22.08	88.3	6.05	4.1	5.8
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR5	17:28:24	1.0	Surface	1	2	28.55	8.16	22.16	88	5.99	4.3	5.7
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR5	17:27:55	4.0	Bottom	3	1	28.74	8.15	23.74	88.3	6.01	4.7	5.6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR5	17:28:16	4.0	Bottom	3	2	28.43	8.15	23.63	87.1	5.97	4.7	5.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:17:17	1.0	Surface	1	1	27.97	7.94	26.14	76.5	5.18	4.5	7.3
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:16:54	1.0	Surface	1	2	27.96	7.94	26.15	76.8	5.2	4.5	6.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:17:09	3.3	Middle	2	1	27.93	7.94	26.35	76.4	5.17	4.4	5.6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:16:47	3.3	Middle	2	2	27.95	7.94	26.32	76.7	5.19	4.4	5.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:17:02	5.5	Bottom	3	1	27.94	7.94	26.49	76.6	5.18	4.4	6.3
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10A	18:16:38	5.5	Bottom	3	2	27.95	7.94	26.47	76.8	5.19	4.5	7.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10B	18:27:43	1.0	Surface	1	1	27.94	7.94	26.23	75.8	5.13	4.6	4.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10B	18:27:59	1.0	Surface	1	2	27.93	7.94	26.26	75.6	5.12	4.7	5.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10B	18:27:36	4.2	Bottom	3	1	27.94	7.93	26.48	75.9	5.13	4.7	6.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	SR10B	18:27:52	4.2	Bottom	3	2	27.92	7.93	26.59	75.8	5.12	4.8	6.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:18:16	1.0	Surface	1	1	29.17	8.27	21.36	104.1	7.06	6.3	10
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:17:53	1.0	Surface	1	2	29.18	8.3	21.34	104.1	7.09	6	9.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:17:29	4.1	Middle	2	1	28.95	8.33	21.57	95.2	6.49	6.2	10.4
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:18:09	4.1	Middle	2	2	29.03	8.27	21.51	103.4	7.05	6.3	10.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:17:16	7.1	Bottom	3	1	28.67	8.41	22.91	92.9	6.35	6.4	9.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS2	16:18:02	7.1	Bottom	3	2	29.07	8.28	22.5	101.3	6.91	6.6	9.1
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:44:47	1.0	Surface	1	1	28.44	7.97	23.41	83.9	5.72	6.1	5.5
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:45:30	1.0	Surface	1	2	28.41	7.96	23.37	81.6	5.57	6.2	6.8
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:45:14	6.4	Middle	2	1	27.79	7.91	27.04	79.7	5.37	10.4	5.6
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:44:28	6.4	Middle	2	2	27.77	7.91	27.06	74.9	5.05	10.5	7.2
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:44:59	11.7	Bottom	3	1	27.88	7.91	27.21	72.7	4.92	10.7	7.9
HCLR	HY/2011/03	2013-09-16	Mid-Flood	Sunny	CS(M)F5	17:44:19	11.7	Bottom	3	2	27.76	7.91	27.34	72.1	4.88	10.3	7.2
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	13:00:02	1.0	Surface	1	1	28.29	8.01	24.91	96.2	6.52	9.2	7.2
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	13:00:40	1.0	Surface	1	2	28.23	8.02	25.07	94.3	6.39	10.1	7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	12:59:44	4.9	Middle	2	1	28.07	8.01	26.06	92	6.22	12.8	7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	13:00:29	4.9	Middle	2	2	28.05	8.01	26.18	92.2	6.23	12.9	7.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	12:59:28	8.7	Bottom	3	1	28.07	8.01	26.36	93.5	6.31	11.6	11.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	13:00:14	8.7	Bottom	3	2	28.09	8.01	26.44	94.5	6.38	11.9	10.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F6	12:50:13	1.0	Surface	1	1	28.32	7.99	23.99	100	6.81	14.9	11.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F6	12:50:39	1.0	Surface	1	2	28.37	7.99	23.9	100.7	6.86	13.9	11.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F6	12:50:31	2.2	Bottom	3	1	28.36	7.99	23.9	100	6.81	14.6	15.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F6	12:50:06	2.2	Bottom	3	2	28.34	7.99	24.01	100.7	6.86	15.7	15.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS7	12:43:38	1.0	Surface	1	1	28.3	7.94	24.24	90.3	6.14	15.5	11
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS7	12:43:53	1.0	Surface	1	2	28.33	7.95	24.16	93.6	6.37	14.8	11.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS7	12:43:45	2.2	Bottom	3	1	28.32	7.95	24.2	92	6.26	17	12.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS7	12:43:30	2.2	Bottom	3	2	28.26	7.93	24.53	90	6.12	16.9	11.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS8	12:20:09	1.0	Surface	1	1	28.24	8	24.15	97.2	6.63	8.7	8.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS8	12:20:29	1.0	Surface	1	2	28.23	8	24.15	97.3	6.63	8.6	8.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS8	12:20:20	2.5	Bottom	3	1	28.22	8	24.16	97.4	6.64	9	9.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS8	12:19:58	2.5	Bottom	3	2	28.21	8	24.17	97.1	6.62	9.9	8.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F9	12:36:56	1.0	Surface	1	1	28.12	7.94	24.14	91.6	6.26	15.5	16.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F9	12:37:33	1.0	Surface	1	2	28.12	7.94	24.15	90.8	6.2	15.6	15.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F9	12:36:40	2.5	Bottom	3	1	28.1	7.94	24.29	90.6	6.18	15.8	16.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS(M)F9	12:37:23	2.5	Bottom	3	2	28.11	7.94	24.34	91	6.21	14.7	16.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:53:20	1.0	Surface	1	1	28.38	8.15	24.13	93.1	6.33	6.6	3.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:53:56	1.0	Surface	1	2	28.4	8.15	24.63	93.9	6.34	6.5	3.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:53:12	5.3	Middle	2	1	28.32	8.15	24.69	91.3	6.23	6.5	4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:53:44	5.3	Middle	2	2	28.31	8.15	24.66	91.7	6.23	6.6	3.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:52:59	9.6	Bottom	3	1	28.25	8.14	26.08	91.2	6.15	6.8	3.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS10	11:53:36	9.6	Bottom	3	2	28.29	8.14	25.63	92.3	6.24	6.5	3.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR3	13:07:38	0.8	Middle	2	1	28.27	8.01	24.98	98.2	6.66	8.6	5.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR3	13:07:43	0.8	Middle	2	2	28.25	8.01	25.04	98.2	6.66	8.4	5.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR4	12:27:21	1.0	Surface	1	1	28.13	7.93	23.63	93	6.37	7.9	7.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR4	12:27:01	1.0	Surface	1	2	28.14	7.94	23.63	93.5	6.4	8	8.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR4	12:26:53	2.4	Bottom	3	1	28.15	7.94	23.69	93.8	6.42	8	7.1
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR4	12:27:09	2.4	Bottom	3	2	28.15	7.94	23.74	93.3	6.38	7.8	8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR5	11:59:59	1.0	Surface	1	1	28.4	8.13	24.05	94.1	6.4	4.3	6.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR5	12:00:28	1.0	Surface	1	2	28.4	8.14	24.06	94	6.39	4.3	5.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR5	12:00:12	3.5	Bottom	3	1	28.39	8.13	24.22	93.9	6.38	4.4	3.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR5	11:59:51	3.5	Bottom	3	2	28.4	8.13	24.28	93.8	6.38	4.4	3.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:03:46	1.0	Surface	1	1	27.74	7.92	27.42	78	5.26	4.7	5.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:03:10	1.0	Surface	1	2	27.72	7.92	27.46	77.8	5.25	4.4	5.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:03:34	3.5	Middle	2	1	27.72	7.92	27.45	77.4	5.23	4.8	6.4
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:02:49	3.5	Middle	2	2	27.69	7.92	27.52	77.4	5.22	4.7	5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:02:33	5.9	Bottom	3	1	27.7	7.92	27.52	77.4	5.29	4.5	5.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10A	11:03:22	5.9	Bottom	3	2	27.7	7.92	27.51	77.3	5.22	4.6	5.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10B	10:54:41	1.0	Surface	1	1	27.69	7.91	27.62	76.7	5.17	6.4	6.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10B	10:54:14	1.0	Surface	1	2	27.69	7.91	27.58	77	5.2	6.2	6.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10B	10:54:03	4.7	Bottom	3	1	27.69	7.91	27.57	76.9	5.19	6.3	7.9
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	SR10B	10:54:31	4.7	Bottom	3	2	27.69	7.91	27.61	76.5	5.16	6.2	7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:26:39	1.0	Surface	1	1	28.61	8.15	23.37	91.9	6.25	6.3	6.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:27:06	1.0	Surface	1	2	28.65	8.15	23.32	92.2	6.27	6.4	5.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:26:58	4.1	Middle	2	1	28.38	8.16	24.54	91.3	6.2	6.5	5.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:26:32	4.1	Middle	2	2	28.37	8.16	24.52	91.2	6.19	6.4	5.7
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:26:21	7.2	Bottom	3	1	28.31	8.13	26.53	91.2	6.12	6.8	5.9
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS2	13:26:49	7.2	Bottom	3	2	28.43	8.13	26.24	91.6	6.15	6.8	6.9
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS(MWF)	11:41:26	1.0	Surface	1	1	28.26	7.97	24.21	87.7	5.97	7.2	7.6
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS(MWF)	11:40:47	1.0	Surface	1	2	28.32	7.97	24.14	90.3	6.15	7.3	6.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS(MWF)	11:41:13	6.9	Middle	2	1	27.82	7.94	25.62	83.5	5.68	7.7	6.5
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS(MWF)	11:40:28	6.9	Middle	2	2	27.82	7.94	25.61	82.2	5.6	7.4	7.8
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	CS(MWF)	11:41:02	12.7	Bottom	3	1	27.84	7.94	26.15	86.1	5.84	7.9	7.3
HCLR	HY/2011/03	2013-09-18	Mid-Ebb	Sunny	IS5	17:20:45	1.0	Surface	1	1	28.19	7.99	24.72	97.5	6.63	11.4	7.1
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS5	17:20:04	1.0	Surface	1	2	28.19	7.99	24.72	97.7	6.65	11.6	7.5
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS5	17:19:39	5.0	Middle	2	1	28.18	7.98	24.88	95.6	6.5	13.7	8
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS5	17:20:28	5.0	Middle	2	2	28.18	7.98	24.83	96.5	6.56	13.1	8.2
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS5	17:19:30	8.9	Bottom	3	1	28.17	7.98	24.97	96.3	6.54	14	7.6
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS5	17:20:18	8.9	Bottom	3	2	28.18	7.98	24.84	97	6.59	12.8	9
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:27:42	1.0	Surface	1	1	28.19	7.97	24.6	96.5	6.57	14.1	16.4
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:28:06	1.0	Surface	1	2	28.19	7.96	24.59	96.2	6.55	14.1	15.8
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:27:49	2.4	Bottom	3	1	28.2	7.96	24.62	96.3	6.55	17.9	15
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:27:33	2.4	Bottom	3	2	28.19	7.97	24.6	96.7	6.58	17.2	14.2
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS7	17:33:42	1.0	Surface	1	1	28.16	7.93	24.76	92.9	6.32	18.1	21.3
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS7	17:34:05	1.0	Surface	1	2	28.16	7.94	24.74	93.2	6.34	17.7	20.5
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS7	17:33:29	2.4	Bottom	3	1	28.15	7.93	24.78	93.1	6.33	19.5	20.6
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS7	17:33:49	2.4	Bottom	3	2	28.16	7.93	24.75	93	6.32	19	20.7
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS8	17:58:20	1.0	Surface	1	1	28.17	7.99	24.5	95.7	6.51	13.1	11.2
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS8	17:58:02	1.0	Surface	1	2	28.18	7.99	24.5	96.1	6.55	13.2	11.5
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS8	17:58:11	2.5	Bottom	3	1	28.17	7.99	24.56	95.8	6.52	13.6	10.4
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS8	17:57:50	2.5	Bottom	3	2	28.17	7.99	24.54	95.9	6.53	12.9	10.2
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:41:23	1.0	Surface	1	1	28.13	7.97	24.47	96.4	6.57	15.8	14.8
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:41:08	1.0	Surface	1	2	28.13	7.97	24.47	96.5	6.57	16.1	15.6
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:40:59	2.4	Bottom	3	1	28.14	7.96	24.5	96.4	6.57	17.1	15.8
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS(MF)	17:41:16	2.4	Bottom	3	2	28.14	7.97	24.49	96.3	6.57	16.9	16.5
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:54:38	1.0	Surface	1	1	28.29	8.14	23.2	89.7	6.14	10.2	5.3
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:54:02	1.0	Surface	1	2	28.3	8.14	23.35	89.8	6.14	10.4	6.3
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:53:51	5.3	Middle	2	1	28.3	8.14	24.06	89.3	6.08	10.6	6.6
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:54:28	5.3	Middle	2	2	28.31	8.15	24.04	89.2	6.07	10.4	7.7
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:53:42	9.5	Bottom	3	1	28.31	8.13	25.11	89.6	6.08	10.5	7.5
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	IS10	18:54:17	9.5	Bottom	3	2	28.32	8.13	25.06	89.2	6.04	10.6	6.9
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	SR3	17:06:52	0.8	Middle	2	1	28.19	7.99	24.73	99.6	6.77	10.1	9.7
HCLR	HY/2011/03	2013-09-18	Mid-Flood	Sunny	SR3	17:07:04	0.8	Middle	2	2	28.19	7.99	24.74	99.2	6.75	10.8	10.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR4	17:52:28	1.0	Surface	1	1	28.09	7.99	24.48	89.5	6.11	18.1	23
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR4	17:52:07	1.0	Surface	1	2	28.1	8	24.52	89.6	6.11	18.2	22.6
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR4	17:52:18	2.4	Bottom	3	1	28.11	8	24.52	89.6	6.1	20.7	24.9
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR4	17:51:58	2.4	Bottom	3	2	28.12	8.01	24.56	89.6	6.11	19.5	24.6
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR5	18:43:08	1.0	Surface	1	1	28.33	8.13	23.4	90.7	6.2	6.4	7.2
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR5	18:42:44	1.0	Surface	1	2	28.34	8.13	23.41	90.9	6.21	6.4	6
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR5	18:42:36	3.7	Bottom	3	1	28.35	8.13	23.56	91.2	6.22	6.5	5.3
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR5	18:42:53	3.7	Bottom	3	2	28.35	8.13	23.67	90.6	6.18	6.5	4.2
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:15:36	1.0	Surface	1	1	27.8	7.9	27.11	78.1	5.28	8.1	4.9
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:14:46	1.0	Surface	1	2	27.83	7.9	26.81	78.4	5.3	7.7	4.8
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:14:36	3.4	Middle	2	1	27.77	7.9	27.29	77.7	5.24	9.2	5.8
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:15:17	3.4	Middle	2	2	27.75	7.89	27.43	77.3	5.21	9.5	6.1
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:14:17	5.7	Bottom	3	1	27.75	7.9	27.48	77.8	5.25	9.9	8.9
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10A	19:15:06	5.7	Bottom	3	2	27.74	7.89	27.51	77.7	5.24	9.8	8.3
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10B	19:25:24	1.0	Surface	1	1	27.76	7.89	27.29	77	5.2	9.5	8.3
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10B	19:25:57	1.0	Surface	1	2	27.77	7.89	27.24	77.4	5.22	9.8	8.1
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10B	19:25:36	4.7	Bottom	3	1	27.72	7.89	27.67	76.7	5.17	12.2	5.9
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	SR10B	19:25:10	4.7	Bottom	3	2	27.71	7.89	27.72	76.6	5.16	12.7	5.7
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:06:55	1.0	Surface	1	1	28.26	8.13	22.59	87.2	5.99	8.6	7.4
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:06:21	1.0	Surface	1	2	28.27	8.18	22.64	88	6.04	8.5	5.8
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:06:42	4.0	Middle	2	1	28.36	8.15	23.07	87.2	5.97	8.5	5.1
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:06:11	4.0	Middle	2	2	28.33	8.2	22.93	88.4	6.06	8.5	5
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:05:55	7.0	Bottom	3	1	28.41	8.26	23.43	90.5	6.18	8.2	5
HCLR	HV/2011/03	2013-09-18	Mid-Flood	Sunny	CS2	17:06:34	7.0	Bottom	3	2	28.38	8.15	23.36	87.5	5.98	8.4	5.7
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:32:38	1.0	Surface	1	1	28.67	7.89	25.21	87.8	5.91	9.9	8
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:33:20	1.0	Surface	1	2	28.81	7.89	25.14	89.5	6.01	9.6	8.2
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:33:02	4.6	Middle	2	1	28.18	7.9	25.76	85.5	5.78	13.4	9.2
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:32:26	4.6	Middle	2	2	28.2	7.89	25.69	85.5	5.78	14.3	9.7
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:32:15	8.2	Bottom	3	1	28.25	7.89	25.72	87.2	5.89	13.2	9.8
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS5	14:32:52	8.2	Bottom	3	2	28.24	7.89	25.74	86.9	5.87	13.2	8.4
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F6	14:24:34	1.0	Surface	1	1	28.46	7.86	24.8	88.8	6.01	14.9	8.1
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F6	14:24:15	1.0	Surface	1	2	28.39	7.84	24.86	86.5	5.86	15.3	8
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F6	14:24:25	2.1	Bottom	3	1	28.38	7.85	24.92	87.7	5.94	16.6	7.7
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F6	14:24:07	2.1	Bottom	3	2	28.31	7.83	24.98	85.9	5.82	16.1	7.5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS7	14:16:39	1.0	Surface	1	1	28.58	7.84	25.14	85	5.73	9.4	7.5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS7	14:16:58	1.0	Surface	1	2	28.59	7.85	25.14	85.2	5.74	9.4	6.9
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS7	14:16:30	2.3	Bottom	3	1	28.27	7.82	25.57	84.3	5.7	10.9	7.1
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS7	14:16:48	2.3	Bottom	3	2	28.33	7.84	25.53	84.6	5.72	10.5	8.4
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS8	13:49:38	1.0	Surface	1	1	28.52	7.86	24.7	91	6.15	9.6	5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS8	13:49:09	1.0	Surface	1	2	28.48	7.85	24.72	91.7	6.2	9.4	4.8
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS8	13:49:26	2.7	Bottom	3	1	28.36	7.82	24.8	90.6	6.14	10.8	4
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS8	13:49:00	2.7	Bottom	3	2	28.42	7.84	24.76	92.1	6.23	10.2	5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F9	14:10:31	1.0	Surface	1	1	28.52	7.84	24.78	85.5	5.78	13.9	13.6
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F9	14:10:09	2.0	Surface	1	2	28.55	7.84	24.78	85.6	5.79	14.1	14.2
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F9	14:10:23	2.4	Bottom	3	1	28.51	7.84	24.78	85.6	5.79	14.1	14
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS(M)F9	14:09:57	2.4	Bottom	3	2	28.42	7.83	24.79	84.7	5.74	16.2	15.5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:31:50	1.0	Surface	1	1	29.15	8.01	21.95	83.3	5.66	7.8	3.1
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:32:29	1.0	Surface	1	2	29.11	8.01	22.08	83.2	5.65	7.5	2.5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:31:38	5.2	Middle	2	1	28.99	8.02	22.58	82.8	5.62	7.8	3
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:32:19	5.2	Middle	2	2	29.04	8.01	22.45	82.8	5.62	7.8	3.1
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:32:08	9.3	Bottom	3	1	28.97	8.01	23	82.6	5.6	7.8	3
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	IS10	13:31:27	9.3	Bottom	3	2	28.93	8.01	23.03	82.7	5.61	7.8	2.7
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	SR3	14:41:07	0.8	Middle	2	1	28.82	7.9	25.12	91.6	6.15	8.2	8.1
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	SR3	14:41:16	0.8	Middle	2	2	28.81	7.9	25.13	91.6	6.15	8.7	7.7
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	SR4	13:59:41	1.0	Surface	1	1	28.7	7.88	24.63	93.1	6.28	8	4.5
HCLR	HV/2011/03	2013-09-20	Mid-Ebb	Sunny	SR4	13:59:22	1.0	Surface	1	2	28.6	7.88	24.67	91.9	6.21	8.6	5.8

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR4	13:59:30	2.5	Bottom	3	1	28.54	7.88	24.71	92.2	6.23	10.7	4.6
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR4	13:59:13	2.5	Bottom	3	2	28.39	7.87	24.79	91	6.17	10	4.8
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR5	13:41:35	1.0	Surface	1	1	29.17	7.99	22.01	83.5	5.66	4.6	3.5
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR5	13:41:01	1.0	Surface	1	2	29.15	7.99	22.05	83.4	5.66	4.7	3.5
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR5	13:40:52	3.5	Bottom	3	1	29.16	7.99	22.14	83.3	5.65	4.8	2.8
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR5	13:41:17	3.5	Bottom	3	2	29.16	7.99	22.2	83.4	5.66	4.9	3
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:22:44	1.0	Surface	1	1	28.23	7.88	26.73	85.3	5.73	4.9	4.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:20:45	1.0	Surface	1	2	28.23	7.88	26.81	82.3	5.53	5	4.8
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:20:34	3.3	Middle	2	1	28.14	7.88	27.11	81.6	5.48	5.2	4.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:22:29	3.3	Middle	2	2	28.25	7.88	26.62	86.9	5.84	4.9	4.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:20:06	5.6	Bottom	3	1	28.1	7.88	27.15	82.1	5.52	5.1	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10A	12:21:02	5.6	Bottom	3	2	28.16	7.88	27.03	82.1	5.51	5	7.5
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10B	12:11:34	1.0	Surface	1	1	28.07	7.9	27.24	81.1	5.45	6.9	7.8
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10B	12:11:10	1.0	Surface	1	2	28.06	7.89	27.24	81	5.44	7.2	8.3
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10B	12:11:20	4.3	Bottom	3	1	28.08	7.89	27.19	81	5.44	7	8.3
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	SR10B	12:10:56	4.3	Bottom	3	2	28.07	7.89	27.22	80.9	5.43	7.1	7.6
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:00:33	1.0	Surface	1	1	28.95	8.03	22.22	83.1	5.66	6.4	2.9
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:01:17	1.0	Surface	1	2	28.96	8.03	22.4	82.8	5.63	6.1	2.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:00:22	4.0	Middle	2	1	28.64	8.04	23.66	82.9	5.63	7.7	2.9
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:01:03	4.0	Middle	2	2	28.68	8.04	23.42	82.9	5.63	7.9	3.8
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:00:45	6.9	Bottom	3	1	28.63	8.03	24.14	82.5	5.59	8.4	3.6
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS2	15:00:12	6.9	Bottom	3	2	28.62	8.03	23.97	82.5	5.6	8.2	3.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:07:26	1.0	Surface	1	1	28.31	7.86	25.13	82.3	5.57	9.9	6.7
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:06:38	1.0	Surface	1	2	28.42	7.86	24.93	82.7	5.6	9.7	7.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:06:16	6.7	Middle	2	1	28.11	7.85	25.48	80.9	5.49	14.2	8.4
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:07:05	6.7	Middle	2	2	28.12	7.86	25.44	81	5.49	13.9	8.6
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:06:54	12.3	Bottom	3	1	28.13	7.86	25.47	81.5	5.52	16	7.9
HCLR	HY/2011/03	2013-09-20	Mid-Ebb	Sunny	CS1(MF)S	13:06:01	12.3	Bottom	3	2	28.13	7.85	25.48	81.5	5.52	15.7	7.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:15:05	1.0	Surface	1	1	28.83	7.89	24.84	87.5	5.88	12.7	11.8
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:15:42	1.0	Surface	1	2	28.8	7.89	24.9	87.5	5.88	13	11.1
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:15:32	4.6	Middle	2	1	28.78	7.9	24.96	87.3	5.87	12.6	12.8
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:14:53	4.6	Middle	2	2	28.78	7.89	24.98	87.3	5.87	13	11.8
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:15:19	8.1	Bottom	3	1	28.75	7.89	25.07	87.1	5.86	12.9	12.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS5	18:14:43	8.1	Bottom	3	2	28.77	7.89	25.06	87.3	5.87	12.7	13.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)6	18:22:15	1.0	Surface	1	1	28.7	7.88	24.85	83.7	5.64	17	12.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)6	18:21:57	1.0	Surface	1	2	28.77	7.88	24.71	84.9	5.72	16.5	13.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)6	18:22:08	2.2	Bottom	3	1	28.57	7.88	25.39	83.7	5.64	17.9	13
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)6	18:21:42	2.2	Bottom	3	2	28.61	7.87	25.46	84.5	5.68	17.3	12.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS7	18:28:52	1.0	Surface	1	1	28.81	7.88	24.22	84.5	5.7	17	15.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS7	18:29:12	1.0	Surface	1	2	28.82	7.92	25.24	95	6.37	14.4	9.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS7	18:29:00	2.4	Bottom	3	1	28.81	7.88	24.34	84.8	5.72	16.5	15.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS7	18:28:42	2.4	Bottom	3	2	28.57	7.87	25.26	84.3	5.68	18.8	15.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS8	18:53:50	2.6	Bottom	3	1	28.82	7.92	25.25	94.7	6.36	14.9	8.3
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS8	18:53:28	2.6	Bottom	3	2	28.8	7.91	25.28	94.7	6.35	15.5	8.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)9	18:37:00	1.0	Surface	1	1	28.64	7.91	25.04	88	5.96	18.8	12.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)9	18:36:31	1.0	Surface	1	2	28.64	7.91	25.04	88.4	5.96	18.1	13
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)9	18:36:47	2.6	Bottom	3	1	28.53	7.91	25.15	87.4	5.9	19.2	14.1
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS1(MF)9	18:36:22	2.6	Bottom	3	2	28.59	7.91	25.1	88.4	5.96	19.1	14.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:38:58	1.0	Surface	1	1	28.97	8.07	22.02	82.1	5.6	10.6	4.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:38:17	1.0	Surface	1	2	28.94	8.07	22.38	82.4	5.6	10.8	5.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:38:48	5.3	Middle	2	1	28.84	8.07	23.71	81.4	5.51	11.1	4.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:38:06	5.3	Middle	2	2	28.85	8.07	23.56	82	5.55	11.2	4.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:38:39	9.5	Bottom	3	1	28.69	8.06	24.09	80.9	5.48	12.7	5.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	IS10	19:37:55	9.5	Bottom	3	2	28.84	8.05	23.94	81.6	5.52	12.8	6
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR3	18:02:06	0.9	Middle	2	1	28.85	7.77	24.85	88.5	5.95	12.7	12
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR3	18:02:16	0.9	Middle	2	2	28.87	7.81	24.79	88	5.92	12.9	11.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR4	18:45:58	1.0	Surface	1	1	28.9	7.96	25.06	95	6.37	12.6	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR4	18:45:40	1.0	Surface	1	2	28.88	7.96	25.12	95.3	6.39	11.9	6.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR4	18:45:50	2.6	Bottom	3	1	28.85	7.96	25.13	95	6.37	13.5	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR4	18:45:32	2.6	Bottom	3	2	28.86	7.96	25.14	95.3	6.39	12.6	6.8

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR5	19:28:47	1.0	Surface	1	1	28.95	8.05	22.39	82	5.58	11.4	6
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR5	19:29:07	1.0	Surface	1	2	28.95	8.05	22.39	81.9	5.57	11.2	6.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR5	19:28:57	3.7	Bottom	3	1	28.93	8.04	22.88	81.8	5.55	11.7	5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR5	19:28:38	3.7	Bottom	3	2	28.93	8.04	23.06	82.1	5.56	11.7	5.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:09:27	1.0	Surface	1	1	28.06	7.91	27.73	78.9	5.29	12.1	5.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:08:49	1.0	Surface	1	2	28.09	7.9	27.52	79.1	5.31	12.2	6.6
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:09:13	3.5	Middle	2	1	28.04	7.9	28.01	78.8	5.28	12.8	7.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:08:35	3.5	Middle	2	2	28.07	7.9	27.73	78.9	5.29	13.5	8.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:08:24	5.9	Bottom	3	1	28.05	7.89	27.68	79.1	5.3	15.2	8.3
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10A	20:09:02	5.9	Bottom	3	2	28.05	7.9	27.94	78.8	5.28	15.1	8.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10B	20:18:18	1.0	Surface	1	1	28.09	7.9	27.43	79	5.3	11.8	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10B	20:18:39	1.0	Surface	1	2	28.09	7.9	27.44	78.9	5.29	12.1	6.1
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10B	20:17:53	4.5	Bottom	3	1	28.08	7.9	27.56	78.8	5.28	12.9	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	SR10B	20:18:29	4.5	Bottom	3	2	28.06	7.9	27.59	78.8	5.28	12.4	6.3
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:00:53	1.0	Surface	1	1	29.06	8.08	21.54	82.8	5.65	10.8	4.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:01:20	1.0	Surface	1	2	29.06	8.07	21.46	81.5	5.56	8.2	4.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:00:46	1.0	Middle	2	1	29.07	8.09	22.11	83.3	5.66	8.6	4.5
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:01:12	3.9	Middle	2	2	29.08	8.07	21.87	81.5	5.55	8.8	4.6
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:01:03	6.8	Bottom	3	1	29.08	8.06	22.41	82	5.57	8.7	5.1
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS2	18:00:33	6.8	Bottom	3	2	29.12	8.1	22.46	86	5.83	8.8	5.1
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:31:11	1.0	Surface	1	1	28.29	7.9	25.72	79.3	5.36	10.5	5.7
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:31:58	1.0	Surface	1	2	28.2	7.9	26.3	79	5.32	10.8	4.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:31:00	6.8	Middle	2	1	28.02	7.9	26.98	78.2	5.27	14	6.4
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:31:38	6.8	Middle	2	2	27.99	7.9	27.07	77.7	5.23	13.7	6.2
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:30:50	12.5	Bottom	3	1	28.07	7.89	26.99	79.4	5.34	14.6	6.9
HCLR	HY/2011/03	2013-09-20	Mid-Flood	Fine	CS(M)F5	19:31:27	12.5	Bottom	3	2	28.03	7.89	27.03	78.6	5.29	15	7.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:55:36	1.0	Surface	1	1	28.42	7.77	22.1	89.8	6.17	10.1	8.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:56:37	1.0	Surface	1	2	28.41	7.77	22.11	89.9	6.18	9.9	8.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:55:14	4.6	Middle	2	1	28.33	7.76	22.18	88.7	6.12	11.4	7.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:56:16	4.6	Middle	2	2	28.35	7.76	22.17	88.5	6.09	11.6	8.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:55:58	8.2	Bottom	3	1	28.12	7.76	22.37	87.9	6.05	12.9	8.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS5	14:54:56	8.2	Bottom	3	2	28.14	7.75	22.37	88	6.06	13.4	8.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F6	15:07:24	1.0	Surface	1	1	28.89	7.83	20.08	95.8	6.61	5.3	5.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F6	15:08:10	1.0	Surface	1	2	28.89	7.83	20.08	95.8	6.61	5.3	6.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F6	15:07:01	2.2	Bottom	3	1	28.88	7.82	20.12	95.8	6.6	5.6	5.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS7	15:17:18	1.0	Surface	1	2	28.87	7.83	20.11	95.7	6.6	5.7	5.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS7	15:16:45	1.0	Surface	1	1	28.88	7.84	20.3	95.8	6.6	6.7	5.1
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS7	15:16:27	2.3	Bottom	3	2	28.87	7.84	20.37	95.8	6.6	7.2	7.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS7	15:17:01	2.3	Bottom	3	1	28.85	7.84	20.34	95.7	6.59	7.3	6.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS8	15:43:09	1.0	Surface	1	2	28.62	7.82	20.75	91.3	6.3	8.6	9.5
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS8	15:43:55	1.0	Surface	1	2	28.64	7.82	20.73	91.5	6.31	8.7	8.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS8	15:43:31	2.6	Bottom	3	1	28.41	7.82	20.76	91.3	6.3	9.1	11
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS8	15:42:50	2.6	Bottom	3	2	28.46	7.82	20.77	91.3	6.3	9.2	9.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F9	15:25:49	1.0	Surface	1	1	28.7	7.81	20.67	93.4	6.44	9.3	8.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F9	15:25:11	1.0	Surface	1	2	28.7	7.81	20.67	93.4	6.44	9	8.1
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F9	15:25:31	2.4	Bottom	3	1	28.65	7.81	20.69	93.3	6.44	9.7	8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS(M)F9	15:24:53	2.4	Bottom	3	2	28.64	7.8	20.69	93.3	6.44	9.3	8.1
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:20:50	1.0	Surface	1	1	28.42	8.05	19.75	84.5	5.88	8.5	5.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:20:00	1.0	Surface	1	2	28.39	8.05	19.81	84.1	5.86	8.5	5.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:19:49	5.3	Middle	2	1	28.11	8.02	22.79	81.1	5.63	8.4	5.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:20:37	5.3	Middle	2	2	28.12	8.01	23.1	83.5	5.73	8.5	5.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:19:32	9.6	Bottom	3	1	28.13	8	23.4	82.2	5.64	8.9	7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	IS10	16:20:27	9.6	Bottom	3	2	28.12	8	23.4	81.8	5.62	8.6	7.3
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR3	14:36:08	0.7	Middle	2	1	28.56	7.78	22.15	94.6	6.49	9.3	9.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR3	14:36:32	0.7	Middle	2	2	28.56	7.78	22.14	94.5	6.48	9.4	10.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR4	15:36:59	1.0	Surface	1	1	29.06	7.8	19.96	90.1	6.22	8.8	7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR4	15:36:23	1.0	Surface	1	2	29.06	7.81	20.69	90.3	6.23	9.1	9.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR4	15:36:41	2.5	Bottom	3	1	28.48	7.8	20.69	89.2	6.16	9.8	6.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR4	15:36:04	2.5	Bottom	3	2	28.46	7.8	20.67	89.2	6.16	9.7	6.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR5	16:07:52	1.0	Surface	1	1	28.32	8.03	20.74	86.2	5.98	6.7	6.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR5	16:07:31	1.0	Surface	1	2	28.29	8.03	20.92	86.7	6.01	6.5	5.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR5	16:07:21	3.5	Bottom	3	1	28.24	8.02	22.1	87	6	6.7	6.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR5	16:07:41	3.5	Bottom	3	2	28.17	8.01	22.35	86.1	5.93	6.9	5.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:49:16	1.0	Surface	1	2	28.4	7.86	25.35	85.5	5.76	4.7	4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:50:19	1.0	Surface	1	2	28.41	7.87	25.37	85.5	5.78	4.6	3.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:48:50	3.4	Middle	2	1	28.36	7.86	25.65	84.5	5.7	5.3	3.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:49:58	3.4	Middle	2	2	28.34	7.87	25.65	84.3	5.69	5.4	3.3
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:48:33	5.8	Bottom	3	1	28.27	7.86	25.91	84.1	5.67	5.1	4.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10A	16:49:40	5.8	Bottom	3	2	28.26	7.86	25.89	84	5.67	4.9	4.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10B	16:58:09	1.0	Surface	1	1	28.26	7.87	26.14	83.5	5.63	6.1	5.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10B	16:58:42	1.0	Surface	1	2	28.27	7.87	26.14	83.6	5.63	6.3	6.6
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10B	16:58:27	4.5	Bottom	3	1	28.27	7.87	26.16	83.9	5.65	7.3	6.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	SR10B	16:57:48	4.5	Bottom	3	2	28.26	7.87	26.16	83.7	5.64	6.9	5.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:47:25	1.1	Surface	1	1	28.71	8.12	19.18	86.5	6.02	5.4	5.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:48:09	1.0	Surface	1	2	28.73	8.09	19.15	87	6.05	5.7	5
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:47:10	3.9	Middle	2	1	28.21	8.1	22.29	83	5.72	6.9	6.2
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:47:55	3.9	Middle	2	2	28.21	8.07	22.18	83	5.72	6.7	4.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:46:32	6.8	Bottom	3	1	28.22	8.15	22.63	83.6	5.75	7.3	6.1
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS2	14:47:42	6.8	Bottom	3	2	28.24	8.06	22.54	84.2	5.79	7.2	4.8
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:17:59	1.0	Surface	1	1	28.56	7.88	23.19	88.9	6.06	4.1	2.9
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:19:06	1.0	Surface	1	2	28.58	7.89	23.24	89.3	6.09	4.2	3.1
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:17:32	6.6	Middle	2	1	28.15	7.88	26.4	81.6	5.5	7.6	3.7
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:18:46	6.6	Middle	2	2	28.17	7.88	26.31	81.6	5.51	7.5	5
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:17:08	12.2	Bottom	3	1	28.06	7.86	27.11	80.7	5.43	11.5	4.4
HCLR	HY/2011/03	2013-09-25	Mid-Ebb	Sunny	CS(M)F5	16:18:21	12.2	Bottom	3	2	28.06	7.86	27.11	81.2	5.46	11.6	4.4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:57:24	1.0	Surface	1	1	28.2	7.8	22.17	91.5	6.31	10.1	8.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:58:24	1.0	Surface	1	2	28.22	7.81	22.16	91.4	6.31	10.2	8.7
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:58:05	4.7	Middle	2	1	28.11	7.81	22.2	90.6	6.26	10.3	9.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:57:05	4.7	Middle	2	2	28.12	7.8	22.2	90.8	6.27	10.3	9.4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:57:46	8.4	Bottom	3	1	28.05	7.8	22.24	90.5	6.25	10.8	10.7
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS5	11:56:40	8.4	Bottom	3	2	28.06	7.8	22.25	90.7	6.27	10.8	9.7
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F6	11:47:48	1.0	Surface	1	1	28.46	7.77	20.45	93.3	6.47	10.2	6.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F6	11:47:12	1.0	Surface	1	2	28.46	7.77	20.44	93.2	6.46	9.9	7.6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F6	11:46:56	2.4	Bottom	3	1	28.45	7.77	20.52	93.2	6.46	13.9	7.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F6	11:47:31	2.4	Bottom	3	2	28.44	7.77	20.49	93.2	6.46	13.7	7.1
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS7	11:38:17	1.0	Surface	1	1	28.39	7.78	20.58	92.6	6.42	8.8	6.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS7	11:38:51	1.0	Surface	1	2	28.4	7.78	20.44	92.6	6.43	8.9	6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS7	11:37:58	2.5	Bottom	3	1	28.29	7.77	21.13	92.3	6.39	9.9	6.7
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS7	11:38:34	2.5	Bottom	3	2	28.22	7.77	21.06	92.3	6.4	9.7	5.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS8	11:12:33	1.0	Surface	1	1	28.27	7.75	20.2	88.2	6.14	20.5	4.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS8	11:13:10	1.0	Surface	1	2	28.25	7.75	20.34	88.3	6.14	19.9	6.1
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS8	11:12:53	2.6	Bottom	3	1	28.16	7.74	21.11	88	6.1	19.7	6.6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS8	11:12:15	2.6	Bottom	3	2	28.15	7.74	21.12	87.7	6.09	20.1	7.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F9	11:29:48	1.0	Surface	1	1	28.23	7.77	20.67	89.7	6.24	8.9	5.8
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F9	11:29:12	1.0	Surface	1	2	28.27	7.76	20.68	90.1	6.26	9.3	4.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F9	11:29:31	2.4	Bottom	3	1	28.07	7.76	21.46	88.9	6.17	10.2	5.4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS(M)F9	11:28:55	2.4	Bottom	3	2	28.06	7.75	21.53	89.2	6.18	10.6	4.6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:55:11	1.0	Surface	1	1	28.33	8	19.59	87.5	6.11	9.5	3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:54:28	1.0	Surface	1	2	28.33	8	19.59	87.4	6.1	9.5	4.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:54:59	5.3	Middle	2	1	28.09	7.99	21.06	85.9	5.97	10.3	5.1
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:54:17	5.3	Middle	2	2	28.09	7.99	21.17	85.8	5.96	10.5	4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:54:06	9.5	Bottom	3	1	28.13	7.97	22.71	86.1	5.93	11.4	3.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	IS10	10:54:46	9.5	Bottom	3	2	28.12	7.97	22.64	86	5.92	11.2	3.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR3	12:10:31	0.6	Middle	2	1	28.23	7.8	22.18	93.9	6.47	9.4	10
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR3	12:10:08	0.6	Middle	2	2	28.23	7.8	22.18	94.3	6.5	9.5	9.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR4	11:20:42	1.0	Surface	1	1	28.28	7.73	20.01	89	6.2	8.3	4.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR4	11:20:05	1.0	Surface	1	2	28.29	7.73	20.01	88.7	6.19	8.2	3.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR4	11:20:24	2.4	Bottom	3	1	28.21	7.73	20.22	88.8	6.19	8.8	3.8
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR4	11:19:48	2.4	Bottom	3	2	28.21	7.72	20.23	88.4	6.16	8.7	3.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR5	11:04:28	1.0	Surface	1	1	28.27	7.98	19.76	88	6.14	11.4	6.1
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR5	11:04:46	1.0	Surface	1	2	28.31	7.98	19.71	88	6.14	11.4	5.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR5	11:04:20	3.6	Bottom	3	1	28.18	7.97	20.78	87.8	6.11	12.6	4.6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR5	11:04:36	3.6	Bottom	3	2	28.2	7.97	20.81	87.7	6.1	12.7	5.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:55:35	1.0	Surface	1	1	28.14	7.83	22.65	87.7	6.03	5.7	4.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:54:36	1.0	Surface	1	2	28.14	7.82	22.65	88.3	6.07	5.7	5.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:55:17	3.1	Middle	2	1	28.11	7.82	22.83	87	5.94	5.8	4.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:54:14	3.1	Middle	2	2	28.11	7.81	22.83	87.2	5.95	5.8	4.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:54:57	5.2	Bottom	3	1	28.12	7.81	24.18	86	5.86	5.9	4.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10A	09:53:53	5.2	Bottom	3	2	28.11	7.81	24.16	85.6	5.84	5.9	4.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10B	09:39:45	1.0	Surface	1	1	28.03	7.88	26.9	83.4	5.62	11.7	10.8
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10B	09:40:34	1.0	Surface	1	2	28.02	7.89	26.94	83.2	5.6	11.6	11.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10B	09:40:07	4.3	Bottom	3	1	28	7.89	27.01	83.1	5.6	11.9	10
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	SR10B	09:39:26	4.3	Bottom	3	2	28.01	7.88	26.98	83.4	5.61	12.1	10.8
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:32:52	1.0	Surface	1	1	28.42	7.99	18.96	86.9	6.08	9.9	2.5
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:33:22	1.0	Surface	1	2	28.44	7.99	18.93	86.9	6.08	9.6	4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:33:12	3.9	Middle	2	1	28.15	7.98	21.08	86.6	5.97	10.2	2.9
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:32:41	3.9	Middle	2	2	28.14	7.98	21.51	86.2	5.96	10.1	3.3
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:32:33	6.8	Bottom	3	1	28.14	7.96	21.95	85.2	5.91	10.3	4.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS2	12:33:03	6.8	Bottom	3	2	28.21	7.96	21.97	85.5	5.94	10.7	4.4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:26:45	1.0	Surface	1	1	28.23	7.82	21.96	86.9	6	6.3	2.6
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:27:42	1.0	Surface	1	2	28.24	7.83	21.94	86.6	5.97	6.6	2.8
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:26:19	6.5	Middle	2	1	28.16	7.82	23.73	82.7	5.66	7.5	4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:27:21	6.5	Middle	2	2	28.14	7.83	23.77	82.8	5.66	7.6	3.1
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:25:55	12	Bottom	3	1	28.09	7.81	26.13	83.5	5.65	8.9	5.4
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	CS(M)F5	10:27:02	12	Bottom	3	2	28.09	7.81	26.16	83	5.62	8.5	5.2
HCLR	HY/2011/03	2013-09-25	Mid-Flood	Sunny	ISS	06:39:55	1.0	Surface	1	1	27.76	7.81	22.78	85.4	5.91	6.6	5.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	ISS	06:40:21	1.0	Surface	1	2	27.8	7.82	22.71	84.6	5.86	6.6	7.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	ISS	06:40:12	4.3	Middle	2	1	27.95	7.82	25.81	83.9	5.7	6.5	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	ISS	06:39:43	4.3	Middle	2	2	27.96	7.81	26.18	83.7	5.67	6.6	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	ISS	06:39:36	7.5	Bottom	3	1	27.92	7.78	27.96	85.6	5.74	7.3	7.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	ISS	06:40:05	7.5	Bottom	3	2	27.9	7.78	27.92	85.8	5.76	7.6	8
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F6	06:32:35	1.0	Surface	1	1	27.56	7.76	21.44	93.6	6.55	7.8	5.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F6	06:32:17	1.0	Surface	1	2	27.56	7.76	21.45	93.2	6.53	7.8	6.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F6	06:32:06	2.1	Bottom	3	1	27.61	7.75	21.51	92.4	6.56	7.7	6.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F6	06:32:23	2.1	Bottom	3	2	27.6	7.76	21.56	93.4	6.53	7.7	5.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS7	06:26:29	1.0	Surface	1	1	27.67	7.73	21.71	87.9	6.13	6.7	4.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS7	06:26:06	1.0	Surface	1	2	27.67	7.73	21.71	88.8	6.2	6.7	3.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS7	06:25:56	2.2	Bottom	3	1	27.7	7.72	21.92	88.7	6.18	6.8	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS7	06:26:17	2.2	Bottom	3	2	27.62	7.72	22.11	86.9	6.03	6.6	5.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS8	06:03:02	1.0	Surface	1	1	27.65	7.76	21.19	89.7	6.28	5.1	3.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS8	06:03:21	1.0	Surface	1	2	27.62	7.76	21.2	90.2	6.31	5.3	5.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS8	06:02:52	3.3	Bottom	3	1	27.74	7.73	23.93	90.3	6.22	5.5	6.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS8	06:03:10	3.3	Bottom	3	2	27.78	7.74	23.86	90.7	6.24	5.4	6.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F9	06:19:26	1.0	Surface	1	1	27.67	7.75	21.4	88	6.15	12.4	3.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F9	06:19:02	1.0	Surface	1	2	27.72	7.74	21.38	87.2	6.09	12.5	2.8
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F9	06:18:53	2.8	Bottom	3	1	27.91	7.71	24.11	88.3	6.06	12.3	4.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS(M)F9	06:19:13	2.8	Bottom	3	2	27.94	7.71	24.05	87.6	6	12.3	4.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:04:13	1.0	Surface	1	1	27.66	8.08	22.32	84	5.84	4	2.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:05:06	1.0	Surface	1	2	27.65	8.07	22.32	85.8	5.97	3.8	2.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:04:00	5.6	Middle	2	1	27.91	8.07	23.78	80.5	5.53	6.6	1.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:04:46	5.6	Middle	2	2	27.88	8.06	24.39	80.8	5.54	6.6	1.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:03:47	10.1	Bottom	3	1	28.06	8.04	27.02	81.2	5.47	7	3.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	IS10	06:04:32	10.1	Bottom	3	2	28.05	8.03	26.92	82	5.52	6.7	3.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR3	06:47:04	0.6	Middle	2	1	27.72	7.78	22.69	89.9	6.23	5.7	6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR3	06:46:57	0.6	Middle	2	2	27.72	7.78	22.7	89.8	6.22	5.7	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR4	06:08:19	1.0	Surface	1	1	27.94	7.67	20.96	82.7	5.77	5.4	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR4	06:08:37	1.0	Surface	1	2	27.96	7.66	21.29	82.4	5.73	5.5	5.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR4	06:08:27	2.9	Bottom	3	1	28.02	7.66	21.4	82.2	5.71	6	5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR4	06:08:10	2.9	Bottom	3	2	27.99	7.66	22.02	82.6	5.72	5.4	5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR5	06:14:11	1.0	Surface	1	1	27.52	8.05	22.08	86.4	6.03	3.3	2.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR5	06:14:44	1.0	Surface	1	2	27.48	8.03	22.05	87.3	6.1	3.4	3.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR5	06:14:28	4.3	Bottom	3	1	27.75	8.05	23.8	86.5	5.96	3.5	2.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR5	06:13:56	4.3	Bottom	3	2	27.77	8.03	23.85	86.3	5.94	3.7	3.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:54:09	1.0	Surface	1	1	27.62	7.76	23.5	89.4	6.17	2.6	2.3
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:53:42	1.0	Surface	1	2	27.64	7.76	23.6	89.3	6.18	2.6	2.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:53:29	3.3	Middle	2	1	27.68	7.76	23.87	88.8	6.12	2.6	4.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:53:59	3.3	Middle	2	2	27.68	7.76	23.85	88.9	6.13	2.7	4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:53:50	5.5	Bottom	3	1	27.68	7.76	24.05	89.1	6.11	2.6	4.6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10A	04:53:22	5.5	Bottom	3	2	27.7	7.76	24.05	88.8	6.14	2.7	4.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10B	04:47:47	1.0	Surface	1	1	27.7	7.77	24.91	87.4	5.99	3.5	4.1
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10B	04:47:23	1.0	Surface	1	2	27.7	7.76	24.88	87.7	6.01	3.5	5.1
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10B	04:47:33	3.9	Bottom	3	1	27.7	7.76	25.13	87.3	5.98	3.5	4.6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	SR10B	04:47:15	3.9	Bottom	3	2	27.98	7.76	24.91	87.7	6.01	3.5	5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:31:59	1.0	Surface	1	1	27.98	8.06	23.57	86.2	5.92	3.2	3.6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:31:06	1.0	Surface	1	2	28	8.06	23.56	86.2	5.92	3	3.6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:31:41	3.4	Middle	2	1	27.98	8.07	23.71	84.8	5.82	3.4	5.6
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:30:51	3.4	Middle	2	2	27.97	8.07	23.71	85.2	5.85	3.4	5.7
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:31:29	5.8	Bottom	3	1	28.04	8.06	24.86	84.5	5.76	5.5	4.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS2	07:30:28	5.8	Bottom	3	2	28.03	8.06	25.39	84.5	5.74	5.6	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:29:41	1.0	Surface	1	1	27.79	7.77	21.81	83.4	5.8	5.4	6.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:30:17	1.0	Surface	1	2	27.82	7.79	21.72	81.8	5.69	5.4	6.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:29:26	6.5	Middle	2	1	28.12	7.77	26.85	80	5.38	5.2	7.2
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:30:06	6.5	Middle	2	2	28.12	7.77	27	79.2	5.33	5.2	7.4
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:29:16	12.0	Bottom	3	1	28.06	7.73	27.96	82.8	5.54	5.3	7.5
HCLR	HY/2011/03	2013-09-27	Mid-Ebb	Fine	CS1(M)F5	05:29:56	12.0	Bottom	3	2	28.08	7.74	27.82	81.7	5.47	5.3	7.6
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:24:00	1.0	Surface	1	1	28.72	7.86	22	89.6	6.13	8	4.1
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:24:29	1.0	Surface	1	2	28.71	7.86	22.03	90.5	6.2	7.5	3.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:23:48	4.4	Middle	2	1	28.02	7.83	25.53	82.6	5.61	11.3	5.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:24:17	4.4	Middle	2	2	28.04	7.83	25.82	84.5	5.73	11.5	3.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:23:39	7.7	Bottom	3	1	28.1	7.81	27.33	87.2	5.86	12.4	4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS5	17:24:09	7.7	Bottom	3	2	28.24	7.81	27.05	90	6.04	12.2	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F6	17:31:21	1.0	Surface	1	1	28.22	7.85	21.82	100.8	6.96	6.6	6.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F6	17:31:37	1.0	Surface	1	2	28.24	7.85	21.71	100.5	6.94	6.6	5.5
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F6	17:31:08	2.2	Bottom	3	1	28.19	7.83	22.64	100.7	6.93	6.6	6.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F6	17:31:27	2.2	Bottom	3	2	28.19	7.84	22.68	100.3	6.9	6.5	7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS7	17:38:15	1.0	Surface	1	1	28.59	7.88	21.41	106.9	7.36	5.3	7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS7	17:38:36	1.0	Surface	1	2	28.23	7.85	22.22	103.1	7.1	5.3	5.3
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS7	17:38:23	2.4	Bottom	3	1	28.34	7.87	22.11	106.7	7.34	5.5	7.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS7	17:38:04	2.4	Bottom	3	2	28.24	7.85	22.39	105.4	7.25	5.5	5.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS8	18:05:04	1.0	Surface	1	1	28.71	7.83	22.37	94.7	6.47	6.4	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS8	18:04:46	1.0	Surface	1	2	28.67	7.83	22.35	92.9	6.35	6.7	4.8
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS8	18:04:53	3.2	Bottom	3	1	28.47	7.82	23.61	93.6	6.38	7.7	5.6
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS8	18:04:36	3.2	Bottom	3	2	28.47	7.81	23.65	93.1	6.34	7.6	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F9	17:48:14	1.0	Surface	1	1	28.34	7.84	21.87	96.8	6.67	7.4	4.3
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F9	17:47:58	1.0	Surface	1	2	28.35	7.84	22.09	97.1	6.68	7.5	5.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F9	17:48:05	2.7	Bottom	3	1	28.24	7.82	23.4	96.6	6.61	7.9	4.5
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS1(M)F9	17:47:49	2.7	Bottom	3	2	28.27	7.82	23.65	98.7	6.74	7.7	4.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:27:30	1.0	Surface	1	1	28.46	8.11	23.43	86.9	5.92	5	4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:28:29	1.0	Surface	1	2	28.48	8.11	23.35	86.1	5.87	5.4	5.5
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:28:12	5.6	Middle	2	1	28.09	8.08	27.05	76.2	5.13	8.6	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:27:11	5.6	Middle	2	2	28.09	8.08	26.92	77.4	5.21	8.3	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:27:56	10.2	Bottom	3	1	28.11	8.07	27.48	78.5	5.27	8.2	7.6
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	IS10	18:26:57	10.2	Bottom	3	2	28.11	8.07	27.18	80.8	5.43	8.3	5.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR3	17:15:51	0.7	Middle	2	1	28.7	7.85	22.04	103.6	7.09	5.1	7.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR3	17:16:00	0.7	Middle	2	2	28.69	7.85	22.06	103.2	7.07	5	6.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR4	17:59:19	1.0	Surface	1	1	29	7.89	22.44	98.2	6.68	3.3	6.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR4	17:59:00	1.0	Surface	1	2	29	7.9	22.52	98.2	6.67	3.4	4.8
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR4	17:58:47	2.7	Bottom	3	1	28.75	7.9	22.94	97.8	6.65	3.6	4.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR4	17:59:06	2.7	Bottom	3	2	28.81	7.89	22.85	97.7	6.65	3.5	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR5	18:17:31	1.0	Surface	1	1	28.45	8.11	23.47	87.9	5.99	4.9	5.2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR5	18:18:12	1.0	Surface	1	2	28.47	8.11	23.42	89.3	6.09	4.8	4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR5	18:17:12	4.3	Bottom	3	1	28.13	8.07	26.62	84.3	5.67	6.4	4.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR5	18:17:50	4.3	Bottom	3	2	28.12	8.07	26.64	84	5.66	6.4	4.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:17:17	1.0	Surface	1	1	28.19	7.87	27.35	82.9	5.55	3.2	3.1
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:16:49	1.0	Surface	1	2	28.19	7.87	27.37	83	5.56	3.2	3.6
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:17:08	3.3	Middle	2	1	28.18	7.87	27.47	82.2	5.5	3.4	3.6
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:16:41	3.3	Middle	2	2	28.18	7.87	27.47	82.6	5.53	3.4	4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:16:58	5.6	Bottom	3	1	28.17	7.86	28.31	82.7	5.51	3.4	5.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10A	19:16:32	5.6	Bottom	3	2	28.18	7.86	28.46	83.2	5.54	3.5	4.8
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10B	19:25:26	1.0	Surface	1	2	28.14	7.87	26.14	83.7	5.65	2.5	5.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10B	19:25:45	1.0	Surface	1	2	28.13	7.87	26.28	84.3	5.69	2.5	4.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10B	19:25:35	4.2	Bottom	3	1	28.16	7.86	27.49	84.3	5.65	2.6	6.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	SR10B	19:25:17	4.2	Bottom	3	2	28.16	7.86	27.67	83.9	5.61	2.5	7.3
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:02:49	1.0	Surface	1	1	28.18	8.18	24.25	84.9	5.78	2.8	2.8
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:03:34	1.0	Surface	1	1	28.25	8.15	24.47	83.6	5.69	5.6	3.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:02:34	3.3	Middle	2	1	28.11	8.19	26.35	78.8	5.31	6.9	4.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:03:20	3.3	Middle	2	2	28.11	8.13	26.59	78.6	5.29	3.9	3.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:02:16	5.6	Bottom	3	1	28.07	8.22	27.3	80	5.38	8.6	2.7
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS2	17:03:09	5.6	Bottom	3	2	28.08	8.14	27.19	79.4	5.34	8.7	3.1
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:43:24	1.0	Surface	1	1	28.2	7.89	24.54	84.2	5.73	3.5	3.5
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:42:50	1.0	Surface	1	2	28.23	7.88	24.69	86.6	5.89	3.5	2.4
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:43:12	6.3	Middle	2	1	28.1	7.86	29.04	80.9	5.38	5.6	2.3
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:42:35	6.3	Middle	2	2	28.09	7.86	29.19	80.1	5.32	5.4	2
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:42:25	11.6	Bottom	3	1	28.1	7.85	29.53	82.7	5.49	5.7	3.9
HCLR	HY/2011/03	2013-09-27	Mid-Flood	Sunny	CS(M)F5	18:43:03	11.6	Bottom	3	2	28.12	7.85	29.5	84.4	5.6	5.7	3.1
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:34:31	1.0	Surface	1	1	27.54	7.9	26.38	91.9	6.22	5.6	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:34:01	1.0	Surface	1	2	27.53	7.9	25.83	92	6.23	5.6	2.4
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:33:52	4.3	Middle	2	1	27.76	7.88	28.52	91.1	6.11	7.7	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:34:20	4.3	Middle	2	1	27.82	7.89	28.81	91.4	6.1	7.9	3.5
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:33:40	7.5	Bottom	3	1	27.81	7.87	30.02	90.5	6.07	8.7	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS5	10:34:12	7.5	Bottom	3	2	27.78	7.87	30.12	90.3	6.04	8.7	3.4
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F6	10:26:43	1.0	Surface	1	1	27.21	7.87	25.32	96.3	6.63	3.9	2.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F6	10:27:03	1.0	Surface	1	2	27.22	7.87	25.33	96	6.61	4	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F6	10:26:32	2.1	Bottom	3	1	27.27	7.86	25.54	96.5	6.63	4.1	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F6	10:26:52	2.1	Bottom	3	2	27.34	7.86	25.86	96.4	6.61	4	3.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS7	10:19:41	1.0	Surface	1	1	27.33	7.81	26.17	84.5	5.78	6.6	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS7	10:20:00	1.0	Surface	1	2	27.44	7.81	26.17	82.5	5.63	6.8	3.6
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS7	10:19:30	2.3	Bottom	3	1	27.66	7.8	26.56	83.2	5.65	6.8	4.1
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS7	10:19:51	2.3	Bottom	3	2	27.69	7.79	27.33	83.3	5.63	6.7	3.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS8	09:57:18	1.0	Surface	1	1	27.41	7.87	25.85	91.3	6.25	4.5	2.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS8	09:57:41	1.0	Surface	1	2	27.38	7.88	25.92	93	6.37	4.6	2.5
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS8	09:57:08	3.1	Bottom	3	1	27.61	7.86	27.43	92	6.22	4.5	2.4
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS8	09:57:31	3.1	Bottom	3	2	27.56	7.87	27.22	92.9	6.3	4.5	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F9	10:13:23	1.0	Surface	1	1	27.21	7.86	25.48	90.7	6.25	5.6	2.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F9	10:13:03	1.0	Surface	1	2	27.27	7.85	25.46	89.4	6.15	5.5	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F9	10:12:54	2.7	Bottom	3	1	27.59	7.83	27	90.7	6.15	5.7	1.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS(M)F9	10:13:11	2.7	Bottom	3	2	27.47	7.83	26.94	91	6.18	5.7	1.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:55:18	1.0	Surface	1	1	27.62	8.15	27.41	88.2	5.96	4.1	20.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:54:20	1.0	Surface	1	2	27.63	8.15	27.41	88.1	5.96	4	20.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:54:55	5.5	Middle	2	1	27.52	8.15	28.28	87.1	5.87	2.6	23.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:54:01	5.5	Middle	2	2	27.53	8.15	28.35	87.2	5.87	2.5	22.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:54:41	10.0	Bottom	3	1	27.54	8.15	28.41	87.3	5.88	2.8	22.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	IS10	09:53:48	10.0	Bottom	3	2	27.54	8.15	28.4	87.4	5.89	2.9	22.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR3	10:41:13	0.7	Middle	2	1	27.46	7.88	26.04	94.8	6.48	3.8	3.4
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR3	10:41:23	0.7	Middle	2	2	27.5	7.88	26.35	94.7	6.46	3.8	3.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR4	10:02:57	1.0	Surface	1	1	27.54	7.81	25.42	80.7	5.53	4.4	4.6
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR4	10:03:22	1.0	Surface	1	2	27.42	7.79	25.3	83	5.7	4.5	4.6
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR4	10:03:10	2.7	Bottom	3	1	27.69	7.79	26.38	81.8	5.56	5.6	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR4	10:02:48	2.7	Bottom	3	2	27.83	7.79	27.62	81.7	5.5	5.5	2.5
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR5	10:06:00	1.0	Surface	1	1	27.54	8.15	27.46	87.9	5.95	4	21.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR5	10:05:26	1.0	Surface	1	2	27.56	8.15	27.48	87.7	5.94	3.9	20.5
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR5	10:05:40	4.7	Bottom	3	1	27.51	8.15	28.17	87.4	5.9	3.2	17.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR5	10:05:12	4.7	Bottom	3	2	27.51	8.15	28.18	87.4	5.9	3.3	17.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:51:47	1.0	Surface	1	1	27.88	7.86	29.98	83.4	5.54	2.7	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:51:14	1.0	Surface	1	2	27.91	7.86	30.15	83.6	5.54	2.6	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:51:02	3.3	Middle	2	1	27.91	7.86	30.15	83.6	5.54	2.6	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:51:33	3.3	Middle	2	2	27.92	7.86	30.18	83.4	5.53	2.6	3.1
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:51:25	5.6	Bottom	3	1	27.92	7.86	30.24	83.3	5.52	2.7	2.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10A	08:50:53	5.6	Bottom	3	2	27.91	7.86	30.25	83.6	5.53	2.6	2.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10B	08:45:56	1.0	Surface	1	1	27.88	7.83	30.12	82.2	5.45	3.4	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10B	08:45:40	1.0	Surface	1	2	27.87	7.84	30.11	82.4	5.46	3.4	3.8
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10B	08:45:25	3.9	Bottom	3	1	27.89	7.84	30.12	82.4	5.47	3.4	3.6
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	SR10B	08:45:48	3.9	Bottom	3	2	27.89	7.84	30.12	82.2	5.45	3.4	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:21:07	1.0	Surface	1	1	27.4	8.2	28.17	91.9	6.21	2.6	2.8
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:21:56	1.0	Surface	1	2	27.39	8.2	28.14	92	6.22	2.6	2.5
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:20:52	3.4	Middle	2	1	27.52	8.21	28.31	90.4	6.09	4.9	2.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:21:41	3.4	Middle	2	2	27.48	8.21	28.2	90.3	6.09	4.4	2.2
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:21:28	5.7	Bottom	3	1	27.86	8.19	30.05	90.5	6.01	7.1	2.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS2	11:20:38	5.7	Bottom	3	2	27.9	8.19	30.11	90.4	6	6.7	2.7
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:26:08	1.0	Surface	1	1	27.28	7.84	27.37	85.7	5.83	2.5	3.3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:25:24	1.0	Surface	1	2	27.38	7.85	27.32	83.4	5.67	2.5	3.6
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:25:51	6.3	Middle	2	1	27.94	7.85	29.84	81.3	5.4	2.5	4
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:25:13	6.3	Middle	2	2	27.96	7.85	29.72	81.3	5.4	2.6	3
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:25:03	11.6	Bottom	3	1	28.01	7.83	30.64	83.4	5.5	3.3	4.9
HCLR	HY/2011/03	2013-09-30	Mid-Ebb	Cloudy	CS1(MF)5	09:25:39	11.6	Bottom	3	2	27.94	7.83	30.67	83.8	5.54	3.2	4.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:43:38	1.0	Surface	1	1	27.41	7.88	25.98	90.2	6.1	9.5	2.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:44:06	1.0	Surface	1	2	27.43	7.89	25.87	90	6.09	10	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:43:27	4.1	Middle	2	1	27.73	7.87	28.17	89.2	6.02	12	5.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:43:56	4.1	Middle	2	2	27.8	7.87	28.48	89	6	12.3	4.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:43:15	7.2	Bottom	3	1	27.73	7.86	29.39	88.1	5.92	12.6	5.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS5	15:43:48	7.2	Bottom	3	2	27.71	7.86	29.57	88.2	5.91	12.5	4.6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)6	15:50:59	1.0	Surface	1	1	27.16	7.87	25.81	97.4	6.7	5.2	4.9
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)6	15:51:17	1.0	Surface	1	2	27.14	7.87	25.72	97	6.67	5.3	3.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)6	15:51:08	2.1	Bottom	3	1	27.22	7.86	25.9	96.7	6.64	5.5	2.9
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)6	15:51:08	2.1	Bottom	3	2	27.23	7.86	25.93	96.8	6.64	5.6	2.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS7	15:59:23	1.0	Surface	1	1	27.25	7.86	25.98	97	6.65	4.1	4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS7	15:59:09	1.0	Surface	1	2	27.21	7.85	25.96	97	6.66	4.1	3.9
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS7	15:58:57	2.3	Bottom	3	1	27.24	7.85	25.98	96.4	6.61	4.1	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS7	15:59:14	2.3	Bottom	3	2	27.25	7.85	26.01	97.1	6.66	4.3	2.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS8	16:23:30	1.0	Surface	1	1	27.69	7.85	26.56	82.9	5.62	10.5	3.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS8	16:23:08	1.0	Surface	1	2	27.85	7.83	27.95	83.7	5.62	10.8	2.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS8	16:22:58	2.8	Bottom	3	1	27.84	7.84	28.1	82.7	5.55	11.4	3.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS8	16:23:22	2.8	Bottom	3	2	27.84	7.84	28.12	81.9	5.49	11.4	3.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)9	16:05:50	1.0	Surface	1	1	27.6	7.82	27.16	86.8	5.88	16.5	13.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)9	16:06:10	1.0	Surface	1	2	27.65	7.82	27.42	85.9	5.8	17.2	12.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)9	16:05:40	2.7	Bottom	3	1	27.73	7.82	28.2	87.2	5.86	17.6	7.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS1(MF)9	16:06:00	2.7	Bottom	3	2	27.7	7.82	28.22	87	5.85	18	7.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:46:56	1.0	Surface	1	1	27.5	8.15	27.76	87.3	5.9	15.6	4.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:47:36	1.0	Surface	1	2	27.5	8.15	27.71	87.2	5.9	15.5	4.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:46:41	5.3	Middle	2	1	27.55	8.15	28.1	86.8	5.85	11.4	5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:47:24	5.3	Middle	2	2	27.53	8.16	27.98	86.7	5.86	12	6.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:47:11	9.5	Bottom	3	1	27.61	8.15	28.5	86.8	5.84	13.4	7.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	IS10	18:46:28	9.5	Bottom	3	2	27.59	8.14	28.36	86.8	5.84	13.9	8.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR3	15:34:27	0.8	Middle	2	1	27.2	7.89	25.37	98.4	6.78	4.7	6.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR3	15:34:34	0.8	Middle	2	2	27.2	7.89	25.37	98.4	6.78	4.7	7.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR4	16:18:03	1.0	Surface	1	1	27.86	7.82	27.51	78	5.25	8.7	9
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR4	16:18:17	1.0	Surface	1	2	27.89	7.81	27.71	77.5	5.21	9.1	8.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR4	16:17:52	2.7	Bottom	3	1	27.92	7.81	27.97	78	5.23	10.4	4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR4	16:18:09	2.7	Bottom	3	2	27.9	7.81	27.91	78.1	5.24	10.3	3.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR5	18:35:44	1.0	Surface	1	1	27.5	8.11	27.74	87.4	5.91	19.9	4.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR5	18:36:10	1.0	Surface	1	2	27.5	8.12	27.73	87.5	5.92	19.3	4.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR5	18:36:00	4.5	Bottom	3	1	27.5	8.11	27.83	87.3	5.9	18.3	5.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR5	18:35:25	4.5	Bottom	3	2	27.51	8.09	27.83	87.4	5.91	18.3	6.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:43:02	1.0	Surface	1	1	27.84	7.83	30.06	81.9	5.44	4.3	5.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:43:34	1.0	Surface	1	2	27.89	7.84	30.14	82.1	5.44	4.3	6.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:43:24	3.3	Middle	2	1	27.94	7.84	30.44	82	5.42	4.4	6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:42:53	3.3	Middle	2	2	27.93	7.84	30.47	82.2	5.42	4.4	5.5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:43:14	5.6	Bottom	3	1	27.92	7.84	30.47	82	5.42	4.4	5
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10A	17:42:44	5.6	Bottom	3	2	27.91	7.83	30.48	82.2	5.44	4.3	5.9
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10B	17:52:14	1.0	Surface	1	1	27.92	7.84	30.22	81.6	5.4	3.7	3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10B	17:51:52	1.0	Surface	1	2	27.9	7.84	30.16	81.6	5.41	3.8	4.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10B	17:52:02	3.8	Bottom	3	1	27.93	7.84	30.38	81.6	5.4	4.3	2.6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	SR10B	17:51:41	3.8	Bottom	3	2	27.93	7.84	30.36	81.7	5.41	4.4	2.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:19:27	1.0	Surface	1	1	27.41	8.11	28.27	91.4	6.18	4.8	3.4
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:18:43	1.0	Surface	1	2	27.41	8.01	28.27	92	6.22	4.2	3.6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:18:28	3.5	Middle	2	1	27.43	7.94	28.28	90.4	6.11	6.5	4.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:19:15	3.5	Middle	2	2	27.46	8.1	28.25	89.4	6.03	6.8	4.8
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:19:04	6.0	Bottom	3	1	27.76	8.06	29.39	89.2	5.95	12.1	4.6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS2	17:18:13	6.0	Bottom	3	2	27.7	7.79	29.11	89	5.95	11.2	4.2
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:02:44	1.0	Surface	1	1	27.79	7.83	29.01	81.6	5.41	4.5	3.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:02:09	1.0	Surface	1	2	27.82	7.82	29.18	81.2	5.41	4.4	3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:02:32	6.3	Middle	2	1	28.03	7.83	30.25	81	5.36	7.1	4.3
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:01:57	6.3	Middle	2	2	28.02	7.82	30.19	81.1	5.36	6.9	5.1
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:02:21	11.6	Bottom	3	1	27.99	7.82	30.54	80.2	5.3	8.9	4.6
HCLR	HY/2011/03	2013-09-30	Mid-Flood	Cloudy	CS(M)FS	17:01:46	11.6	Bottom	3	2	27.99	7.81	30.6	80.2	5.3	9.3	4.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:54:21	1.0	Surface	1	1	28.13	7.93	28.48	99.6	6.64	6.7	10
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:53:49	1.0	Surface	1	2	28.1	7.92	28.49	99	6.6	7.2	9.7
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:53:37	4.7	Middle	2	1	27.95	7.92	28.63	97.7	6.53	8.3	10.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:54:09	4.7	Middle	2	2	28	7.92	28.56	98.4	6.57	8.5	9.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:54:01	8.3	Bottom	3	1	28	7.92	28.59	98.9	6.61	7.5	10.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS5	11:53:26	8.3	Bottom	3	2	27.97	7.92	28.62	98.6	6.58	7.9	10.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F6	11:46:20	1.0	Surface	1	1	28.24	7.9	28.52	96.3	6.41	13.1	6.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F6	11:45:40	1.0	Surface	1	2	28.35	7.9	28.48	97.5	6.48	12.4	5.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F6	11:46:12	2.2	Bottom	3	1	28.13	7.9	28.58	97.3	6.48	16.1	8.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F6	11:45:28	2.2	Bottom	3	2	28.14	7.89	28.57	95.9	6.39	15.7	7.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS7	11:38:46	1.0	Surface	1	1	27.97	7.87	28.62	89.4	5.97	13.4	11.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS7	11:38:29	1.0	Surface	1	2	27.97	7.87	28.62	89.8	6	13.3	10
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS7	11:38:18	2.5	Bottom	3	1	27.95	7.87	28.63	90.1	6.02	13.8	9.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS7	11:38:38	2.5	Bottom	3	2	27.94	7.87	28.62	89.5	5.98	14.1	10.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS8	11:15:23	1.0	Surface	1	1	28.25	7.9	28.62	95.3	6.33	8.4	6.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS8	11:15:08	1.0	Surface	1	2	28.29	7.91	28.6	95.8	6.37	8.1	5.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS8	11:15:17	2.6	Bottom	3	1	28.18	7.9	28.59	95.5	6.36	8.8	7.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS8	11:15:00	2.6	Bottom	3	2	28.13	7.9	28.62	95.8	6.38	8.7	8.9
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F9	11:31:57	1.0	Surface	1	1	28.07	7.87	28.61	88.8	5.92	20.5	7.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F9	11:31:40	1.0	Surface	1	2	28.16	7.87	28.57	90.9	6.06	18.9	6.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS(M)F9	11:31:32	2.5	Bottom	3	1	27.95	7.87	28.66	90.8	6.07	21.2	6.9
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:25	1.0	Surface	1	1	27.92	7.86	28.68	89.4	5.97	21.8	6.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:15	1.0	Surface	1	2	28.19	8.19	26.85	95.8	6.44	7.6	2.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:08:00	1.0	Surface	1	2	28.23	8.18	26.82	95.9	6.44	7.6	3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:15	5.2	Middle	2	1	27.94	8.19	28.81	94.5	6.31	7.7	2.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:47	5.2	Middle	2	2	27.96	8.18	28.43	94.8	6.34	7.6	2.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:37	9.4	Bottom	3	1	27.99	8.17	29.21	95	6.32	7.4	3.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	IS10	11:07:08	9.4	Bottom	3	2	27.96	8.17	29.19	95	6.33	7.6	4.9
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR3	12:01:07	0.8	Middle	2	1	28.16	7.93	28.46	100.9	6.72	6	7.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR3	12:01:15	0.8	Middle	2	2	28.17	7.93	28.45	100.9	6.73	6	8.7
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR4	11:21:38	1.0	Surface	1	1	28.47	7.87	27.86	99.4	6.61	4.8	6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR4	11:21:56	1.0	Surface	1	2	28.57	7.87	27.88	99.5	6.61	4.5	4.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR4	11:21:48	2.5	Bottom	3	1	28.46	7.88	28.43	98.8	6.56	4.7	8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR4	11:21:31	2.5	Bottom	3	2	28.19	7.88	28.43	99	6.59	4.5	7.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR5	11:15:34	1.0	Surface	1	1	28.17	8.17	26.92	97.2	6.54	2.8	4.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR5	11:15:14	1.0	Surface	1	2	28.2	8.17	26.88	96.4	6.51	2.7	3.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR5	11:15:04	3.6	Bottom	3	1	28.11	8.16	27.96	96.9	6.44	2.8	4.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR5	11:15:25	3.6	Bottom	3	2	28.07	8.16	28.08	96.7	6.47	2.9	4.7
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:03:03	1.0	Surface	1	1	27.92	7.86	30.29	82.9	5.49	4.5	6.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:03:33	1.0	Surface	1	2	27.94	7.87	30.23	82.9	5.49	4.2	8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:02:50	3.3	Middle	2	1	27.92	7.86	30.31	82.9	5.49	4.6	7.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:03:25	3.3	Middle	2	2	27.92	7.87	30.32	82.6	5.47	4.3	6.4
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:03:16	5.5	Bottom	3	1	27.92	7.86	30.34	82.6	5.47	4.5	7.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10A	10:02:42	5.5	Bottom	3	2	27.92	7.86	30.32	82.5	5.46	4.4	9.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10B	09:57:31	1.0	Surface	1	1	27.95	7.86	30.39	82.5	5.46	6.3	7.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10B	09:57:03	1.0	Surface	1	2	27.94	7.86	30.38	82.7	5.47	6.7	10.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10B	09:56:53	4.8	Bottom	3	1	27.94	7.86	30.4	82.7	5.47	6.5	10.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	SR10B	09:57:17	4.8	Bottom	3	2	27.94	7.86	30.4	82.4	5.45	6.5	11.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:46:04	1.0	Surface	1	1	28.1	8.21	27.29	98.1	6.59	5.8	3.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:46:34	1.0	Surface	1	2	28.16	8.21	27.2	98.1	6.59	5.6	4.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:46:23	4.1	Middle	2	1	27.9	8.2	29.54	97.1	6.46	7.5	3.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:45:55	4.1	Middle	2	2	27.9	8.2	29.42	97.1	6.47	7.3	3.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:46:14	7.2	Bottom	3	1	27.97	8.19	29.7	97.8	6.5	10.3	5.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS2	12:45:44	7.2	Bottom	3	2	27.89	8.18	29.66	97.8	6.5	10.9	4.8
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:41:29	1.0	Surface	1	1	28.15	7.9	28.96	89	3.8	3.8	4.3
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:40:40	1.0	Surface	1	2	28.1	7.9	29.03	87.3	5.81	3.9	3.5
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:41:12	6.9	Middle	2	1	27.87	7.89	29.54	84.5	5.62	4	4.6
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:40:28	6.9	Middle	2	2	27.87	7.89	29.55	85	5.66	4.1	3.7
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:40:18	12.7	Bottom	3	1	27.88	7.89	29.63	86.4	5.75	4	6.2
HCLR	HY/2011/03	2013-10-02	Mid-Ebb	Sunny	CS(MF)5	10:40:55	12.7	Bottom	3	2	27.9	7.89	29.72	86.5	5.75	4	4.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:14:12	1.0	Surface	1	1	28.53	7.95	28.44	99.2	6.57	15.5	17.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:15:01	1.0	Surface	1	2	28.43	7.95	28.49	98.4	6.52	16.6	18.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:14:00	4.6	Middle	2	1	28.44	7.94	28.59	98	6.5	16.6	18.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:14:41	4.6	Middle	2	2	28.38	7.94	28.6	97.9	6.49	17.2	17.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:14:29	8.2	Bottom	3	1	28.45	7.95	28.57	98.8	6.55	16.6	19.9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS5	16:13:46	8.2	Bottom	3	2	28.42	7.94	28.6	98.7	6.54	16.4	18.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)6	16:21:41	1.0	Surface	1	1	28.64	7.95	28.37	98.2	6.49	16.2	12.3
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)6	16:22:07	1.0	Surface	1	2	28.65	7.95	28.36	100.4	6.64	16.1	14
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)6	16:21:27	2.2	Bottom	3	1	28.46	7.94	28.6	97.4	6.46	17.9	12.9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)6	16:21:56	2.2	Bottom	3	2	28.57	7.95	28.45	99.9	6.61	17.7	12.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS7	16:29:39	1.0	Surface	1	1	28.56	7.93	28.16	96.8	6.42	14.9	13.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS7	16:29:06	1.0	Surface	1	2	28.56	7.93	28.19	97.9	6.49	13.9	12.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS7	16:29:26	2.5	Bottom	3	1	28.62	7.92	28.62	98.3	6.32	17	15.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS7	16:28:55	2.5	Bottom	3	2	28.49	7.93	28.39	95.3	6.52	16.6	14.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS8	16:49:19	1.0	Surface	1	1	28.87	7.95	28.58	102.4	6.74	10.6	6.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS8	16:49:42	1.0	Surface	1	2	28.9	7.96	28.58	102.8	6.76	10.9	6.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS8	16:49:32	2.8	Bottom	3	1	28.32	7.94	28.7	96.8	6.43	18.1	16.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS8	16:49:08	2.8	Bottom	3	2	28.35	7.94	28.59	99.2	6.58	14.1	7.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)9	16:36:39	1.0	Surface	1	1	28.36	7.95	28.54	97.2	6.45	17.2	16.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)9	16:36:51	1.0	Surface	1	2	28.27	7.95	28.67	96.3	6.4	17	16.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)9	16:36:46	2.6	Bottom	3	1	28.27	7.95	28.71	96.6	6.42	18.6	15.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS(MF)9	16:36:24	2.6	Bottom	3	2	28.26	7.94	28.71	96.6	6.41	10.3	6.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:51:33	1.0	Surface	1	1	28.4	8.2	27.46	96	6.42	10.3	6.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:52:07	1.0	Surface	1	2	28.4	8.2	27.5	95.8	6.39	10.2	7.3
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:51:57	5.3	Middle	2	1	28.28	8.2	27.93	94.4	6.3	11.3	8.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:51:19	5.3	Middle	2	2	28.26	8.2	27.99	94.4	6.29	11.4	9.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:51:45	9.6	Bottom	3	1	28.24	8.19	28.19	95.1	6.34	12.5	10.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	IS10	17:51:06	9.6	Bottom	3	2	28.26	8.19	28.13	95	6.33	12.1	10.1
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR3	16:04:38	0.8	Middle	2	1	28.57	7.96	28.41	102.4	6.78	14.5	20.9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR3	16:04:28	0.8	Middle	2	2	28.56	7.96	28.41	102.3	6.78	14.8	19.1
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR4	16:43:02	1.0	Surface	1	1	28.95	7.96	28.19	101.1	6.66	7.3	12.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR4	16:43:30	1.0	Surface	1	2	28.94	7.94	28.18	101.2	6.67	7.5	12.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR4	16:43:13	2.3	Bottom	3	1	28.64	7.94	28.32	100.5	6.65	8.8	12.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR4	16:42:43	2.3	Bottom	3	2	28.71	7.98	28.33	100.6	6.64	8.1	13.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR5	17:41:11	1.0	Surface	1	1	28.4	8.2	27.49	97.3	6.48	6.5	9.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR5	17:40:54	1.0	Surface	1	2	28.39	8.2	27.51	97.1	6.48	6.5	10.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR5	17:40:45	3.6	Bottom	3	1	28.37	8.2	27.64	96.9	6.46	6.4	10.1
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR5	17:41:03	3.6	Bottom	3	2	28.4	8.2	27.53	97.2	6.49	6.5	9.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:59:01	1.0	Surface	1	1	28.13	7.87	29.95	84.8	5.61	6.3	8.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:58:19	1.0	Surface	1	2	28.12	7.87	29.95	84.3	5.58	6.8	8.4
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:58:07	3.5	Middle	2	1	28.05	7.87	30.27	83.6	5.52	7.6	8.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:58:45	3.5	Middle	2	2	28.06	7.86	30.22	83.6	5.52	7.8	8.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:58:35	5.9	Bottom	3	1	28.06	7.86	30.29	83.7	5.53	7.6	8.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10A	17:57:58	5.9	Bottom	3	2	28.05	7.87	30.3	84	5.55	7.4	9.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10B	18:09:36	1.0	Surface	1	1	28.11	7.86	29.98	84.1	5.56	6.8	6.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10B	18:10:02	1.0	Surface	1	2	28.08	7.86	30.1	83.6	5.53	7.6	7.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10B	18:09:53	4.9	Bottom	3	1	28.06	7.85	30.29	83.6	5.52	8.2	7.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	SR10B	18:09:22	4.9	Bottom	3	2	28.06	7.86	30.26	83.6	5.52	9	6.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:05:55	1.0	Surface	1	1	28.4	8.2	27.24	91.8	6.13	7	6.6
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:06:27	1.0	Surface	1	2	28.4	8.2	27.18	91.1	6.09	7.3	7.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:05:45	3.9	Middle	2	1	28.37	8.19	27.59	91.9	6.13	7.5	7.2
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:06:16	3.9	Middle	2	2	28.37	8.2	27.5	90.9	6.07	7.5	6.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:05:28	6.8	Bottom	3	1	28.37	8.21	27.67	94.2	6.28	10.7	8.8
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS2	16:06:05	6.8	Bottom	3	2	28.38	8.2	27.48	91.2	6.09	10.7	7.9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:25:34	1.0	Surface	1	1	28.37	7.88	28.83	89.2	5.91	7.3	8.7
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:26:27	1.0	Surface	2	2	28.29	7.87	28.94	86	5.71	8	9.1
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:26:14	7	Middle	2	1	27.96	7.85	29.91	81.8	5.43	10.6	7.9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:25:17	7	Middle	2	2	27.97	7.86	29.9	83.6	5.55	10.2	9
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:26:01	12.9	Bottom	3	1	27.95	7.85	29.95	82.9	5.5	12.9	8.5
HCLR	HY/2011/03	2013-10-02	Mid-Flood	Sunny	CS(MF)5	17:25:02	12.9	Bottom	3	2	28.01	7.87	29.8	88.4	5.86	12.3	8.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:08:29	1.0	Surface	1	1	28.07	7.86	29.13	97	6.45	10.2	8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:07:49	4.9	Surface	1	2	28.06	7.85	29.15	96.4	6.41	10.6	7.6
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:07:36	4.9	Middle	2	1	27.82	7.84	29.4	94	6.27	12.7	9.8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:08:14	4.9	Middle	2	2	28.17	7.85	29.41	94.3	6.29	12.7	8.5
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:08:03	8.7	Bottom	3	1	27.83	7.85	29.41	95.5	6.36	12.1	8.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS5	13:07:23	8.7	Bottom	3	2	27.8	7.84	29.44	95.1	6.34	13.2	9.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)6	12:59:32	1.0	Surface	1	1	28.16	7.85	28.7	99.4	6.61	11.8	5.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)6	12:59:48	1.0	Surface	1	2	28.27	7.86	28.62	101.6	6.75	10.6	5.8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)6	12:59:37	2.3	Bottom	3	1	28.2	7.85	28.66	100.2	6.66	13.1	6.4
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)6	12:59:25	2.3	Bottom	3	2	28.05	7.84	28.89	99.7	6.64	13.2	5.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS7	12:53:40	1.0	Surface	1	1	28.12	7.85	28.56	99.4	6.63	10.5	4
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS7	12:53:02	1.0	Surface	1	2	28.13	7.85	28.55	100	6.66	10.4	4.9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS7	12:53:32	2.3	Bottom	3	1	28.09	7.86	28.55	99.5	6.64	9.9	4.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS7	12:52:52	2.3	Bottom	3	2	28.12	7.85	28.54	100.2	6.68	10.1	4.6
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS8	12:30:36	1.0	Surface	1	1	28.31	7.86	28.54	103.2	6.86	10	5
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS8	12:30:15	1.0	Surface	1	2	28.39	7.87	28.52	104.7	6.95	9.2	4.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS8	12:30:05	2.5	Bottom	3	1	28.21	7.86	28.54	104.5	6.96	10.6	4.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS8	12:30:26	2.5	Bottom	3	2	28.21	7.86	28.54	103.9	6.92	10.5	5.4
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)9	12:47:25	1.0	Surface	1	1	28.17	7.81	28.69	91.8	6.11	20	8.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)9	12:47:12	1.0	Surface	1	2	28.25	7.81	28.67	92.4	6.14	19.9	9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS(MF)9	12:47:01	2.4	Bottom	3	1	28.18	7.81	28.68	92.4	6.15	20.2	9.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:21:19	1.0	Surface	1	1	28.35	8.2	28.85	94.7	6.28	12.3	8.9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:20:36	1.0	Surface	1	2	28.29	8.2	28.88	93.4	6.2	12.7	3.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:20:59	5.3	Middle	2	1	27.99	8.2	29.12	91.7	6.11	12.4	3.6
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:20:24	5.3	Middle	2	2	27.92	8.2	29.19	91.4	6.09	12.5	4.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:20:49	9.6	Bottom	3	1	27.93	8.2	29.39	92.7	6.17	12.6	4.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	IS10	12:20:13	9.6	Bottom	3	2	27.92	8.2	29.42	92.5	6.16	12.5	4.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR3	13:17:47	0.8	Middle	2	1	28.14	7.87	29.09	100.1	6.65	9.2	8.2
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR3	13:17:54	0.8	Middle	2	2	28.12	7.87	29.09	100.2	6.66	9	8.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR4	12:35:42	1.0	Surface	1	1	28.33	7.82	28.07	98.7	6.58	8.3	5.5
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR4	12:36:01	1.0	Surface	1	2	28.33	7.82	28.07	98.8	6.58	8	6.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR4	12:35:51	2.4	Bottom	3	1	28.3	7.82	28.17	98.7	6.57	8.1	6.4
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR4	12:35:34	2.4	Bottom	3	2	28.29	7.82	28.18	98.7	6.57	8.6	8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR5	12:28:11	1.0	Surface	1	1	28.33	8.2	28.83	95.3	6.32	5	4.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR5	12:27:53	1.0	Surface	1	2	28.29	8.2	28.86	95.1	6.31	5.1	4.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR5	12:28:02	3.6	Bottom	3	1	28.22	8.2	28.86	95	6.31	5.1	3.9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR5	12:27:43	3.6	Bottom	3	2	28.17	8.2	28.89	94.7	6.29	5.1	3.9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:16:13	1.0	Surface	1	1	27.98	7.8	30.51	82.9	5.48	7.5	4.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:16:51	1.0	Surface	1	2	27.98	7.8	30.51	82.7	5.47	7	4.9
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:16:35	3.4	Middle	2	1	27.96	7.8	30.57	82.3	5.44	7.3	5.8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:16:00	3.4	Middle	2	2	27.96	7.8	30.58	82.5	5.45	8	5.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:15:49	5.8	Bottom	3	1	27.96	7.8	30.59	82.6	5.46	8.2	9.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10A	11:16:28	5.8	Bottom	3	2	27.96	7.8	30.59	82.2	5.43	7.5	8
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10B	11:10:12	1.0	Surface	1	1	27.97	7.82	30.53	82.9	5.48	9.9	8.2
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10B	11:10:39	1.0	Surface	1	2	27.98	7.82	30.54	82.6	5.46	9.6	9.5
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10B	11:10:04	4.7	Bottom	3	1	27.97	7.82	30.54	83	5.48	10.3	11.2
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	SR10B	11:10:28	4.7	Bottom	3	2	27.97	7.82	30.55	82.7	5.46	10.2	11.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:59:04	1.0	Surface	1	1	28.2	8.2	28.46	95	6.32	8.3	3.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:59:43	1.0	Surface	1	2	28.29	8.2	28.36	95	6.32	8.1	4.3
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:58:51	4.0	Middle	2	1	28.02	8.21	29.01	93.6	6.23	8.1	3.6
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:59:31	4.0	Middle	2	2	28.02	8.2	28.92	94	6.26	8.4	3.8

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:59:21	6.9	Bottom	3	1	27.93	8.2	29.48	94.1	6.26	8.5	3.7
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS2	13:58:38	6.9	Bottom	3	2	27.82	8.2	29.78	93.5	6.22	8.7	4
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:55:27	1.0	Surface	1	2	28.09	7.82	29.59	89	5.9	6.7	2.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:54:44	1.0	Surface	1	2	28.09	7.82	29.59	88.4	5.86	6.7	2
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:54:30	6.9	Middle	2	1	27.97	7.81	30.05	86	5.7	10	2.5
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:55:10	6.9	Middle	2	2	27.98	7.81	30.02	85.5	5.67	9.5	3.1
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:54:15	12.7	Bottom	3	1	28	7.81	30.05	89.6	5.94	10.2	3.2
HCLR	HY/2011/03	2013-10-04	Mid-Ebb	Sunny	CS(M)F5	11:54:59	12.7	Bottom	3	2	27.98	7.81	30.06	87.4	5.79	11	3.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:08:51	1.0	Surface	1	2	28.33	7.96	28.35	104.4	7.01	9.6	5.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:08:10	1.0	Surface	1	2	28.31	7.96	28.37	105.6	6.95	9.8	4.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:07:57	4.7	Middle	2	2	28.25	7.95	28.46	103.8	6.9	10.8	6.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:08:36	4.7	Middle	2	2	28.27	7.95	28.45	103.7	6.9	10.2	7.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:07:47	8.4	Bottom	3	1	28.26	7.96	28.44	104.8	6.97	10.1	7.8
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS5	17:08:25	8.4	Bottom	3	2	28.26	7.96	28.44	104.4	6.94	10	8.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F6	17:15:25	1.0	Surface	1	2	28.32	7.92	28.38	96.8	6.43	16.4	7.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F6	17:15:43	1.0	Surface	1	2	28.31	7.91	28.4	96.2	6.4	15.5	7.9
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F6	17:15:31	2.2	Bottom	3	1	28.31	7.92	28.41	96.8	6.44	17.7	7.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F6	17:15:11	2.2	Bottom	3	2	28.31	7.91	28.41	95.6	6.35	18	7.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS7	17:21:58	1.0	Surface	1	2	28.4	7.92	28.43	98.1	6.51	18.9	17.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS7	17:22:18	1.0	Surface	1	2	28.4	7.92	28.43	97.8	6.49	19.1	18.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS7	17:21:44	1.0	Surface	1	2	28.39	7.91	28.44	97.3	6.46	21.7	19.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS7	17:21:44	2.3	Bottom	3	1	28.37	7.91	28.44	97.6	6.48	21.3	18.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS7	17:22:06	2.3	Bottom	3	2	28.37	7.91	28.46	97.6	6.48	21.3	18.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS8	17:45:21	1.0	Surface	1	2	28.45	7.98	28.28	108.7	7.22	9.8	5.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS8	17:45:36	1.0	Surface	1	2	28.44	7.98	28.28	108.8	7.23	9.5	6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS8	17:45:28	2.6	Bottom	3	1	28.42	7.98	28.28	108.9	7.23	10	6.9
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS8	17:45:13	2.6	Bottom	3	2	28.42	7.98	28.28	109	7.24	10.3	8.1
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F9	17:29:00	1.0	Surface	1	1	28.2	7.89	28.39	94.9	6.32	21.4	22.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F9	17:29:16	1.0	Surface	1	2	28.2	7.88	28.4	94.7	6.31	21.1	22.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F9	17:28:51	2.4	Bottom	3	1	28.2	7.89	28.41	95	6.33	23.1	22
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS(M)F9	17:29:11	2.4	Bottom	3	2	28.2	7.88	28.41	94.7	6.31	23.4	23.1
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:34:52	1.0	Surface	1	2	28.22	8.18	28.44	91	6.06	10.5	5.3
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:35:41	1.0	Surface	1	2	28.22	8.18	28.44	91	6.06	10.3	5.2
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:34:42	5.3	Middle	2	1	28.21	8.19	28.53	90.5	6.03	10.3	4.8
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:35:20	5.3	Middle	2	2	28.15	8.19	28.65	89.9	5.99	10.4	4.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:35:11	9.5	Bottom	3	1	28.02	8.19	29.14	89.9	5.98	11.5	5.8
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	IS10	18:34:22	9.5	Bottom	3	2	28.14	8.18	28.86	90.6	6.03	11.3	6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR3	16:56:38	0.8	Middle	2	1	28.35	7.96	28.3	106	7.04	8.7	6.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR3	16:56:48	0.8	Middle	2	2	28.36	7.96	28.3	107	7.11	8.6	5.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR4	17:39:53	1.0	Surface	1	1	28.56	8	28.3	105.4	6.98	11.3	10
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR4	17:39:41	1.0	Surface	1	2	28.57	8.01	28.31	105.3	6.98	11.4	9.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR4	17:39:35	2.5	Bottom	3	1	28.57	8.01	28.32	105.3	6.98	10.9	9.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR4	17:39:47	2.5	Bottom	3	2	28.56	8	28.31	105.2	6.97	11.9	9.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR5	18:23:11	1.0	Surface	1	1	28.23	8.19	28.45	91.7	6.1	8.9	10.2
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR5	18:23:29	1.0	Surface	1	2	28.23	8.19	28.45	91.5	6.09	8.7	10.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR5	18:23:03	3.6	Bottom	3	1	28.23	8.19	28.47	91.7	6.1	9.1	10
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR5	18:23:19	3.6	Bottom	3	2	28.23	8.19	28.46	91.6	6.1	8.7	9.2
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:55:27	3.6	Middle	2	2	28.06	7.8	30.12	85	5.62	8.9	9.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:55:35	1.0	Surface	1	1	28.06	7.8	30.06	85.1	5.63	8.8	7.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:56:22	1.0	Surface	1	2	28.05	7.81	30.04	85	5.62	8.1	8.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:56:06	3.6	Middle	2	1	28.06	7.8	30.11	84.7	5.6	8.6	8.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:55:27	3.6	Middle	2	2	28.06	7.8	30.12	85	5.62	8.9	9.1
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:55:15	6.2	Bottom	3	1	28.06	7.8	30.12	85	5.62	8.5	9.5
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10A	18:55:56	6.2	Bottom	3	2	28.06	7.8	30.14	84.7	5.6	9	10.1
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10B	19:07:01	1.0	Surface	1	1	28.06	7.8	30.09	84.5	5.59	10	7.6
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10B	19:07:34	1.0	Surface	1	2	28.05	7.81	30.08	84.5	5.59	9.2	7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10B	19:06:49	4.8	Bottom	3	1	28.06	7.8	30.15	84.3	5.57	10.1	9.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	SR10B	19:07:14	4.8	Bottom	3	2	28.06	7.8	30.15	84.2	5.57	9.6	10.2
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:56:48	1.0	Surface	1	1	28.26	8.22	28.19	88.4	5.89	7.4	8.9
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:57:24	1.0	Surface	1	2	28.25	8.21	28.2	87.8	5.85	7.6	8.3
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:56:28	3.9	Middle	2	1	28.17	8.25	28.69	88.4	5.88	8.6	8.7
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:57:13	3.9	Middle	2	2	28.2	8.21	28.54	87.4	5.82	8.8	8.4
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:56:57	6.8	Bottom	3	1	28.21	8.21	28.51	87.9	5.85	8.7	8.2
HCLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS2	16:56:14	6.8	Bottom	3	2	28.17	8.28	28.73	89.8	5.98	8.9	9.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:23:15	1.0	Surface	1	1	28.13	7.82	28.96	88.9	5.91	11.2	6.4
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:22:28	1.0	Surface	1	2	28.15	7.82	28.96	89.1	5.92	10.5	6.1
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:22:55	6.9	Middle	2	1	27.99	7.8	29.87	84	5.57	14	6.7
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:22:07	6.9	Middle	2	2	27.99	7.8	29.86	83.5	5.54	13.2	6.4
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:21:55	12.8	Bottom	3	1	27.99	7.8	29.88	84.4	5.59	14.9	6.4
HKLR	HY/2011/03	2013-10-04	Mid-Flood	Sunny	CS(M)F5	18:22:40	12.8	Bottom	3	2	28.02	7.8	29.79	87.1	5.77	16.3	7
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:02:00	1.0	Surface	1	1	27.88	7.88	28.67	90.4	6.08	14.2	18.7
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:01:08	1.0	Surface	1	2	27.47	7.88	28.67	90.4	6.09	14	18.6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:00:57	4.9	Middle	2	1	27.44	7.88	28.72	89.9	6.06	15	17.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:01:40	4.9	Middle	2	2	27.44	7.88	28.71	89.9	6.05	15.3	17.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:01:24	8.8	Bottom	3	1	27.44	7.88	28.71	89.9	6.05	16.1	19.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS5	13:00:47	8.8	Bottom	3	2	27.44	7.88	28.72	89.9	6.05	14.7	17.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F6	13:11:01	1.0	Surface	1	1	27.58	7.87	28.57	92.6	6.23	11.9	11.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F6	13:11:23	1.0	Surface	1	2	27.52	7.87	28.59	91.7	6.17	13.2	11.7
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F6	13:11:14	2.3	Bottom	3	1	27.54	7.87	28.58	92.1	6.2	12.4	12.6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F6	13:10:49	2.3	Bottom	3	2	27.58	7.87	28.58	92.5	6.22	12	12.1
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS7	13:17:52	1.0	Surface	1	1	27.61	7.87	28.52	94.6	6.36	10.8	9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS7	13:18:12	1.0	Surface	1	2	27.61	7.87	28.52	94.4	6.35	11	9.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS7	13:18:04	2.4	Bottom	3	1	27.56	7.87	28.53	94.3	6.34	11.4	8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS7	13:17:43	2.4	Bottom	3	2	27.58	7.87	28.52	94.5	6.36	11.6	9.2
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS8	13:39:57	1.0	Surface	1	1	27.61	7.87	28.57	96.8	6.51	11.3	9.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS8	13:39:25	2.6	Bottom	3	1	27.61	7.87	28.59	96.9	6.51	11	9.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS8	13:39:47	2.6	Bottom	3	2	27.61	7.87	28.59	96.8	6.5	11.4	10.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F9	13:24:01	1.0	Surface	1	1	27.61	7.87	28.55	90	6.07	10.1	10.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F9	13:23:38	1.0	Surface	1	2	27.61	7.87	28.54	90.4	6.08	11.4	12.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F9	13:23:46	2.7	Bottom	3	1	27.59	7.87	28.56	95.8	6.44	13.1	12
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS(M)F9	13:23:28	2.7	Bottom	3	2	27.59	7.87	28.56	95.7	6.43	13.1	11.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:18:35	1.0	Surface	1	1	27.66	8.16	28.27	90.8	6.11	10.4	9.6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:17:51	1.0	Surface	1	2	27.66	8.16	28.26	91	6.12	10.3	11.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:18:23	5.3	Middle	2	1	27.61	8.16	28.32	90.1	6.07	10.6	9.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:17:32	5.3	Middle	2	2	27.61	8.16	28.33	90	6.06	10.1	10.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:18:05	9.5	Bottom	3	1	27.59	8.16	28.39	90.4	6.08	11.4	12.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	IS10	14:17:20	9.5	Bottom	3	2	27.58	8.16	28.4	90.1	6.06	11.2	12.6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR3	12:48:49	1.0	Middle	2	1	27.47	7.96	28.78	92.3	6.21	17.1	17.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR3	12:48:42	0.8	Middle	2	2	27.47	7.96	28.78	92.8	6.24	17.4	20.2
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR4	13:31:37	1.0	Surface	1	1	27.61	7.86	28.57	97	6.52	10.5	10.4
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR4	13:31:11	1.0	Surface	1	2	27.6	7.86	28.57	97	6.52	10.8	10.1
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR4	13:31:23	2.4	Bottom	3	1	27.61	7.86	28.58	97	6.52	10.5	13.1
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR4	13:31:01	2.4	Bottom	3	2	27.6	7.87	28.58	97	6.52	10.9	11.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR5	14:06:21	1.0	Surface	1	1	27.65	8.16	28.27	91.4	6.15	10.6	11.7
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR5	14:06:38	1.0	Surface	1	2	27.65	8.16	28.27	91.2	6.14	10.7	11.9
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR5	14:06:13	3.5	Bottom	3	1	27.65	8.16	28.28	91.5	6.15	10.8	12.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR5	14:06:29	3.5	Bottom	3	2	27.64	8.16	28.29	91.3	6.14	10.8	11.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:35:31	1.0	Surface	1	1	27.87	7.85	30.17	84.4	5.59	5.7	5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:36:01	1.0	Surface	1	2	27.87	7.85	30.18	84.1	5.58	6.1	3.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:35:50	3.1	Middle	2	1	27.88	7.85	30.21	84	5.57	6.3	6.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:35:22	3.1	Middle	2	2	27.87	7.86	30.18	84.3	5.59	5.5	5.7
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:35:13	5.2	Bottom	3	1	27.88	7.86	30.2	84.4	5.6	5.9	6.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10A	14:35:40	5.2	Bottom	3	2	27.87	7.85	30.22	84.1	5.57	5.8	5.4
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10B	14:46:38	1.0	Surface	1	1	27.87	7.85	30.2	83.8	5.55	6.1	6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10B	14:46:19	1.0	Surface	1	2	27.87	7.85	30.18	83.8	5.56	6.2	7.1
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10B	14:46:32	4.3	Bottom	3	1	27.87	7.85	30.23	83.8	5.55	6.4	8.1
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	SR10B	14:46:09	4.3	Bottom	3	2	27.87	7.85	30.23	83.8	5.56	6.3	6.6
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:46:32	1.0	Surface	1	1	27.61	8.19	28.67	92.9	6.25	10.5	13
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:47:12	1.0	Surface	1	2	27.62	8.19	28.61	89.9	6.04	10.2	12.2
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:46:52	3.8	Middle	2	1	27.52	8.19	28.72	90.1	6.06	10.3	12
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:46:19	3.8	Middle	2	2	27.52	8.18	28.77	90.8	6.13	10.1	10.8
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:45:59	6.6	Bottom	3	1	27.5	8.16	28.89	90.2	6.1	11.9	11.5
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS2	12:46:44	6.6	Bottom	3	2	27.53	8.19	28.73	90.1	6.06	11.7	12.4
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(M)F5	14:09:46	1.0	Surface	1	1	27.95	7.83	29.51	87.6	5.83	6.2	6.3
HKLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(M)F5	14:10:44	1.0	Surface	1	2	27.94	7.82	29.54	87.6	5.82	6.2	7.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(MF)S	14:09:29	6.5	Middle	2	1	27.87	7.83	29.72	86	5.72	6.4	6.4
HCLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(MF)S	14:10:30	6.5	Middle	2	2	27.9	7.82	29.67	86.8	5.77	6.3	5.2
HCLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(MF)S	14:10:17	12.0	Bottom	3	1	27.89	7.82	29.68	7.6	5.75	6.5	7.4
HCLR	HY/2011/03	2013-10-07	Mid-Ebb	Sunny	CS(MF)S	14:09:17	12.0	Bottom	3	2	27.88	7.83	29.71	86.5	5.75	6.4	8.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:04:18	1.0	Surface	1	1	27.34	7.78	28.83	89.9	6.06	10.7	10.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:03:39	1.0	Surface	2	1	27.35	7.79	28.83	90.1	6.07	10.2	8.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:04:06	4.8	Middle	2	1	27.33	7.79	28.87	89.7	6.05	11.2	10.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:03:27	4.8	Middle	2	2	27.33	7.78	28.87	90	6.07	11.2	9.2
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:03:53	8.6	Bottom	3	1	27.33	7.79	28.87	89.9	6.08	10.8	9.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS5	09:03:16	8.6	Bottom	3	2	27.33	7.78	28.88	90.3	6.06	10.9	9.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)6	08:53:41	1.0	Surface	1	1	27.82	7.78	28.82	91.7	6.19	13.9	13.3
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)6	08:53:24	1.0	Surface	1	2	27.32	7.77	28.83	91.8	6.19	15.1	12.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)6	08:53:30	2.2	Bottom	3	1	27.31	7.78	28.82	91.7	6.19	14.7	12.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)6	08:53:16	2.2	Bottom	3	2	27.32	7.77	28.83	92	6.21	15.1	14.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS7	08:47:14	1.0	Surface	1	1	27.31	7.78	28.76	91.6	6.18	19.5	18.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS7	08:47:33	1.0	Surface	1	2	27.32	7.78	28.76	91.2	6.16	20.1	21.7
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS7	08:47:24	2.3	Bottom	3	1	27.32	7.78	28.77	91.3	6.16	22.8	19.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS7	08:47:06	2.3	Bottom	3	2	27.32	7.78	28.77	92	6.2	21.8	18
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS8	08:21:56	1.0	Surface	1	1	27.29	7.79	28.87	92.8	6.26	16	17.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS8	08:21:35	1.0	Surface	1	2	27.28	7.79	28.88	93.3	6.29	15.5	17.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS8	08:21:22	2.8	Bottom	3	1	27.29	7.79	28.89	93.2	6.28	16.8	17
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS8	08:21:45	2.8	Bottom	3	2	27.29	7.79	28.89	93	6.27	17	16.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)9	08:39:06	1.0	Surface	1	1	27.33	7.76	28.69	92	6.21	19.3	15.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)9	08:39:26	1.0	Surface	1	2	27.33	7.77	28.69	91.6	6.18	19.3	16
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)9	08:38:55	2.5	Bottom	3	1	27.31	7.76	28.77	92.2	6.22	22.8	15
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS(MF)9	08:39:16	2.5	Bottom	3	2	27.3	7.76	28.77	91.6	6.18	23	15.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:29:35	1.0	Surface	1	1	27.46	8.15	28.58	89.5	6.03	11.1	22.3
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:30:14	1.0	Surface	1	2	27.46	8.15	28.58	89.5	6.03	11.1	22.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:30:01	5.5	Middle	2	1	27.46	8.15	28.62	89.2	6.01	11.5	22.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:29:23	5.5	Middle	2	2	27.46	8.15	28.61	89.3	6.02	11.1	22.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:29:52	9.9	Bottom	3	1	27.46	8.15	28.67	89.1	6	12.5	20.7
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	IS10	08:29:12	9.9	Bottom	3	2	27.46	8.15	28.67	89.1	6	12.8	19.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR3	09:12:58	0.8	Middle	2	1	27.34	7.78	28.82	89.9	6.06	9.8	9.7
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR3	09:13:05	0.8	Middle	2	2	27.34	7.78	28.82	89.8	6.06	10.4	10.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR4	08:27:56	1.0	Surface	1	1	27.25	7.77	28.77	91.2	6.16	14.2	12.3
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR4	08:28:11	1.0	Surface	1	2	27.25	7.76	28.76	91	6.14	14.1	12.2
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR4	08:27:47	2.6	Bottom	3	1	27.25	7.76	28.77	91.3	6.16	14.1	12.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR4	08:28:05	2.6	Bottom	3	2	27.25	7.77	28.77	91	6.14	14.5	12.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR5	08:38:14	1.0	Surface	1	1	27.45	8.15	28.6	89.4	6.03	12.5	22.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR5	08:38:31	1.0	Surface	1	2	27.44	8.15	28.67	89.8	6.05	12.6	21.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR5	08:38:22	3.7	Bottom	3	1	27.45	8.15	28.61	89.5	6.03	12.4	22.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR5	08:38:07	3.7	Bottom	3	2	27.45	8.15	28.61	89.5	6.03	12.6	20.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:18:28	1.0	Surface	1	1	27.71	7.8	29.82	83.8	5.58	11.4	10.2
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:17:57	1.0	Surface	1	2	27.71	7.8	29.79	84.2	5.61	10.6	9.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:17:46	3.3	Middle	2	1	27.73	7.8	29.89	84	5.6	11.3	8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:18:17	3.3	Middle	2	2	27.75	7.8	29.87	83.8	5.58	11.5	9.7
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:17:34	5.5	Bottom	3	1	27.73	7.79	29.91	84.2	5.6	11.5	10
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10A	07:18:08	5.5	Bottom	3	2	27.74	7.8	29.88	83.9	5.59	10.9	10.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10B	07:05:28	1.0	Surface	1	1	27.71	7.8	30.59	83.6	5.54	13.8	17.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10B	07:05:50	1.0	Surface	1	2	27.72	7.81	30.56	83	5.5	13.9	17.5
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10B	07:05:15	4.5	Bottom	3	1	27.72	7.79	30.63	83.9	5.56	13.9	17.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	SR10B	07:05:39	4.5	Bottom	3	2	27.72	7.8	30.59	83	5.51	14.5	16.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:00:59	1.0	Surface	1	1	27.44	8.15	28.53	89.1	6.01	11.5	16.5
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:01:33	1.0	Surface	1	2	27.43	8.15	28.53	89.1	6	11.4	18.6
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:00:43	4.0	Middle	2	1	27.44	8.15	28.54	88.7	5.98	11.6	17.4
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:01:21	4.0	Middle	2	2	27.45	8.15	28.55	88.7	5.98	11.2	17.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:00:32	6.9	Bottom	3	1	27.45	8.15	28.56	88.6	5.97	13.4	16.1
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS2	10:01:12	6.9	Bottom	3	2	27.45	8.15	28.56	88.8	5.98	13.2	17.5
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(MF)S	07:49:23	1.0	Surface	1	1	27.63	7.81	29.17	85.8	5.74	8.3	8.2
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(MF)S	07:50:11	1.0	Surface	1	2	27.63	7.81	29.15	86	5.76	8.6	8.9
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(MF)S	07:49:50	6.7	Middle	2	1	27.79	7.8	29.63	84	5.6	9.2	6.8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(MF)S	07:49:05	6.7	Middle	2	2	27.79	7.8	29.71	84.2	5.61	9.3	7.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(M)F5	07:48:47	12.3	Bottom	3	1	27.81	7.8	29.83	84.2	5.6	11.4	8
HCLR	HY/2011/03	2013-10-07	Mid-Flood	Sunny	CS(M)F5	07:49:39	12.3	Bottom	3	2	27.81	7.8	30.01	84.6	5.62	12.5	8.7
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:51:16	1.0	Surface	1	1	27.29	7.82	28.59	89.3	6.03	14.1	10.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:50:40	1.0	Surface	1	2	27.27	7.82	28.6	89.2	6.03	14.6	10.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:50:29	4.2	Middle	2	1	27.25	7.82	28.64	88.9	6.01	16.4	16.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:51:05	4.2	Middle	2	2	27.25	7.82	28.67	88.9	6.01	16.3	16.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:50:17	7.4	Bottom	3	1	27.26	7.82	28.66	89	6.02	16.4	17
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS5	14:50:56	7.4	Bottom	3	2	27.25	7.82	28.68	88.9	6.01	16.6	18.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F6	14:57:22	1.0	Surface	1	1	27.83	7.81	28.42	92.2	6.21	9.4	7.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F6	14:57:45	1.0	Surface	1	2	27.61	7.8	28.4	91.3	6.15	9.5	6.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F6	14:57:33	2.2	Bottom	3	1	28.43	7.81	28.43	91	6.15	9.4	7.2
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F6	14:57:11	2.2	Bottom	3	2	27.42	7.82	28.42	92	6.21	9.5	7.7
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS7	15:04:24	1.0	Surface	1	1	27.98	7.83	28.44	96.1	6.42	7.4	4.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS7	15:03:55	2.3	Bottom	3	1	27.65	7.82	28.47	95.6	6.37	7.5	3.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS7	15:03:55	2.3	Bottom	3	2	27.66	7.82	28.45	94.9	6.37	7.8	6.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS7	15:04:12	2.3	Bottom	3	2	27.86	7.83	28.42	95.5	6.4	7.7	5.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS8	15:31:59	1.0	Surface	1	1	27.57	7.8	28.4	90	6.06	10.5	8.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS8	15:31:37	1.0	Surface	1	2	27.5	7.8	28.41	89.9	6.06	10.6	8.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS8	15:31:48	2.9	Bottom	3	1	27.42	7.8	28.4	89.6	6.04	10.6	11.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS8	15:31:29	2.9	Bottom	3	2	27.46	7.8	28.37	89.5	6.06	10.5	11.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F9	15:12:58	1.0	Surface	1	1	27.63	7.82	28.46	93.5	6.29	7.6	5.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F9	15:13:20	1.0	Surface	1	2	27.67	7.82	28.44	93.7	6.29	7.6	5.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F9	15:12:49	2.6	Bottom	3	1	27.44	7.82	28.45	93.2	6.29	9	5.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS(M)F9	15:13:06	2.6	Bottom	3	2	27.46	7.82	28.42	93	6.27	9	4.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:45:03	1.0	Surface	1	1	27.82	8.12	27.96	91.9	6.18	4.2	3.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:44:11	1.0	Surface	1	2	27.87	8.12	27.93	92.2	6.19	3.9	2
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:44:48	5.3	Middle	2	1	27.48	8.13	28.56	91	6.13	5.6	3.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:43:54	5.3	Middle	2	2	27.5	8.12	28.54	90.9	6.12	5.7	2.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:44:34	9.5	Bottom	3	1	27.41	8.12	28.62	90.8	6.12	6.6	3.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	IS10	15:43:39	9.5	Bottom	3	2	27.33	8.12	28.67	90.6	6.11	6.1	4.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR3	14:41:33	0.7	Middle	2	1	27.32	7.82	28.56	90.6	6.12	11.9	11.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR3	14:41:24	0.7	Middle	2	2	27.31	7.83	28.56	91	6.14	12.2	12.1
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR4	14:33:12	1.0	Surface	1	1	27.31	7.83	28.41	85.6	5.79	11.5	6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR4	14:33:29	1.0	Surface	1	2	27.46	7.81	28.25	86.4	5.83	11.4	7.3
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR4	14:33:04	2.7	Bottom	3	1	27.27	7.83	28.46	85.1	5.75	11.3	9.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR4	14:33:22	2.7	Bottom	3	2	27.31	7.82	28.21	85.9	5.81	11.7	8.7
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR5	15:34:36	1.0	Surface	1	1	27.6	8.12	28.21	91.1	6.14	4.7	4.1
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR5	15:35:10	1.0	Surface	1	2	27.71	8.11	28.07	91.5	6.16	4.4	3.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR5	15:34:20	4.4	Bottom	3	1	27.45	8.12	28.4	91	6.14	4.9	3.5
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR5	15:34:49	4.4	Bottom	3	2	27.48	8.12	28.52	90.7	6.11	5	2.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:38:28	1.0	Surface	1	1	27.77	7.8	29.74	87.2	5.81	4.2	3.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:38:00	1.0	Surface	1	2	27.78	7.8	29.74	87.1	5.8	4	2.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:37:49	3.3	Middle	2	1	27.76	7.8	29.78	86.6	5.76	4.1	4.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:38:15	3.3	Middle	2	2	27.78	7.8	29.77	87	5.79	4	3.7
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:37:38	5.6	Bottom	3	1	27.71	7.8	29.97	86.4	5.75	4.1	2.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10A	16:38:07	5.6	Bottom	3	2	27.77	7.8	29.8	86.9	5.78	4	4.2
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10B	16:47:39	4.0	Bottom	3	1	27.71	7.8	29.97	85.9	5.72	4.4	4.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10B	16:47:49	1.0	Surface	1	1	27.75	7.8	29.78	86.1	5.73	4.5	3.1
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10B	16:48:09	1.0	Surface	1	2	27.68	7.8	29.95	85.4	5.69	4.4	3.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10B	16:47:57	4.0	Bottom	3	1	27.69	7.8	30	85.9	5.72	4.4	4.2
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	SR10B	16:47:39	4.0	Bottom	3	2	27.71	7.8	29.97	85.9	5.72	4.4	4.6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:20:19	3.6	Surface	1	1	27.68	8.23	28.37	91.8	6.17	15	4.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:21:04	1.0	Surface	1	2	27.67	8.19	28.33	91.2	6.13	15.1	6
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:20:03	3.6	Middle	2	1	27.3	8.27	28.85	91.1	6.14	17.6	5.4
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:20:45	3.6	Middle	2	2	27.3	8.2	28.76	89.9	6.07	18	5.1
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:20:32	6.2	Bottom	3	1	27.31	8.21	28.73	90.3	6.1	18.8	7.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS2	14:19:53	6.2	Bottom	3	2	27.28	8.22	28.89	91.9	6.2	18.5	8.2
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:03:16	1.0	Surface	1	1	27.69	7.81	29.24	85.2	5.7	7.2	7
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:03:53	1.0	Surface	1	2	27.69	7.81	29.24	85.2	5.7	7.3	6.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:03:04	6.3	Middle	2	1	27.48	7.8	29.89	82.6	5.52	8.2	6.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:03:41	6.3	Middle	2	2	27.48	7.8	29.93	82.7	5.52	8.3	6.8
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:03:32	11.6	Bottom	3	1	27.49	7.8	30.12	83.9	5.6	9.6	6.9
HCLR	HY/2011/03	2013-10-09	Mid-Ebb	Sunny	CS(M)F5	16:02:49	11.6	Bottom	3	2	27.49	7.8	30.13	83.5	5.58	9.1	6.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:59:01	1.0	Surface	1	1	27.05	7.77	28.62	88.8	6.02	11.2	8
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:59:34	1.0	Surface	1	2	27.06	7.77	28.62	88.8	6.02	11.1	9.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:59:24	4.4	Middle	2	1	27	7.77	28.66	88.4	6	11.4	10.9
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:58:49	4.4	Middle	2	2	27	7.77	28.66	88.5	6.01	11.3	9.7
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:58:41	7.7	Bottom	3	1	27	7.77	28.66	88.5	6	11.3	12.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS5	10:59:15	7.7	Bottom	3	2	27	7.77	28.66	88.4	6	11.4	13.8
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F6	10:51:45	1.0	Surface	1	1	27.13	7.77	28.61	90.7	6.14	11.2	7.6
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F6	10:52:04	1.0	Surface	1	2	27.16	7.77	28.6	90.7	6.14	11.4	9.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F6	10:51:54	2.2	Bottom	3	1	27.09	7.77	28.61	90.5	6.13	12.6	9.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F6	10:51:34	2.2	Bottom	3	2	27.09	7.77	28.61	90.8	6.15	12.5	7.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS7	10:45:08	1.0	Surface	1	1	27.19	7.76	28.61	89.5	6.06	15.6	8.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS7	10:45:28	1.0	Surface	1	2	27.14	7.76	28.6	89.6	6.07	15.7	7.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS7	10:44:59	2.2	Bottom	3	1	27.08	7.76	28.61	89.4	6.06	18.2	10.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS7	10:45:16	2.2	Bottom	3	2	27.11	7.76	28.6	89.4	6.05	17.9	8.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS8	10:21:47	1.0	Surface	1	1	27.03	7.76	28.58	89.1	6.05	19.2	10.8
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS8	10:22:05	1.0	Surface	1	2	27.04	7.77	28.58	89	6.04	20.1	10.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS8	10:21:55	3.2	Bottom	3	1	27.04	7.77	28.58	89	6.04	19.7	11.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS8	10:21:38	3.2	Bottom	3	2	27.03	7.76	28.58	89.1	6.05	20.2	13
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F9	10:38:56	1.0	Surface	1	1	27.19	7.77	28.67	90.3	6.11	18.2	12.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F9	10:39:23	1.0	Surface	1	2	27.18	7.77	28.67	90.2	6.1	18.3	12.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F9	10:38:46	2.9	Bottom	3	1	27.11	7.77	28.65	90.3	6.12	18.8	11.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS(M)F9	10:39:06	2.9	Bottom	3	2	27.09	7.77	28.65	89.9	6.09	18.7	12.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:12:46	1.0	Surface	1	1	27.17	8.12	28.67	91.3	6.18	15.2	14.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:11:54	1.0	Surface	1	2	27.14	8.12	28.7	91.3	6.18	15.5	15
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:12:29	5.4	Middle	2	1	27.15	8.12	28.75	91	6.16	15.1	13.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:11:40	5.4	Middle	2	2	27.17	8.12	28.76	91.2	6.17	14.7	15.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:12:13	9.8	Bottom	3	1	27.12	8.12	28.75	91	6.16	14.4	16.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	IS10	10:11:23	9.8	Bottom	3	2	27.14	8.12	28.76	91.2	6.17	14.5	15.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR3	11:09:09	0.8	Middle	2	1	27.09	7.76	28.6	89	6.03	9.5	9.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR3	11:09:17	0.8	Middle	2	2	27.09	7.76	28.6	89.1	6.04	9.7	8.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR4	10:27:38	1.0	Surface	1	1	27.2	7.75	28.58	86.5	5.86	12.7	10.6
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR4	10:27:58	1.0	Surface	1	2	27.21	7.75	28.58	86.1	5.83	12.5	11.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR4	10:27:46	2.8	Bottom	3	1	27.21	7.75	28.58	86.3	5.84	12.6	12.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR4	10:27:27	2.8	Bottom	3	2	27.21	7.75	28.58	86.6	5.86	12.6	11.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR5	10:21:37	1.0	Surface	1	1	27.13	8.12	28.65	90.9	6.16	16.7	10
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR5	10:22:09	1.0	Surface	1	2	27.12	8.12	28.66	90.9	6.16	17.2	11.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR5	10:21:23	4.6	Bottom	3	1	27.12	8.12	28.71	90.8	6.15	17.1	11.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR5	10:21:53	4.6	Bottom	3	2	27.11	8.12	28.69	90.7	6.14	17.1	12.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:18:07	1.0	Surface	1	1	27.43	7.78	29.98	84.3	5.64	10.7	9.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:17:34	1.0	Surface	1	2	27.43	7.78	29.98	84.4	5.65	10.1	8.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:17:23	3.3	Middle	2	1	27.43	7.78	30	84.3	5.64	10.6	6.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:17:59	3.3	Middle	2	2	27.43	7.78	29.99	84.1	5.63	10.6	7.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:17:50	5.6	Bottom	3	1	27.43	7.78	29.99	84.2	5.63	10.6	6.9
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10A	09:17:13	5.6	Bottom	3	2	27.43	7.78	30.01	84.4	5.64	10.9	9
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10B	09:10:33	1.0	Surface	1	1	27.5	7.77	30.4	83.1	5.54	11.3	16
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10B	09:10:16	1.0	Surface	1	2	27.49	7.77	30.39	83.2	5.55	11.2	15
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10B	09:10:26	4.4	Bottom	3	1	27.5	7.77	30.4	83	5.53	11.3	17.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	SR10B	09:10:07	4.4	Bottom	3	2	27.49	7.77	30.38	83.2	5.55	11.3	17.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:36:39	1.0	Surface	1	1	27.26	8.12	28.63	90.4	6.11	18.4	12.1
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:35:57	1.0	Surface	1	2	27.29	8.12	28.61	90.8	6.13	16.4	13.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:36:24	3.7	Middle	2	1	27.19	8.12	28.66	90	6.09	17.5	13.2
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:35:39	3.7	Middle	2	2	27.18	8.12	28.66	90	6.09	17.7	14.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:36:16	6.3	Bottom	3	1	27.18	8.12	28.66	90	6.09	18.2	15.6
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS2	11:35:25	6.3	Bottom	3	2	27.18	8.12	28.66	90.2	6.11	17.9	14.4
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:46:25	1.0	Surface	1	1	27.38	7.78	28.79	84.3	5.68	14.5	5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:45:46	1.0	Surface	1	2	27.36	7.79	28.88	84.6	5.7	14.7	4.6
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:45:37	6.2	Middle	2	1	27.47	7.78	29.97	84.3	5.64	14.6	4.5
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:46:17	6.2	Middle	2	2	27.46	7.78	29.92	84.1	5.62	14.8	6
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:45:26	11.3	Bottom	3	1	27.43	7.78	29.91	85.2	5.7	15.4	4.3
HCLR	HY/2011/03	2013-10-09	Mid-Flood	Sunny	CS(M)F5	09:46:04	11.3	Bottom	3	2	27.48	7.77	30.11	85.5	5.71	15.7	6.1
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:41:44	1.0	Surface	1	1	28.16	7.79	28.87	91.5	6.08	8.5	6.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:42:35	1.0	Surface	1	2	28.2	7.76	28.87	91.6	6.08	9	7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:41:32	5.0	Middle	2	1	28.11	7.78	28.94	91	6.05	8.9	6.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:42:25	5.0	Middle	2	2	28.11	7.77	28.93	91	6.06	9.9	7.1
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:41:19	9.0	Bottom	3	1	28.11	7.79	28.93	91.5	6.07	8.9	5.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS5	16:42:13	9.0	Bottom	3	2	28.11	7.79	28.93	91.2	6.08	8.2	5.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F6	16:49:50	1.0	Surface	1	1	28.43	7.74	28.4	96.6	6.41	7.7	3.8
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F6	16:49:26	1.0	Surface	2	2	28.34	7.74	28.48	97.1	6.45	8.4	4.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F6	16:49:19	2.3	Bottom	3	1	28.28	7.74	28.62	97.9	6.51	10.4	3.7
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F6	16:49:40	2.3	Bottom	3	2	28.09	7.73	28.76	94.8	6.31	10.7	4.8
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS7	16:58:21	1.0	Surface	1	1	28.45	7.75	28.17	99.6	6.61	6.8	3.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS7	16:57:36	1.0	Surface	1	2	28.48	7.75	28.15	99.8	6.63	7.1	4.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS7	16:58:13	2.4	Bottom	3	1	28.41	7.75	28.6	99.5	6.6	9.7	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS7	16:57:26	2.4	Bottom	3	2	28.42	7.74	28.46	100.1	6.64	9.3	3.2
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS8	17:25:50	1.0	Surface	1	1	28.11	7.81	28.2	95.6	6.39	5	4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS8	17:25:32	1.0	Surface	1	2	28.14	7.82	28.21	96.4	6.44	4.7	2.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS8	17:25:24	2.8	Bottom	3	1	28.12	7.83	28.16	96.3	6.44	5.5	3.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS8	17:25:42	2.8	Bottom	3	2	27.97	7.82	28.18	95.4	6.39	5.3	3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F9	17:06:09	1.0	Surface	1	1	28.31	7.74	28.36	97.6	6.49	5	3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS(M)F9	17:05:30	1.0	Surface	1	2	28.76	7.75	28.13	100.6	6.65	5.4	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS10	18:04:32	1.0	Surface	1	1	28.03	8.14	25.02	89.7	6.11	6.4	2.4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS10	18:04:59	5.2	Middle	2	1	27.65	8.12	28.41	87.1	5.86	8	2.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS10	18:04:22	5.2	Middle	2	2	27.68	8.12	28.35	87.8	5.9	7.6	2.1
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS10	18:04:13	9.4	Bottom	3	1	27.71	8.11	28.62	88.6	6.09	8.8	3.7
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	IS10	18:04:46	9.4	Bottom	3	2	27.7	8.11	28.64	88.6	5.94	8.9	3.2
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR3	16:27:04	0.9	Middle	2	1	28.37	7.8	28.87	95.3	6.31	7.3	7.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR3	16:27:13	0.9	Middle	2	2	28.3	7.8	28.85	94.8	6.27	7.5	5.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR4	17:18:55	1.0	Surface	1	1	28.62	7.86	28.26	97.8	6.47	4.2	3.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR4	17:19:20	1.0	Surface	1	2	28.57	7.85	28.23	97.5	6.46	4.4	5.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR4	17:18:49	2.5	Bottom	3	1	28.42	7.87	28.25	97.2	6.42	4.3	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR4	17:19:09	2.5	Bottom	3	2	28.27	7.86	28.19	96.4	6.46	4.6	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR5	17:53:17	1.0	Surface	1	1	28.21	8.12	25.54	92.1	6.23	6.1	4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR5	17:52:50	1.0	Surface	1	2	28.18	8.12	25.61	92	6.23	6.1	3.4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR5	17:53:03	3.5	Bottom	3	1	28.11	8.1	27.92	91.8	6.14	6.2	2.1
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR5	17:52:43	3.5	Bottom	3	2	28.15	8.1	28.45	92	6.14	6.3	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:31:58	1.0	Surface	1	1	27.91	7.71	29.58	85.7	5.7	3.7	2.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:31:18	1.0	Surface	1	2	27.91	7.71	29.58	85.6	5.69	3.7	1.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:31:45	3.1	Middle	2	1	27.9	7.71	29.62	85.4	5.68	3.7	2.1
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:31:06	3.1	Middle	2	2	27.9	7.71	29.63	85.3	5.67	3.8	2.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:30:54	5.1	Bottom	3	1	27.89	7.71	29.72	85.3	5.67	3.9	3.4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10A	18:31:29	5.1	Bottom	3	2	27.89	7.71	29.73	85.3	5.67	3.7	3.4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10B	18:42:09	1.0	Surface	1	1	27.9	7.71	29.58	85.5	5.68	3.7	2.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10B	18:41:35	1.0	Surface	1	2	27.9	7.71	29.58	85.4	5.68	3.7	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10B	18:41:17	4.3	Bottom	3	1	27.89	7.71	29.71	85.4	5.68	3.7	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	SR10B	18:41:55	4.3	Bottom	3	2	27.88	7.71	29.72	85	5.65	3.9	4.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:26:54	1.0	Surface	1	1	28.26	8.16	24.93	91.4	6.21	3.8	1.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:27:31	1.0	Surface	1	2	28.12	8.16	24.93	91.4	6.21	3.8	1.8
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:26:39	4.0	Middle	2	1	27.8	8.18	27.63	90.5	6.1	6.3	1.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:27:17	4.0	Middle	2	2	27.76	8.15	28.14	89.9	6.04	6.3	1.2
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:27:08	6.9	Bottom	3	1	27.71	8.14	28.37	90.5	6.08	6.8	3.6
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS2	16:26:20	6.9	Bottom	3	2	27.63	8.2	28.53	92.3	6.2	6.8	2.3
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:02:06	1.0	Surface	1	1	28.12	7.7	28.64	87.8	5.85	4.2	2.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:01:27	1.0	Surface	1	2	28.09	7.7	28.73	86.6	5.77	4.5	2.5
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:01:15	6.3	Middle	2	1	27.72	7.69	29.58	84	5.6	5.3	3.8
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:01:51	6.3	Middle	2	2	27.75	7.69	29.55	84	5.6	4.8	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:01:41	11.5	Bottom	3	1	27.75	7.69	29.62	85.7	5.71	4.6	5.4
HCLR	HY/2011/03	2013-10-11	Mid-Ebb	Sunny	CS(M)F5	18:01:05	11.5	Bottom	3	2	27.73	7.69	29.62	85.8	5.72	5.1	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:08:37	1.0	Surface	1	1	27.92	7.76	28.8	91.1	6.09	8	4.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:10:28	1.0	Surface	1	2	27.97	7.76	28.8	91.1	6.08	7.7	5.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:08:21	4.9	Middle	2	1	27.83	7.76	28.81	90.5	6.05	8.1	5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:10:13	4.9	Middle	2	2	27.83	7.76	28.8	90.5	6.05	7.8	3.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:10:05	8.8	Bottom	3	1	27.83	7.76	28.83	90.6	6.06	7.7	6.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS5	13:08:10	8.8	Bottom	3	2	27.81	7.76	28.82	90.5	6.06	7.7	7.5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F6	13:00:01	1.0	Surface	1	1	28.63	7.76	28.68	94.3	6.23	16.2	6.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F6	13:00:22	1.0	Surface	1	2	28.48	7.76	28.59	93.2	6.17	15.9	5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F6	13:00:07	2.2	Bottom	3	1	28.35	7.76	28.54	93.2	6.19	21.2	4.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F6	12:59:50	2.2	Bottom	3	2	28.43	7.76	28.55	94.2	6.25	22.2	5.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS7	12:52:50	1.0	Surface	1	1	27.92	7.74	28.63	91.5	6.11	18.5	6.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS7	12:51:48	1.0	Surface	1	2	28	7.74	28.61	91.9	6.14	19.7	8.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS7	12:51:39	2.5	Bottom	3	1	27.89	7.74	28.69	91.7	6.13	22.8	7.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS7	12:52:26	2.5	Bottom	3	2	27.86	7.74	28.7	91.6	6.13	23.3	5.6
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS8	12:26:43	1.0	Surface	1	1	27.81	7.75	28.48	92.2	6.19	8.2	8.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS8	12:27:03	1.0	Surface	1	2	27.75	7.75	28.28	91.5	6.15	9.2	8.4
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS8	12:26:33	2.8	Bottom	3	1	27.71	7.75	28.42	92.3	6.2	9.2	10.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS8	12:26:56	2.8	Bottom	3	2	27.71	7.74	28.52	91.4	6.13	10.2	9.8
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F9	12:45:33	1.0	Surface	1	1	27.86	7.72	28.38	92.8	6.22	12.5	4.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F9	12:45:15	1.0	Surface	1	2	27.86	7.73	28.39	93.1	6.24	12.7	4.5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F9	12:45:08	2.6	Bottom	3	1	27.86	7.73	28.43	93.1	6.24	16.6	4.8
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS(M)F9	12:45:24	2.6	Bottom	3	2	27.84	7.72	28.47	92.8	6.22	16.2	5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:22:48	1.0	Surface	1	1	27.87	8.12	27.65	89.9	6.05	15.1	3.7
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:23:49	1.0	Surface	1	2	27.79	8.11	27.85	89.5	6.02	15.6	2.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:23:36	5.3	Middle	2	1	27.61	8.12	28.24	88.8	5.98	15.3	4.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:22:33	5.3	Middle	2	2	27.6	8.12	28.25	88.9	5.99	15.6	5.7
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:23:25	9.5	Bottom	3	1	27.57	8.12	28.56	88.7	5.97	17.2	5.4
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	IS10	12:22:25	9.5	Bottom	3	2	27.59	8.12	28.41	88.9	5.98	17.6	3.8
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR3	13:18:14	0.8	Middle	2	1	27.95	7.76	28.79	91.7	6.12	8	7.8
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR3	13:18:09	0.8	Middle	2	2	27.95	7.76	28.79	91.7	6.12	7.7	6.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR4	12:33:11	1.0	Surface	1	1	28.02	7.72	28.03	92.8	6.21	7	4.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR4	12:33:26	1.0	Surface	1	2	28.08	7.72	28.01	93	6.22	6.9	4.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR4	12:33:17	2.4	Bottom	3	1	28.04	7.72	28.01	92.8	6.21	7.1	5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR4	12:33:04	2.4	Bottom	3	2	27.91	7.72	28.03	92.6	6.21	6.8	4.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR5	12:35:15	1.0	Surface	1	1	27.79	8.11	27.78	89.7	6.04	14.1	5.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR5	12:35:42	1.0	Surface	1	2	27.83	8.11	27.69	89.6	6.03	14.2	7.4
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR5	12:35:05	3.5	Bottom	3	1	27.67	8.11	28.09	89.3	6.01	14.7	15.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR5	12:35:34	3.5	Bottom	3	2	27.63	8.11	28.16	89	6	14.6	16.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:19:37	1.0	Surface	1	1	27.76	7.77	29.3	84.5	5.64	6.4	3.6
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:18:53	1.0	Surface	1	2	27.76	7.77	29.24	84.5	5.66	6.7	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:19:20	3.1	Middle	2	1	27.73	7.77	29.47	84.1	5.61	7.6	4.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:18:26	3.1	Middle	2	2	27.72	7.77	29.45	84.2	5.62	7.3	3.7
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:18:15	5.2	Bottom	3	1	27.7	7.77	29.56	84.2	5.62	7.3	4.6
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10A	11:19:09	5.2	Bottom	3	2	27.72	7.77	29.55	84	5.61	7.5	6.1
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10B	11:09:50	1.0	Surface	1	1	27.71	7.79	29.93	84.2	5.6	8.5	9.7
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10B	11:09:30	1.0	Surface	1	2	27.72	7.79	29.92	84.7	5.64	8.2	9.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10B	11:09:24	4.3	Bottom	3	1	27.71	7.79	29.91	84.8	5.64	8.2	9.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	SR10B	11:09:40	4.3	Bottom	3	2	27.71	7.79	29.93	84.3	5.61	8.2	9.5
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:02:12	1.0	Surface	1	1	28.47	8.09	26.19	91.4	6.14	6.5	2.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:02:51	1.0	Surface	1	2	28.55	8.09	26.14	91.5	6.13	6.5	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:02:00	4.1	Middle	2	1	27.87	8.1	27.65	89.8	6.04	7.9	3.6
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:02:36	4.1	Middle	2	2	27.83	8.1	27.77	89.5	6.02	7.6	2.2
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:01:49	7.1	Bottom	3	1	27.73	8.08	28.26	89.9	6.04	8.8	3.9
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS2	14:02:25	7.1	Bottom	3	2	27.75	8.09	28.27	89.7	6.02	8.5	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:52:28	1.0	Surface	1	1	27.81	7.76	28.39	87.5	5.86	6.1	2.7
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:51:19	1.0	Surface	1	2	27.72	7.75	28.45	86.5	5.81	6.2	2.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:51:00	6.5	Middle	2	1	27.65	7.75	29.34	84	5.62	13.3	3.3
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:52:03	6.5	Middle	2	2	27.65	7.75	29.36	83.3	5.57	13.2	2.8
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:50:49	12	Bottom	3	1	27.66	7.74	29.35	85.3	5.7	12.5	2.4
HCLR	HY/2011/03	2013-10-11	Mid-Flood	Sunny	CS(M)F5	11:51:52	12	Bottom	3	2	27.65	7.75	29.44	84	5.61	12.7	2.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:51:33	1.0	Surface	1	1	27.61	7.78	28.49	92.1	6.2	5.7	6.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:52:08	1.0	Surface	1	2	27.6	7.78	28.49	92.3	6.2	5.5	6.5
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:51:22	4.2	Middle	2	1	27.58	7.79	28.93	91.3	6.13	6.8	5.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:51:57	4.2	Middle	2	2	27.58	7.79	29.05	91.1	6.11	6.9	6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:51:12	7.4	Bottom	3	1	27.6	7.78	29.74	91.8	6.13	6.9	5.3
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS5	09:51:47	7.4	Bottom	3	2	27.59	7.77	29.64	91.8	6.13	6.9	6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F6	09:44:12	1.0	Surface	1	1	27.64	7.78	28.1	99.7	6.71	11.4	26.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F6	09:43:49	1.0	Surface	1	2	27.63	7.77	28.1	98.9	6.66	11.3	27
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F6	09:43:37	2.0	Bottom	3	1	27.63	7.78	28.1	98.7	6.65	12.5	13.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F6	09:43:59	2.0	Bottom	3	2	27.63	7.78	28.1	99.2	6.68	12.4	14.3
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS7	09:35:58	1.0	Surface	1	1	27.66	7.77	28.17	95.2	6.41	6.5	10.8
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS7	09:35:32	1.0	Surface	1	2	27.65	7.76	28.17	95.6	6.43	6.5	10.5
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS7	09:35:17	2.3	Bottom	3	1	27.65	7.76	28.27	95.2	6.4	6.7	12.5
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS7	09:35:47	2.3	Bottom	3	2	27.66	7.76	28.25	94.6	6.37	6.7	13.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS8	09:12:49	1.0	Surface	1	1	27.65	7.79	28.13	97.6	6.57	7.4	11.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS8	09:13:08	1.0	Surface	1	2	27.65	7.79	28.13	97.2	6.54	7.4	11.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS8	09:12:59	3.3	Bottom	3	1	27.65	7.79	28.13	97.2	6.55	7.5	13.3
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS8	09:12:42	3.3	Bottom	3	2	27.65	7.79	28.13	97.4	6.56	7.2	12.3
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F9	09:29:19	1.0	Surface	1	1	27.59	7.78	28.16	95.6	6.44	10.4	12.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F9	09:29:02	1.0	Surface	1	2	27.58	7.77	28.15	95.8	6.46	10.3	11
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F9	09:29:11	2.6	Bottom	3	1	27.58	7.77	28.19	95.9	6.46	10.4	15.3
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS(M)F9	09:28:48	2.6	Bottom	3	2	27.58	7.77	28.19	95.8	6.46	10.4	14.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:05:54	1.0	Surface	1	1	27.78	8.12	27.05	94.3	6.37	2.1	7.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:07:05	1.0	Surface	1	2	27.76	8.13	27.09	94.2	6.37	2.3	6.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:05:10	9.8	Bottom	3	1	27.46	8.14	27.87	93.9	6.35	2.4	5.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:06:41	5.4	Middle	2	1	27.56	8.14	27.55	94.1	6.37	2.4	6.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:05:29	5.4	Middle	2	2	27.54	8.14	27.64	94	6.36	2.5	6.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:06:28	9.8	Bottom	3	1	27.46	8.14	27.85	94.1	6.37	2.4	6.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	IS10	09:05:10	9.8	Bottom	3	2	27.46	8.14	27.87	93.9	6.35	2.4	5.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR3	09:58:56	0.7	Middle	2	1	27.61	7.76	28.43	94.3	6.34	3.6	7.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR3	09:58:49	0.7	Middle	2	2	27.61	7.76	28.43	94.2	6.34	3.6	6.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR4	09:18:39	1.0	Surface	1	1	27.47	7.75	27.8	93.1	6.3	5.6	11.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR4	09:18:55	1.0	Surface	1	2	27.5	7.74	27.85	92.9	6.28	5.6	12.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR4	09:18:47	2.8	Bottom	3	1	27.5	7.74	27.94	93	6.28	5.6	11.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR4	09:18:28	2.8	Bottom	3	2	27.54	7.75	27.94	93.5	6.31	5.5	11.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR5	09:15:37	1.0	Surface	1	1	27.77	8.12	27.04	94.1	6.36	2.2	6.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR5	09:15:10	1.0	Surface	1	2	27.77	8.12	27.04	94	6.35	2.3	8.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR5	09:15:23	4.3	Bottom	3	1	27.7	8.12	27.22	93.8	6.34	2.4	7.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR5	09:14:54	4.3	Bottom	3	2	27.67	8.12	27.29	93.7	6.33	2.3	7.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:01:19	1.0	Surface	1	1	27.69	7.73	30.46	83.1	5.52	2.7	7.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:00:39	1.0	Surface	1	2	27.68	7.73	30.44	83.4	5.54	2.7	8.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:01:08	3.3	Middle	2	1	27.69	7.73	30.47	83	5.51	2.9	11.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:00:30	3.3	Middle	2	2	27.68	7.72	30.46	83.3	5.52	2.9	10.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:00:58	5.6	Bottom	3	1	27.69	7.73	30.46	83.1	5.53	3.2	11.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10A	08:00:20	5.6	Bottom	3	2	27.68	7.72	30.45	83.5	5.54	3.1	10.4
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10B	07:54:23	1.0	Surface	1	1	27.64	7.71	30.42	83.8	5.57	2.9	10
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10B	07:54:06	1.0	Surface	1	2	27.64	7.71	30.42	83.9	5.58	3	9.1
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10B	07:54:16	3.9	Bottom	3	1	27.65	7.71	30.44	83.7	5.56	2.9	11.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	SR10B	07:53:57	3.9	Bottom	3	2	27.64	7.71	30.42	83.9	5.58	3	10.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:34:27	1.0	Surface	1	1	27.66	8.12	26.08	94.1	6.41	2.7	7.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:35:21	1.0	Surface	1	2	27.66	8.12	26.08	94.4	6.43	2.7	6.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:35:07	3.5	Middle	2	1	27.64	8.13	26.6	93.5	6.35	3.3	8.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:34:18	3.5	Middle	2	2	27.65	8.12	26.56	93.2	6.33	3.3	7.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:34:51	6.0	Bottom	3	1	27.52	8.13	28.14	92.7	6.25	5	7.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS2	10:34:02	6.0	Bottom	3	2	27.57	8.11	27.75	92.9	6.28	4.8	9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:36:51	1.0	Surface	1	1	27.44	7.76	28.15	85.6	5.78	3.6	8.6
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:37:35	1.0	Surface	1	2	27.43	7.74	28.15	86.1	5.82	3.5	9.7
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:36:38	6.5	Middle	2	1	27.73	7.75	29.12	82.2	5.49	3.7	8.2
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:37:20	6.5	Middle	2	2	27.72	7.75	29.12	83.4	5.57	3.5	9.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:36:27	12.0	Bottom	3	1	27.76	7.74	30.31	83.1	5.52	3.8	10.9
HCLR	HY/2011/03	2013-10-14	Mid-Ebb	Sunny	CS(M)F5	08:37:07	12.0	Bottom	3	2	27.7	7.74	30.3	85.7	5.7	3.7	10.1
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:09:53	1.0	Surface	1	1	27.81	7.81	28.74	104.4	6.99	3.9	9.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:10:21	1.0	Surface	1	2	27.81	7.81	28.75	103.8	6.94	3.9	8.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:09:41	4.4	Middle	2	1	27.81	7.8	28.81	103.2	6.91	4.2	8.6
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:10:11	4.4	Middle	2	2	27.81	7.8	28.81	103.1	6.9	4.3	9.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:09:35	7.7	Bottom	3	1	27.8	7.8	28.85	104.1	6.96	4.3	10.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS5	15:10:03	7.7	Bottom	3	2	27.81	7.81	28.83	104.2	6.97	4.2	9.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS(M)F6	15:17:13	1.0	Surface	1	1	27.81	7.77	28.69	104.1	6.97	11.4	10.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS(M)F6	15:16:53	1.0	Surface	1	2	27.8	7.77	28.69	104.4	6.99	11.5	11.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)6	15:16:43	2.2	Bottom	3	1	27.8	7.77	28.69	104.2	6.98	12.5	12.1
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)6	15:17:02	2.2	Bottom	3	2	27.81	7.77	28.69	104.1	6.97	12.7	11.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS7	15:24:38	1.0	Surface	1	1	27.5	7.76	28.69	97.8	6.55	9.5	14.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS7	15:24:25	1.0	Surface	1	2	27.75	7.75	28.7	98	6.56	9.6	13.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS7	15:24:15	2.2	Bottom	3	1	27.75	7.75	28.7	98.3	6.59	9.5	19.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS7	15:24:31	2.2	Bottom	3	2	27.75	7.75	28.71	97.7	6.55	9.5	20.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS8	15:47:23	1.0	Surface	1	1	27.64	7.79	28.67	104	6.98	6.7	10.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS8	15:47:06	1.0	Surface	1	2	27.64	7.79	28.68	103.8	6.97	6.6	11.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS8	15:46:58	2.8	Bottom	3	1	27.65	7.79	28.7	103.9	6.97	6.7	10.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS8	15:47:14	2.8	Bottom	3	2	27.65	7.79	28.69	103.8	6.97	6.8	11.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)9	15:31:15	1.0	Surface	1	1	27.76	7.78	28.56	101.3	6.81	9.4	10
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)9	15:31:35	1.0	Surface	1	2	27.76	7.78	28.55	101.3	6.79	9.6	11.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)9	15:31:07	2.7	Bottom	3	1	27.69	7.77	28.62	101.6	6.82	9.5	11.6
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	ISM(F)9	15:31:25	2.7	Bottom	3	2	27.69	7.77	28.61	101.6	6.78	9.4	10.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:10:01	1.0	Surface	1	1	27.74	8.15	26.65	96.6	6.55	3	9.1
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:10:59	1.0	Surface	1	2	27.75	8.15	26.54	96.6	6.55	3.3	8.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:09:47	5.5	Middle	2	1	27.73	8.15	27.41	96.8	6.53	5.3	10.1
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:10:36	5.5	Middle	2	2	27.73	8.15	27.43	97	6.55	5.1	11.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:09:29	10.0	Bottom	3	1	27.73	8.15	27.54	97	6.54	6.2	11.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	IS10	16:10:22	10.0	Bottom	3	2	27.73	8.15	27.55	96.8	6.53	6	11.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR3	15:00:44	0.7	Middle	2	1	27.79	7.81	28.77	105.1	7.04	3.7	15.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR3	15:00:54	0.7	Middle	2	2	27.79	7.81	28.77	105.2	7.04	3.8	14.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR4	15:41:39	1.0	Surface	1	1	27.62	7.81	28.78	98	6.58	7.6	10.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR4	15:41:22	1.0	Surface	1	2	27.62	7.81	28.79	98.2	6.59	7.6	10.8
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR4	15:41:11	2.7	Bottom	3	1	27.6	7.82	28.84	97.9	6.57	8.6	11.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR4	15:41:30	2.7	Bottom	3	2	27.59	7.81	28.81	98.1	6.59	8.9	11.6
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR5	16:00:08	1.0	Surface	1	1	27.74	8.15	26.65	96.8	6.56	3.4	9.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR5	16:00:38	1.0	Surface	1	2	27.73	8.15	26.44	97.4	6.61	3.1	8.1
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR5	15:59:57	4.6	Bottom	3	1	27.72	8.15	27.56	96.8	6.53	5	10.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR5	16:00:21	4.6	Bottom	3	2	27.72	8.15	27.53	96.9	6.54	5.2	9.6
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:51:34	1.0	Surface	1	1	27.63	7.72	30.26	84.6	5.63	4.8	7.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:51:02	1.0	Surface	1	2	27.63	7.72	30.29	84.6	5.64	4.8	6.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:51:22	3.3	Middle	2	1	27.64	7.72	30.42	84.3	5.6	4.9	7.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:50:53	3.3	Middle	2	2	27.63	7.72	30.28	84.5	5.62	4.9	7.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:51:10	5.6	Bottom	3	1	27.64	7.72	30.45	84.5	5.62	5.2	7.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10A	16:50:43	5.6	Bottom	3	2	27.65	7.72	30.47	84.6	5.62	5.2	7.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10B	17:00:44	1.0	Surface	1	1	27.63	7.73	30.16	84.3	5.61	4.1	8.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10B	17:01:02	1.0	Surface	1	2	27.63	7.73	30.24	84.3	5.61	4.1	7.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10B	17:00:35	4.3	Bottom	3	1	27.64	7.73	30.41	84.2	5.6	4.4	8.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	SR10B	17:00:53	4.3	Bottom	3	2	27.64	7.72	30.39	84.3	5.61	4.5	9.9
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:39:23	1.0	Surface	1	1	27.79	8.2	26.71	95.1	6.44	3	8.4
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:40:10	1.0	Surface	1	2	27.77	8.2	26.65	93.7	6.35	3.2	8.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:39:07	3.4	Middle	2	1	27.71	8.21	27.17	94	6.35	4.9	8.9
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:39:59	3.4	Middle	2	2	27.63	8.2	27.62	92.3	6.23	5.1	7.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:38:53	5.7	Bottom	3	1	27.59	8.23	27.89	95.2	6.43	6.7	8.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS2	14:39:44	5.7	Bottom	3	2	27.59	8.2	27.85	92.7	6.26	7	8.7
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:20:11	1.0	Surface	1	1	27.65	7.72	28.6	91.7	6.16	5.6	6.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:20:43	1.0	Surface	1	2	27.61	7.71	28.71	87.8	5.9	5.7	7.2
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:19:53	6.3	Middle	2	1	27.61	7.69	29	84.7	5.68	7.6	6.3
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:20:33	6.3	Middle	2	2	27.63	7.69	29	85.4	5.72	7.8	6.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:19:43	11.5	Bottom	3	1	27.66	7.69	30.07	87.9	5.85	9.7	6.5
HCLR	HY/2011/03	2013-10-14	Mid-Flood	Sunny	CS(M)F5	16:20:25	11.5	Bottom	3	2	27.65	7.69	30.09	89.6	5.97	9.7	6.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:44:38	1.0	Surface	1	1	27.59	7.72	28.8	99.5	6.68	6.7	7.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:45:17	1.0	Surface	1	2	27.6	7.72	28.76	100	6.71	6.5	6.5
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:44:28	4.7	Middle	2	1	27.43	7.71	29.23	97.6	6.56	8.5	8.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:45:03	4.7	Middle	2	2	27.43	7.71	29.27	97.3	6.53	8.4	7.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:44:53	8.3	Bottom	3	1	27.44	7.71	29.35	98.4	6.6	8.1	6.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS5	11:44:19	8.3	Bottom	3	2	27.46	7.71	29.3	99.2	6.66	8	7
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	ISM(F)6	11:33:35	1.0	Surface	1	1	27.53	7.69	28.79	101.2	6.8	5.8	7.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	ISM(F)6	11:33:14	1.0	Surface	1	2	27.54	7.66	28.75	101.4	6.82	6	6.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	ISM(F)6	11:33:28	2.1	Bottom	3	1	27.51	7.68	28.86	101.1	6.79	5.9	6
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	ISM(F)6	11:33:07	2.1	Bottom	3	2	27.53	7.63	28.77	101.4	6.82	5.6	6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS7	11:26:08	1.0	Surface	1	1	27.49	7.68	27.98	100.5	6.79	11.2	9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS7	11:25:49	1.0	Surface	1	2	27.49	7.67	27.97	100.6	6.8	11.3	7.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS7	11:26:00	2.3	Bottom	3	1	27.49	7.67	27.99	100.3	6.78	11.3	6.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS7	11:25:36	2.3	Bottom	3	2	27.49	7.66	27.99	100.3	6.77	11.2	8.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS8	11:04:17	1.0	Surface	1	1	27.48	7.69	28.12	101.5	6.85	8.6	7
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS8	11:03:56	1.0	Surface	1	2	27.48	7.67	28.1	101.4	6.85	8.6	8.7
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS8	11:04:11	2.6	Bottom	3	1	27.48	7.68	28.11	101.4	6.85	8.7	7.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS8	11:03:47	2.6	Bottom	3	2	27.48	7.66	28.09	101.2	6.84	8.8	7.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS(M)F9	11:19:19	1.0	Surface	1	1	27.51	7.68	27.92	101.8	6.87	10.6	14.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS(M)F9	11:19:55	1.0	Surface	1	2	27.5	7.69	27.92	101.8	6.84	10	15.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS(M)F9	11:19:48	2.3	Bottom	3	1	27.48	7.7	28.03	101.1	6.83	12.5	19.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS(M)F9	11:19:11	2.3	Bottom	3	2	27.51	7.67	27.95	101.7	6.87	11.9	16.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:55:04	1.0	Surface	1	1	27.55	8.17	27.21	99.8	6.77	4.7	3.5
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:53:22	1.0	Surface	1	2	27.55	8.17	27.2	99.5	6.74	4.9	3.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:54:45	5.3	Middle	2	1	27.54	8.17	28.34	95.2	6.43	6.4	4.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:53:07	5.3	Middle	2	2	27.54	8.17	28.44	95.7	6.44	6.5	5.5
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:54:33	9.6	Bottom	3	1	27.49	8.16	28.98	95.3	6.4	7.7	5.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	IS10	10:52:58	9.6	Bottom	3	2	27.5	8.16	29.01	96.2	6.46	7.6	6.7
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR3	11:54:15	0.8	Middle	2	1	27.64	7.73	28.73	104.2	6.99	6.4	5.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR3	11:54:10	0.8	Middle	2	2	27.64	7.73	28.73	104.1	6.98	6	6.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR4	11:10:04	1.0	Surface	1	1	27.44	7.64	27.65	96.6	6.54	6.4	11.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR4	11:09:45	1.0	Surface	1	2	27.44	7.63	27.62	96	6.5	6.2	11.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR4	11:09:38	2.4	Bottom	3	1	27.44	7.61	27.84	95.1	6.43	6.3	12.5
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR4	11:09:57	2.4	Bottom	3	2	27.45	7.64	27.88	96.4	6.52	6.6	12.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR5	11:00:30	1.0	Surface	1	1	27.55	8.17	27.23	103.2	6.99	2.7	4.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR5	11:01:04	1.0	Surface	1	2	27.55	8.17	27.22	103	6.98	2.6	3.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR5	11:00:17	3.7	Bottom	3	1	27.55	8.17	27.45	102.8	6.96	2.6	3.3
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR5	11:00:48	3.7	Bottom	3	2	27.58	8.17	27.99	103.5	6.98	2.7	4.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:52:24	1.0	Surface	1	1	27.57	7.68	30.61	86.3	5.74	3.7	5.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:52:59	1.0	Surface	1	2	27.57	7.68	30.66	85	5.65	3.5	4.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:52:10	3.2	Middle	2	1	27.57	7.68	30.43	86.4	5.75	4.5	6.3
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:52:48	3.2	Middle	2	2	27.57	7.68	30.61	84.9	5.65	4.5	6.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:52:40	5.3	Bottom	3	1	27.56	7.68	30.69	85	5.65	4.6	6.3
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10A	09:51:55	5.3	Bottom	3	2	27.57	7.68	30.44	86.2	5.74	4.5	5.3
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10B	09:42:40	1.0	Surface	1	1	27.58	7.67	30.62	84.4	5.61	5.9	7.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10B	09:42:13	1.0	Surface	1	2	27.59	7.67	30.59	84.6	5.63	5.4	7.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10B	09:42:01	4.8	Bottom	3	1	27.58	7.66	30.59	84.4	5.61	6.3	8.8
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	SR10B	09:42:30	4.8	Bottom	3	2	27.57	7.67	30.62	84.3	5.6	5.9	8.6
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:20:59	1.0	Surface	1	1	27.52	8.19	27.88	102.5	6.92	3.8	7.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:21:35	1.0	Surface	1	2	27.52	8.19	27.88	102.5	6.92	3.8	6.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:20:50	4.0	Middle	2	1	27.52	8.19	27.89	101.2	6.84	4.8	4.6
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:21:22	4.0	Middle	2	2	27.52	8.2	27.91	100.7	6.81	4.8	4.6
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:20:37	6.9	Bottom	3	1	27.47	8.18	28.86	101.1	6.8	6.2	3.6
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS2	12:21:11	6.9	Bottom	3	2	27.51	8.18	29.4	101.5	6.8	6.3	4.3
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:29:36	1.0	Surface	1	1	27.44	7.7	28.69	95.1	6.4	2.7	4.1
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:30:43	1.0	Surface	1	2	27.45	7.71	28.69	95.5	6.43	3	3.4
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:30:18	7.2	Middle	2	1	27.42	7.69	28.98	90.1	6.06	3	5.2
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:29:13	7.2	Middle	2	2	27.43	7.68	29.01	89.4	6.01	3.2	3.9
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:30:07	13.4	Bottom	3	1	27.52	7.69	29.49	90.4	6.06	3.4	4.5
HCLR	HY/2011/03	2013-10-16	Mid-Ebb	Sunny	CS(M)F5	10:29:01	13.4	Bottom	3	2	27.48	7.67	29.38	90.1	6.04	3.6	3.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:03:18	1.0	Surface	1	1	27.65	7.75	28.2	108.9	7.33	7	8.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:04:12	1.0	Surface	1	2	27.65	7.75	28.18	109	7.34	7	8.7
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:03:56	4.6	Middle	2	1	27.65	7.75	28.24	107.9	7.26	7.2	7.4
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:02:56	4.6	Middle	2	2	27.66	7.74	28.27	107.7	7.24	7.8	6.9
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:03:45	8.1	Bottom	3	1	27.66	7.75	28.26	107.7	7.24	7.1	10.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS5	16:02:45	8.1	Bottom	3	2	27.66	7.74	28.25	107.7	7.25	8	9.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F6	16:13:33	1.0	Surface	1	1	27.61	7.71	27.94	107	7.22	12.3	13.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F6	16:13:53	1.0	Surface	1	2	27.6	7.71	27.94	106.9	7.21	12	13.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F6	16:13:25	2.2	Bottom	3	1	27.61	7.71	27.94	106.9	7.21	13.2	13.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F6	16:13:41	2.2	Bottom	3	2	27.61	7.71	27.94	106.9	7.21	12	14.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS7	16:24:54	1.0	Surface	1	1	27.63	7.7	28.1	102.7	6.92	11.6	13.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS7	16:24:38	1.0	Surface	1	2	27.64	7.7	28.09	102.6	6.91	12.7	14.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS7	16:24:46	2.3	Bottom	3	1	27.64	7.7	28.1	102.5	6.9	13	12.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS7	16:24:30	2.3	Bottom	3	2	27.64	7.69	28.09	102.4	6.9	13.7	13
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS8	17:01:15	1.0	Surface	1	1	27.67	7.69	28.02	99.8	6.74	13.6	17.4
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS8	17:01:30	1.0	Surface	1	2	27.47	7.69	28.03	99.8	6.74	12.9	16.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS8	17:01:23	2.5	Bottom	3	1	27.47	7.69	28.03	99.9	6.75	13.2	16.3
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS8	17:01:07	2.5	Bottom	3	2	27.47	7.69	28.03	99.7	6.74	13.2	16.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F9	16:43:08	1.0	Surface	1	1	27.54	7.73	28.12	107	7.22	21.3	32.5
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F9	16:43:37	1.0	Surface	1	2	27.54	7.73	28.13	107.3	7.24	21	34.5
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F9	16:43:21	2.5	Bottom	3	1	27.54	7.73	28.13	107.2	7.22	25.5	35.3
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS(M)F9	16:43:02	2.5	Bottom	3	2	27.54	7.73	28.12	107.2	7.23	25.1	36.9
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:35:52	1.0	Surface	1	1	27.61	8.21	28.13	102.5	6.91	5.9	4.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:36:25	1.0	Surface	1	2	27.6	8.21	28.12	103	6.94	5.7	5.4
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:35:43	5.3	Middle	2	1	27.61	8.21	28.23	100.9	6.79	6.4	5.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:36:15	5.3	Middle	2	2	27.61	8.2	28.23	101	6.86	6.5	4.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:36:06	9.6	Bottom	3	1	27.6	8.2	28.48	102	6.86	6.7	5.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	IS10	17:35:33	9.6	Bottom	3	2	27.59	8.2	28.5	101.8	6.85	6.8	5.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR3	15:48:59	0.8	Middle	2	1	27.65	7.68	28.06	108.2	7.29	6.8	10.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR3	15:49:10	0.8	Middle	2	2	27.65	7.7	28.08	108.7	7.32	7	8.9
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR4	16:54:28	1.0	Surface	1	1	27.47	7.69	28.02	99.2	6.71	14.1	20.3
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR4	16:53:34	1.0	Surface	1	2	27.46	7.67	28.01	98.9	6.69	15	18.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR4	16:53:19	2.3	Bottom	3	1	27.46	7.66	28.01	98.8	6.67	18.3	19
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR4	16:54:17	2.3	Bottom	3	2	27.47	7.69	28.02	99.1	6.69	17.5	20.4
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR5	17:23:43	1.0	Surface	1	1	27.6	8.22	28.11	105.7	7.12	2.8	6.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR5	17:23:20	1.0	Surface	1	2	27.58	8.23	28.12	106.1	7.15	2.7	5.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR5	17:23:32	3.5	Bottom	3	1	27.6	8.22	28.13	105.8	7.13	2.7	6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR5	17:23:11	3.5	Bottom	3	2	27.6	8.23	28.12	106.4	7.17	2.7	5.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:15:04	1.0	Surface	1	1	27.56	7.64	30.59	86.3	5.74	5.6	8.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:15:53	1.0	Surface	1	2	27.57	7.64	30.63	85.9	5.71	6.2	7.6
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:15:38	3.3	Middle	2	1	27.57	7.64	30.63	85.6	5.68	7.4	7.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:14:49	3.3	Middle	2	2	27.58	7.63	30.73	85.7	5.69	7	6.7
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:14:37	5.5	Bottom	3	1	27.57	7.63	30.72	85.8	5.7	7.7	7
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10A	18:15:23	5.5	Bottom	3	2	27.57	7.64	30.76	85.6	5.69	7.9	7.5
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10B	18:27:17	1.0	Surface	1	1	27.57	7.66	30.68	85.7	5.69	6.5	8.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10B	18:26:39	1.0	Surface	1	2	27.57	7.65	30.68	85.7	5.69	6.5	6.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10B	18:27:02	4.5	Bottom	3	1	27.57	7.66	30.78	85.5	5.68	6.7	8.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	SR10B	18:26:25	4.5	Bottom	3	2	27.57	7.65	30.76	85.5	5.68	7.4	6.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:57:00	1.0	Surface	1	1	27.81	8.27	27.51	104	7.01	4.4	5.3
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:57:53	1.0	Surface	1	2	27.81	8.23	27.46	104.6	7.05	4.4	6.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:56:48	3.9	Middle	2	1	27.74	8.28	27.71	101.7	6.85	7.3	4.7
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:57:35	3.9	Middle	2	2	27.74	8.23	27.67	101.6	6.85	7.3	5.1
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:56:32	6.7	Bottom	3	1	27.67	8.33	28.14	102	6.86	7.2	7.3
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS2	15:57:23	6.7	Bottom	3	2	27.68	8.23	28.02	101.6	6.84	7.2	5
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:38:00	1.0	Surface	1	1	27.45	7.68	28.88	93	6.25	4	4.9
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:38:57	1.0	Surface	1	2	27.46	7.68	28.86	92.8	6.24	4.2	5
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:37:41	6.6	Middle	2	1	27.59	7.65	30.11	86	5.73	7.6	5.2
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:38:32	6.6	Middle	2	2	27.59	7.65	30.16	86.1	5.73	7.8	4.9
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:38:22	12.1	Bottom	3	1	27.59	7.65	30.24	87.6	5.83	7.5	3.8
HCLR	HY/2011/03	2013-10-16	Mid-Flood	Cloudy	CS(M)F5	17:37:29	12.1	Bottom	3	2	27.59	7.64	30.2	87.5	5.83	7.9	5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:33:09	1.0	Surface	1	1	27	7.68	29.52	100.4	6.78	7.8	8.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:33:53	1.0	Surface	1	2	27.02	7.69	29.53	100.3	6.77	7.7	9.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:33:45	4.8	Middle	2	1	26.98	7.68	29.54	99.4	6.72	8.4	10.3
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:33:02	4.8	Middle	2	2	26.99	7.68	29.53	99.7	6.73	8.1	9.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:32:43	8.5	Bottom	3	1	26.92	7.67	29.6	98.8	6.68	9.8	9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS5	13:33:27	8.5	Bottom	3	2	26.92	7.68	29.61	98.8	6.67	9.9	7.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)F6	13:25:23	1.0	Surface	1	1	26.91	7.68	29	105	7.12	9.7	4.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)F6	13:25:01	1.0	Surface	1	2	26.93	7.67	28.93	105.3	7.14	9.9	6.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)F6	13:24:47	2.4	Bottom	3	1	26.9	7.66	29.04	105.3	7.14	11	6.3
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)F6	13:25:05	2.4	Bottom	3	2	26.9	7.67	28.99	105.3	7.12	10.9	4.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS7	13:17:37	1.0	Surface	1	1	26.9	7.64	28.96	101.4	6.88	9.2	7.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS7	13:17:51	1.0	Surface	1	2	26.92	7.65	28.96	101.4	6.88	9.2	9.2
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS7	13:17:42	2.4	Bottom	3	1	26.91	7.65	28.95	101.4	6.88	9.3	7.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS7	13:17:32	2.4	Bottom	3	2	26.91	7.64	28.95	101.7	6.9	9.2	5.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS8	12:41:35	1.0	Surface	1	1	26.87	7.67	28.86	101.9	6.93	11.5	4.2
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS8	12:41:00	1.0	Surface	1	2	26.93	7.67	28.85	102.3	6.94	11.2	2.3
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS8	12:41:19	2.5	Bottom	3	1	26.83	7.67	28.87	101.6	6.91	13.8	3.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS8	12:40:51	2.5	Bottom	3	2	26.83	7.67	28.87	101.7	6.91	13.5	3.8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)/9	13:11:50	1.0	Surface	1	1	27.09	7.64	28.97	97.5	6.59	14.6	11.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)/9	13:12:02	1.0	Surface	1	2	27.12	7.65	28.97	97.5	6.59	14.4	11.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)/9	13:11:55	2.5	Bottom	3	1	27.1	7.64	28.96	97.4	6.59	14.5	11.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS(M)/9	13:11:45	2.5	Bottom	3	2	27.1	7.64	28.96	97.5	6.59	14.8	11.2
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:40:35	1.0	Surface	1	1	27.3	8.2	29.01	97.5	6.58	11.8	4.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:39:50	1.0	Surface	1	2	27.17	8.19	29.04	96.9	6.54	12.6	3.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:40:23	5.3	Middle	2	1	27.04	8.19	29.7	95.9	6.47	12	4.8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:39:38	5.3	Middle	2	2	27.04	8.19	29.68	95.9	6.47	12.3	4.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:40:06	9.6	Bottom	3	1	27.05	8.19	29.72	96.3	6.49	13.5	3.9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	IS10	12:39:25	9.6	Bottom	3	2	27.04	8.19	29.7	96.2	6.48	13.7	3.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR3	13:44:32	0.7	Middle	2	1	27.04	7.7	29.52	101.8	6.87	6.7	9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR3	13:44:36	0.7	Middle	2	2	27.04	7.69	29.52	101.8	6.87	6.6	8.2
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR4	12:53:25	1.0	Surface	1	1	27.04	7.69	28.84	103.9	7.04	7.8	7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR4	12:53:51	1.0	Surface	1	2	27.01	7.69	28.83	103.9	7.04	7.5	6.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR4	12:53:42	2.5	Bottom	3	1	26.88	7.69	28.86	103.4	7.02	8.6	7.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR4	12:53:17	2.5	Bottom	3	2	26.89	7.69	28.86	103.3	7.02	8.4	8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR5	12:49:46	1.0	Surface	1	1	27.23	8.19	28.97	97.3	6.56	8.8	4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR5	12:49:24	1.0	Surface	1	2	27.19	8.19	29.02	97.1	6.56	8.4	3.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR5	12:49:38	4.4	Bottom	3	1	27.06	8.19	29.51	96.7	6.52	12.3	3.3
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR5	12:49:10	4.4	Bottom	3	2	27.05	8.19	29.5	96.8	6.53	11.3	3.8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:24:51	1.0	Surface	1	1	27.25	7.7	30.78	86.4	5.77	6.4	6.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:25:46	1.0	Surface	1	2	27.22	7.68	30.82	86.3	5.76	6.5	6.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:25:31	3.3	Middle	2	1	27.22	7.68	30.82	86.3	5.76	6.6	6.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:24:41	3.3	Middle	2	2	27.23	7.69	30.82	86	5.75	6.5	6.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:25:09	5.6	Bottom	3	1	27.22	7.65	30.81	86.4	5.77	6.8	7.3
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10A	11:24:30	5.6	Bottom	3	2	27.23	7.69	30.84	86.1	5.75	6.7	8.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10B	11:18:07	1.0	Surface	1	1	27.26	7.72	30.72	86.6	5.79	7	9.9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10B	11:17:48	1.0	Surface	1	2	27.26	7.72	30.72	86.6	5.79	7.1	10.2
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10B	11:17:57	4.6	Bottom	3	1	27.26	7.72	30.72	86.6	5.79	7.1	9.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	SR10B	11:17:41	4.6	Bottom	3	2	27.26	7.71	30.72	86.6	5.78	7.2	11.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:55:50	1.0	Surface	1	1	27.59	8.18	27.62	101.9	6.89	5.5	4.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:56:42	1.0	Surface	1	2	27.57	8.18	27.65	102.2	6.91	5.3	4.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:56:26	3.5	Middle	2	1	27.24	8.2	28.85	102.1	6.89	7.8	3.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:55:35	3.5	Middle	2	2	27.26	8.2	28.67	102.3	6.91	8.4	4.6
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:55:22	6.0	Bottom	3	1	27.13	8.19	29.43	101.4	6.84	9.3	4.7
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS2	13:56:11	6.0	Bottom	3	2	27.08	8.19	29.68	100.6	6.78	8.8	4.5
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:06:28	1.0	Surface	1	1	27.25	7.67	29.33	98.5	6.63	3.8	4.4
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:07:17	1.0	Surface	1	2	27.25	7.67	29.29	98.9	6.66	3.8	3.9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:07:00	6.8	Middle	2	1	27.25	7.67	29.45	98.6	6.63	3.8	4.9
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:06:21	6.8	Middle	2	2	27.26	7.66	29.45	98	6.59	4	4.8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:06:47	12.5	Bottom	3	1	27.29	7.67	29.53	98.5	6.62	3.9	4.8
HCLR	HY/2011/03	2013-10-18	Mid-Ebb	Sunny	CS(M)/5	12:06:08	12.5	Bottom	3	2	27.29	7.66	29.63	97.9	6.57	4.1	3.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:48:55	1.0	Surface	1	1	27.26	7.71	28.91	109.2	7.37	8.2	8.7
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:48:17	1.0	Surface	1	2	27.1	7.7	28.89	107.9	7.3	8.3	8.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:48:43	4.8	Middle	2	1	27.08	7.7	28.91	107.8	7.3	9.5	7.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:48:04	4.8	Middle	2	2	27.15	7.68	28.91	107.3	7.25	9.4	7.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:48:28	8.5	Bottom	3	1	27.22	7.7	28.9	108.6	7.33	10.4	6.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS5	16:47:57	8.5	Bottom	3	2	27.07	7.68	28.89	106.7	7.22	10.6	7.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)/6	17:02:39	1.0	Surface	1	1	27.18	7.7	29	108.1	7.3	7.8	7.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)/6	17:02:10	1.0	Surface	1	2	27.19	7.7	28.95	108.2	7.31	7.6	6.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)/6	17:01:59	2.5	Bottom	3	1	27.18	7.7	28.99	108.2	7.31	8.2	10.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)/6	17:02:19	2.5	Bottom	3	2	27.2	7.7	28.94	108.8	7.35	8.1	11.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS7	17:04:03	1.0	Surface	1	1	27.19	7.71	29	108.3	7.31	7.8	23.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS7	17:04:14	1.0	Surface	1	2	27.19	7.71	28.98	108.5	7.33	8	21.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS7	17:04:08	2.5	Bottom	3	1	27.19	7.71	29	108.4	7.32	8.1	26.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS7	17:03:48	2.5	Bottom	3	2	27.19	7.71	28.97	108.5	7.33	8.2	24.7
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS8	17:26:13	1.0	Surface	1	1	27.12	7.68	29.1	103.7	7	14	4.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS8	17:26:02	1.0	Surface	1	2	27.11	7.68	29.1	103.9	7.02	13.9	4.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS8	17:25:57	2.6	Bottom	3	1	27.11	7.67	29.1	104	7.03	15.5	11
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS8	17:26:06	2.6	Bottom	3	2	27.11	7.68	29.1	103.8	7.01	15.8	11.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)F9	17:12:26	1.0	Surface	1	1	27.18	7.67	29.02	103.5	6.99	10	11.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)F9	17:12:39	1.0	Surface	1	2	27.18	7.68	29.02	103.7	7	9.8	9.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)F9	17:12:21	2.5	Bottom	3	1	27.18	7.67	29.02	103.6	6.99	10.7	11.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS(M)F9	17:12:35	2.5	Bottom	3	2	27.18	7.68	29.02	103.6	6.99	10.9	11.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:14:23	1.0	Surface	1	1	27.39	8.2	28.38	99.7	6.74	4.9	5.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:13:42	1.0	Surface	1	2	27.39	8.19	28.36	100	6.76	4.6	4.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:13:25	5.2	Middle	2	1	27.35	8.2	28.8	98.8	6.66	7	5.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:14:11	5.2	Middle	2	2	27.34	8.2	28.86	98.9	6.67	6.8	4.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:13:58	9.4	Bottom	3	1	27.27	8.19	29.08	99.1	6.68	6.5	3.8
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	IS10	18:13:16	9.4	Bottom	3	2	27.3	8.19	28.99	98.9	6.66	6.5	4.7
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR3	16:42:56	0.7	Middle	2	1	27.27	7.67	28.82	103.5	6.98	11.9	7.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR4	17:19:11	1.0	Surface	1	1	27.3	7.66	29.04	101.9	6.87	22.9	10.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR4	17:19:20	1.0	Surface	1	2	27.3	7.66	29.04	101.9	6.86	22.7	11.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR4	17:19:16	2.5	Bottom	3	1	27.3	7.66	29.04	101.8	6.86	23.6	10.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR4	17:19:07	2.5	Bottom	3	2	27.3	7.65	29.04	101.8	6.87	23.4	12.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR5	18:02:13	1.0	Surface	1	1	27.41	8.19	28.34	100.5	6.79	5	3.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR5	18:01:34	1.0	Surface	1	2	27.4	8.19	28.4	99.9	6.74	5.3	4.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR5	18:01:49	4.6	Bottom	3	1	27.38	8.19	28.7	99.7	6.72	5.8	4.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR5	18:01:25	4.6	Bottom	3	2	27.37	8.19	28.68	99.7	6.72	5.9	3.5
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:34	1.0	Surface	1	1	27.31	7.63	30.95	87	5.8	15.5	10.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:55	1.0	Surface	1	2	27.31	7.63	30.96	87	5.8	15.2	10.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:27	3.3	Middle	2	1	27.31	7.63	30.95	86.8	5.79	15.7	11.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:51	3.3	Middle	2	2	27.31	7.63	30.96	86.9	5.79	15.6	12.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:19	5.6	Bottom	3	1	27.31	7.62	30.95	86.8	5.79	16	17
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10A	19:02:41	5.6	Bottom	3	2	27.31	7.63	30.96	86.9	5.79	15.8	17.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10B	19:13:53	1.0	Surface	1	1	27.31	7.64	30.97	87	5.8	15.1	18.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10B	19:14:02	1.0	Surface	1	2	27.31	7.64	30.97	87	5.8	15.2	17
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10B	19:13:57	4.4	Bottom	3	1	27.31	7.64	30.97	87	5.8	15.8	18.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	SR10B	19:13:48	4.4	Bottom	3	2	27.31	7.64	30.97	87	5.8	15.8	19.4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:47:06	1.0	Surface	1	1	27.44	8.2	28.44	99.8	6.73	7.8	5.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:48:06	1.0	Surface	1	2	27.45	8.2	28.37	98.9	6.67	8	6.1
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:46:53	3.4	Middle	2	1	27.34	8.22	28.68	99.8	6.73	11.4	5.3
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:47:40	3.4	Middle	2	2	27.29	8.21	28.74	98.1	6.62	11.1	3.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:47:29	5.7	Bottom	3	1	27.29	8.26	28.78	98.2	6.63	11.9	4.9
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS2	16:46:42	5.7	Bottom	3	2	27.28	8.25	28.95	100.5	6.78	12.5	5
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:22:31	1.0	Surface	1	1	27.34	7.67	29.55	97	6.51	4.5	4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:23:12	1.0	Surface	1	2	27.33	7.67	29.55	97.1	6.52	4.6	4
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:23:04	6.8	Middle	2	1	27.33	7.66	29.58	95.6	6.42	5.6	2.6
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:22:23	6.8	Middle	2	2	27.36	7.66	29.61	95.6	6.41	5.2	2.5
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:22:48	12.6	Bottom	3	1	27.28	7.65	30.31	94.3	6.31	7.9	3.2
HCLR	HY/2011/03	2013-10-18	Mid-Flood	Sunny	CS(M)F5	18:22:07	12.6	Bottom	3	2	27.29	7.64	30.27	94.3	6.31	7.8	2.5
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:55:21	1.0	Surface	1	1	26.7	7.73	29.12	96.6	6.57	14.7	10
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:54:52	1.0	Surface	1	2	26.71	7.73	29.12	96.7	6.58	14.4	11.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:55:11	4.3	Middle	2	1	26.7	7.73	29.19	96.3	6.55	15.8	11.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:54:42	4.3	Middle	2	2	26.7	7.72	29.2	96.4	6.56	16.1	12
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:55:02	7.5	Bottom	3	1	26.7	7.73	29.22	96.3	6.55	16.1	12.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS5	12:54:32	7.5	Bottom	3	2	26.7	7.72	29.21	96.5	6.56	16.3	12
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F6	13:01:51	1.0	Surface	1	1	26.91	7.73	29.08	101.4	6.88	8.6	8.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F6	13:01:32	1.0	Surface	1	2	26.92	7.73	29.08	101.2	6.86	8.4	7.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F6	13:01:21	2.2	Bottom	3	1	26.85	7.72	29.09	100.8	6.84	9.4	10.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS7	13:09:08	1.0	Surface	1	1	26.92	7.73	29.08	101.3	6.87	9.6	8.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS7	13:08:49	1.0	Surface	1	2	26.92	7.74	29.08	104.8	7.11	8.3	8.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS7	13:08:37	2.2	Bottom	3	1	26.98	7.73	29.09	105.4	7.15	8.3	9.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS7	13:08:56	2.2	Bottom	3	2	26.98	7.72	29.09	105.4	7.14	8.4	11
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS8	13:32:01	1.0	Surface	1	1	26.85	7.73	28.91	104.8	7.11	8.4	9.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS8	13:31:43	1.0	Surface	1	2	27.27	7.73	28.91	100.4	6.77	6.6	9.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS8	13:31:51	3.0	Bottom	3	1	27.39	7.72	28.93	100.6	6.77	6.3	9.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS8	13:31:51	3.0	Bottom	3	2	27.18	7.72	28.87	100	6.76	6.5	13.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS8	13:31:32	3.0	Bottom	3	2	27.1	7.71	28.88	99.9	6.76	6.4	14.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F9	13:14:56	1.0	Surface	1	1	27	7.75	29.06	107.8	7.3	8.2	10.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F9	13:15:17	1.0	Surface	1	2	26.97	7.76	29.07	108.1	7.32	8.4	11
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F9	13:15:06	2.8	Bottom	3	1	2.8	7.75	29.09	107.9	7.31	8.2	9.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS(M)F9	13:14:45	2.8	Bottom	3	2	26.96	7.74	29.09	106.8	7.23	8.3	10.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:06:11	1.0	Surface	1	1	27.15	8.22	28.78	97.5	6.6	3.3	6.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:05:16	1.0	Surface	1	2	27.18	8.22	28.76	99	6.62	3.1	8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:05:57	5.5	Middle	2	1	26.76	8.21	29.03	94.4	6.42	6.8	5.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:04:54	5.5	Middle	2	2	26.78	8.21	29.03	94.9	6.45	6.5	6.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:04:40	10.0	Bottom	3	1	26.72	8.21	29.09	95.5	6.5	7.4	8.5
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	IS10	14:05:38	10.0	Bottom	3	2	26.71	8.21	29.08	95.1	6.47	7.3	10.4
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR3	12:46:00	0.7	Middle	2	1	26.8	7.71	29.14	99.1	6.73	11	16
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR3	12:45:51	0.7	Middle	2	2	26.81	7.7	29.15	99.2	6.73	11	16.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR4	13:26:08	1.0	Surface	1	1	27.05	7.74	28.95	96.3	6.52	6.8	7.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR4	13:25:49	1.0	Surface	1	2	27.05	7.74	28.98	96.6	6.54	6.9	7.5
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR4	13:25:40	2.8	Bottom	3	1	26.97	7.74	29.02	96.6	6.54	6.8	8.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR4	13:25:57	2.8	Bottom	3	2	27.01	7.74	28.97	96.5	6.54	6.8	9.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR5	13:54:56	1.0	Surface	1	1	27.13	8.22	28.78	98.8	6.68	3.1	5.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR5	13:55:38	1.0	Surface	1	2	27.18	8.22	28.76	99.8	6.75	3	5.2
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR5	13:55:14	4.6	Bottom	3	1	26.87	8.22	28.94	97.8	6.64	3.6	5.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR5	13:54:42	4.6	Bottom	3	2	26.9	8.22	28.94	98.3	6.67	3.7	6.4
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:09:07	1.0	Surface	1	1	27.04	7.69	30.39	92.8	6.23	8.3	9.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:07:31	1.0	Surface	1	2	27.05	7.69	30.36	88.7	5.95	8.1	8.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:07:19	3.1	Middle	2	1	27.07	7.68	30.44	88.4	5.93	8.3	8.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:07:58	3.1	Middle	2	2	27.06	7.69	30.43	88.4	5.94	8.2	10.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:07:03	5.1	Bottom	3	1	27.06	7.68	30.46	88.7	5.95	8.1	9.5
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10A	15:07:44	5.1	Bottom	3	2	27.06	7.69	30.46	88.5	5.94	8.2	8.7
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10B	15:16:36	1.0	Surface	1	1	27.04	7.69	30.44	87.8	5.89	9.2	12.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10B	15:16:20	1.0	Surface	1	2	27.04	7.69	30.44	87.8	5.89	9.3	11.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10B	15:16:27	4.1	Bottom	3	1	27.04	7.69	30.46	87.6	5.88	9.4	10.1
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	SR10B	15:16:13	4.1	Bottom	3	2	27.04	7.69	30.47	87.7	5.89	9.1	11.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:40:48	1.0	Surface	1	1	26.93	8.27	28.9	96.5	6.54	4.7	8.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:39:57	1.0	Surface	1	2	26.9	8.3	28.97	97.1	6.59	4.3	8.9
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:39:40	3.7	Middle	2	1	26.77	8.32	29.31	96.5	6.55	6.5	8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:40:32	3.7	Middle	2	2	26.8	8.3	29.18	95.5	6.48	6.3	9.8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:39:27	6.3	Bottom	3	1	26.75	8.33	29.41	97.5	6.62	7.5	8.3
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS2	12:40:21	6.3	Bottom	3	2	26.75	8.32	29.25	95.4	6.47	7.7	8
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:18:27	1.0	Surface	1	1	27.29	7.7	29.79	91.9	6.18	6.2	4.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:19:02	1.0	Surface	1	2	27.28	7.7	29.82	91.4	6.13	6.3	6.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:18:50	6.1	Middle	2	1	27.02	7.68	30.28	88.7	5.96	8	4.4
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:18:14	6.1	Middle	2	2	27.01	7.68	30.29	88.6	5.95	7.8	5.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:18:39	11.2	Bottom	3	1	27.03	7.69	30.35	90.8	6.1	8.8	5.6
HCLR	HY/2011/03	2013-10-21	Mid-Ebb	Sunny	CS(M)F5	14:18:02	11.2	Bottom	3	2	27.03	7.68	30.35	90.9	6.11	8.6	7.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:11:18	1.0	Surface	1	1	26.72	7.74	29.39	95.1	6.46	10.7	11.1
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:10:40	1.0	Surface	1	2	26.74	7.73	29.4	95.3	6.47	10.5	12.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:10:30	4.4	Middle	2	1	26.59	7.73	29.39	94.7	6.45	11.1	9.9
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:11:09	4.4	Middle	2	2	26.59	7.74	29.39	94.6	6.44	10.7	10.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:10:21	7.8	Bottom	3	1	26.63	7.73	29.38	94.8	6.43	11.5	11.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS5	09:11:01	7.8	Bottom	3	2	26.59	7.74	29.41	94.5	6.45	11.8	11.5
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F6	09:03:38	1.0	Surface	1	1	26.65	7.74	29.28	97	6.6	11.6	13.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F6	09:03:17	1.0	Surface	1	2	26.65	7.74	29.28	97	6.6	11.3	13
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F6	09:03:05	2.1	Bottom	3	1	26.63	7.73	29.28	96.8	6.58	12.4	13.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F6	09:03:27	2.1	Bottom	3	2	26.64	7.74	29.28	97	6.6	12.4	12.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS7	08:56:31	1.0	Surface	1	1	26.65	7.73	29.3	96	6.53	15.5	12.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS7	08:56:52	1.0	Surface	1	2	26.65	7.73	29.3	96.2	6.54	15.3	12.1
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS7	08:56:22	2.2	Bottom	3	1	26.63	7.72	29.3	95.7	6.51	17	16.7
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS7	08:56:40	2.2	Bottom	3	2	26.63	7.73	29.29	96	6.53	16.2	18.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS8	08:31:40	1.0	Surface	1	1	26.67	7.7	29.32	97.4	6.62	13.9	9.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS8	08:31:59	1.0	Surface	1	2	26.65	7.71	29.32	97.3	6.62	13.9	10.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS8	08:31:31	3.2	Bottom	3	1	26.65	7.69	29.32	97.4	6.62	14.2	17.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS8	08:31:49	3.2	Bottom	3	2	26.65	7.7	29.32	97.2	6.61	13.8	18.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F9	08:49:38	1.0	Surface	1	1	26.59	7.73	29.37	98.2	6.68	16.7	16
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS(M)F9	08:50:17	1.0	Surface	1	2	26.59	7.73	29.37	98.3	6.69	16.5	15.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	ISM(F)9	08:49:28	2.7	Bottom	3	1	26.57	7.71	29.42	98	6.67	16.8	16.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	ISM(F)9	08:49:48	2.7	Bottom	3	2	26.57	7.73	29.42	98.1	6.68	16.6	15.7
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:28:51	1.0	Surface	1	1	26.64	8.19	29.12	96.2	6.55	9.5	13.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:28:00	1.0	Surface	1	2	26.64	8.19	29.11	96.1	6.54	9.8	12
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:28:27	5.4	Middle	2	1	26.64	8.19	29.12	95.6	6.51	11	12.7
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:27:46	5.4	Middle	2	2	26.64	8.19	29.12	95.8	6.52	11.3	12.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:28:17	9.8	Bottom	3	1	26.64	8.19	29.13	95.7	6.50	10.8	15
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	IS10	08:27:35	9.8	Bottom	3	2	26.64	8.18	29.13	95.7	6.52	11.2	13.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR3	09:16:08	0.7	Middle	2	1	26.8	7.74	29.37	95.5	6.48	9.4	12.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR3	09:15:56	0.7	Middle	2	2	26.78	7.74	29.37	95.5	6.48	9.9	13.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR4	08:39:23	1.0	Surface	1	1	26.71	7.69	29.29	95.1	6.46	13.9	15.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR4	08:39:04	1.0	Surface	1	2	26.71	7.68	29.28	95.1	6.46	14.7	15.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR4	08:39:16	2.8	Bottom	3	1	26.71	7.69	29.28	95	6.46	14.5	15.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR4	08:38:53	2.8	Bottom	3	2	26.7	7.67	29.28	94.8	6.45	14.7	15.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR5	08:38:22	1.0	Surface	1	1	26.64	8.19	29.05	95.7	6.52	14.7	16.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR5	08:37:47	1.0	Surface	1	2	26.64	8.19	29.05	95.7	6.52	8	17.1
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR5	08:37:29	4.7	Bottom	3	1	26.64	8.19	29.08	95.6	6.51	8.8	20.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR5	08:38:07	4.7	Bottom	3	2	26.63	8.19	29.06	95.4	6.5	9	22
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:28	1.0	Surface	1	1	26.93	7.7	30.33	88	5.93	9.8	14.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:55	1.0	Surface	1	2	26.93	7.7	30.32	88.1	5.93	9.5	13.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:45	3.3	Middle	2	1	26.94	7.7	30.34	87.9	5.92	9.8	14.7
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:19	3.3	Middle	2	2	26.94	7.69	30.34	88	5.92	10	12
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:35	5.6	Bottom	3	1	26.94	7.7	30.34	88	5.92	9.7	13.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10A	07:34:10	5.6	Bottom	3	2	26.94	7.69	30.34	87.9	5.91	10.1	14
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10B	07:28:44	1.0	Surface	1	1	26.97	7.67	30.79	86.3	5.79	15.5	18.9
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10B	07:29:00	1.0	Surface	1	2	26.97	7.68	30.78	86.2	5.78	15.1	19.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10B	07:28:31	4.2	Bottom	3	1	26.97	7.66	30.8	86.2	5.78	15.9	21.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	SR10B	07:28:50	4.2	Bottom	3	2	26.97	7.67	30.79	86.2	5.79	15.2	20.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:48:19	1.0	Surface	1	1	26.63	8.18	28.92	94.3	6.46	7.1	13.1
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:49:18	1.0	Surface	1	2	26.62	8.18	28.91	95.3	6.5	6.6	12.2
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:48:52	3.5	Middle	2	1	26.67	8.18	29.07	94.3	6.42	10.5	12.6
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:48:09	3.5	Middle	2	2	26.66	8.18	29.04	94.4	6.43	11.1	11.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:47:59	6.0	Bottom	3	1	26.67	8.18	29.09	94.5	6.43	11.8	18
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS2	09:48:41	6.0	Bottom	3	2	26.67	8.18	29.08	94.5	6.43	12.1	17.4
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:03:18	1.0	Surface	1	1	26.81	7.68	29.54	90.5	6.13	11	8.8
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:04:01	1.0	Surface	1	2	26.81	7.69	29.54	90.2	6.11	12.2	9
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:03:06	6.4	Middle	2	1	26.92	7.67	29.87	89.2	6.02	12.7	9.1
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:03:49	6.4	Middle	2	2	26.94	7.68	29.88	88.6	5.98	12.4	9.3
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:02:54	11.8	Bottom	3	1	26.96	7.66	30.24	90.5	6.09	12.7	10.5
HCLR	HY/2011/03	2013-10-21	Mid-Flood	Sunny	CS(M)F5	08:03:36	11.8	Bottom	3	2	27	7.67	30.34	89.4	6.01	12.6	8.8
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:52	1.0	Surface	1	1	26.43	7.85	29.21	94.9	6.48	13.4	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:20	1.0	Surface	1	2	26.42	7.84	29.22	94.9	6.48	13.7	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:13	4.3	Middle	2	1	26.42	7.84	29.25	94.7	6.47	14.3	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:41	4.3	Middle	2	2	26.42	7.84	29.25	94.6	6.46	13.7	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:33	7.6	Bottom	3	1	26.41	7.84	29.28	94.5	6.46	13.9	16
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS5	14:10:06	7.6	Bottom	3	2	26.42	7.85	29.27	94.8	6.47	13.9	16
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)6	14:16:56	1.0	Surface	1	1	26.53	7.83	29.17	98	6.68	11.4	13
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)6	14:16:37	1.0	Surface	1	2	26.53	7.83	29.17	98.3	6.7	11.5	12
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)6	14:16:46	2.3	Bottom	3	1	26.47	7.83	29.18	97.8	6.68	12.2	12
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)6	14:16:29	2.3	Bottom	3	2	26.5	7.83	29.17	98.1	6.69	12.2	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS7	14:23:22	1.0	Surface	1	1	26.65	7.85	29.14	99.6	6.78	13.7	17
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS7	14:23:04	1.0	Surface	1	2	26.66	7.85	29.14	99.6	6.78	13.5	18
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS7	14:23:14	2.1	Bottom	3	1	26.63	7.84	29.15	99.5	6.78	14	18
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS7	14:22:53	2.1	Bottom	3	2	26.62	7.85	29.16	99.3	6.76	13.9	17
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS8	14:45:57	1.0	Surface	1	1	26.86	7.85	29.09	97.5	6.61	8.9	9
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS8	14:46:17	3.0	Bottom	3	2	26.86	7.85	29.09	97.4	6.61	8.9	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS8	14:45:46	3.0	Bottom	3	1	26.66	7.84	29.05	96.9	6.6	9.2	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS8	14:46:06	3.0	Bottom	3	2	26.74	7.85	29.19	97.2	6.61	9.4	9
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)9	14:29:28	1.0	Surface	1	1	26.66	7.85	29.19	100.5	6.84	11.3	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)9	14:29:43	1.0	Surface	1	2	26.61	7.85	29.21	99.9	6.81	11.7	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)9	14:29:17	2.8	Bottom	3	1	26.55	7.85	29.2	100.1	6.82	13.1	12
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	ISM(F)9	14:29:36	2.8	Bottom	3	2	26.54	7.85	29.2	100.4	6.84	12.9	11

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:19:14	1.0	Surface	1	1	26.74	8.24	29.24	99.8	6.78	4	8
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:18:17	1.0	Surface	1	2	26.74	8.24	29.25	99.7	6.77	3.9	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:18:04	5.2	Middle	2	1	26.66	8.23	29.33	98.7	6.71	4.2	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:18:53	5.2	Middle	2	2	26.67	8.23	29.34	97.9	6.66	4.5	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:17:54	9.4	Bottom	3	1	26.65	8.23	29.35	99.2	6.75	4.1	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	IS10	15:18:38	9.4	Bottom	3	2	26.62	8.23	29.4	98.2	6.68	4.4	8
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR3	14:01:11	0.7	Middle	2	1	26.43	7.86	29.28	97.8	6.68	13.3	14
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR3	14:01:20	0.7	Middle	2	2	26.43	7.85	29.27	97.1	6.63	13.1	12
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR4	14:39:23	1.0	Surface	1	1	26.96	7.87	29.1	98.3	6.66	6.4	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR4	14:38:40	1.0	Surface	1	2	26.91	7.89	29.15	98.9	6.7	6.6	5
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR4	14:38:29	2.9	Bottom	3	1	26.89	7.91	29.16	99	6.71	6.8	5
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR4	14:39:10	2.9	Bottom	3	2	26.83	7.87	29.12	97.7	6.63	6.8	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR5	15:09:01	1.0	Surface	1	1	26.68	8.23	29.38	99.5	6.76	4.5	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR5	15:08:37	1.0	Surface	1	2	26.68	8.23	29.38	99.4	6.75	4.5	7
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR5	15:08:47	4.5	Bottom	3	1	26.68	8.23	29.36	99.3	6.75	4.4	9
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR5	15:08:27	4.5	Bottom	3	2	26.67	8.23	29.37	99.1	6.73	4.5	8
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:59:39	1.0	Surface	1	1	26.84	7.75	30.53	86.9	5.85	5.9	4
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:59:06	1.0	Surface	1	2	26.83	7.74	30.54	86.9	5.85	5.9	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:58:44	5.6	Bottom	3	1	26.83	7.74	30.61	87	5.86	5.9	9
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:58:54	3.3	Middle	2	1	26.83	7.74	30.58	86.9	5.85	6.1	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:59:29	3.3	Middle	2	2	26.83	7.74	30.58	86.6	5.83	5.9	8
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	15:59:21	5.6	Bottom	3	1	26.83	7.74	30.61	86.6	5.83	5.9	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10A	16:11:19	1.0	Surface	1	2	26.84	7.76	30.51	86.9	5.85	5.4	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10B	16:11:00	1.0	Surface	1	2	26.84	7.76	30.52	86.9	5.85	5.4	13
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10B	16:10:50	4.2	Bottom	3	1	26.84	7.76	30.55	86.9	5.85	5.5	13
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	SR10B	16:10:50	4.2	Bottom	3	2	26.84	7.76	30.55	86.9	5.85	5.5	13
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:54:24	1.0	Surface	1	1	26.75	8.2	29.28	100.4	6.82	5	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:55:09	1.0	Surface	1	2	26.74	8.2	29.29	98.7	6.7	5.1	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:54:54	3.6	Middle	2	1	26.71	8.18	29.51	97.8	6.64	6.1	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:54:09	3.6	Middle	2	2	26.73	8.15	29.56	100.6	6.83	6	11
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:53:57	6.2	Bottom	3	1	26.72	8.13	29.63	102.4	6.94	6	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS2	13:54:37	6.2	Bottom	3	2	26.62	8.15	29.49	98.7	6.71	5.6	10
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:34:05	1.0	Surface	1	1	26.98	7.77	29.95	89.4	6.03	5.1	5
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:33:18	1.0	Surface	1	2	26.92	7.76	30.03	88	5.93	5.1	4
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:33:08	6.1	Middle	2	1	26.75	7.75	30.42	86.5	5.84	5.4	4
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:33:50	6.1	Middle	2	2	26.75	7.75	30.47	85.2	5.75	5.2	4
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:33:40	11.2	Bottom	3	1	26.76	7.75	30.62	86.1	5.8	5.5	6
HCLR	HY/2011/03	2013-10-23	Mid-Ebb	Sunny	CS(M)F5	15:32:52	11.2	Bottom	3	2	26.79	7.75	30.55	88.6	5.97	5.2	5
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:56:53	1.0	Surface	1	1	26.37	7.71	29.47	94.3	6.48	12.3	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:56:11	1.0	Surface	1	2	26.38	7.7	29.47	95.9	6.51	11.8	13
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:56:00	4.3	Middle	2	1	26.34	7.7	29.48	94.8	6.48	12.1	13
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:56:43	4.3	Middle	2	2	26.29	7.71	29.49	94.1	6.43	12.3	13
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:55:49	7.6	Bottom	3	1	26.35	7.7	29.47	95.1	6.5	12.8	12
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS5	10:56:33	7.6	Bottom	3	2	26.28	7.72	29.51	94.5	6.46	12.8	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F6	10:47:53	1.0	Surface	1	1	26.48	7.74	29.4	99.3	6.77	12	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F6	10:48:18	1.0	Surface	1	2	26.48	7.75	29.39	99.3	6.77	12.4	13
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS7	10:41:41	1.0	Surface	1	2	26.41	7.72	29.4	99.3	6.48	22.2	22
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS7	10:41:31	2.3	Bottom	3	1	26.43	7.72	29.43	95	6.48	22.7	24
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS7	10:41:49	2.3	Bottom	3	2	26.42	7.72	29.42	99	6.75	12	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS8	10:19:47	1.0	Surface	1	1	26.42	7.74	29.43	94.7	6.46	21.8	22
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS8	10:20:04	1.0	Surface	1	2	26.42	7.74	29.43	95.6	6.52	18.6	11
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS8	10:19:38	3.2	Bottom	3	1	26.41	7.74	29.43	96	6.55	18.6	10
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS8	10:19:56	3.2	Bottom	3	2	26.4	7.74	29.43	95.5	6.52	18.5	10
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F9	10:35:52	1.0	Surface	1	1	26.38	7.75	29.41	98.5	6.73	15.7	10
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F9	10:36:09	1.0	Surface	1	2	26.35	7.75	29.42	98.2	6.72	15.9	11
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F9	10:36:01	2.7	Bottom	3	1	26.35	7.75	29.42	98.3	6.72	15.8	12
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS(M)F9	10:35:41	2.7	Bottom	3	2	26.34	7.75	29.43	98.7	6.74	16.1	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:59:45	1.0	Surface	1	1	26.4	8.19	29.31	93.6	6.41	10.3	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:59:06	1.0	Surface	1	2	26.4	8.19	29.32	93.8	6.41	10.1	14

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:58:54	5.3	Middle	2	1	26.41	8.19	29.4	93.4	6.37	12	11
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:59:32	5.3	Middle	2	2	26.41	8.19	29.42	93.3	6.37	11.6	12
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:59:23	9.5	Bottom	3	1	26.41	8.19	29.41	93.4	6.38	14.1	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	IS10	09:58:45	9.5	Bottom	3	2	26.41	8.19	29.41	93.6	6.39	12.2	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR3	11:03:41	0.7	Middle	2	1	26.41	7.72	29.46	95.8	6.53	11.7	14
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR3	11:03:34	0.7	Middle	2	2	26.41	7.72	29.46	95.7	6.53	11.4	13
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR4	10:25:30	1.1	Surface	1	1	26.4	7.72	29.4	93.9	6.41	15.8	18
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR4	10:25:48	1.0	Surface	1	2	26.39	7.72	29.39	93.7	6.4	15.9	18
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR4	10:25:22	2.8	Bottom	3	1	26.39	7.72	29.41	93.8	6.41	16.4	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR4	10:25:38	2.8	Bottom	3	2	26.4	7.72	29.4	93.9	6.4	16	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR5	10:09:48	1.0	Surface	1	1	26.4	8.19	29.31	93.9	6.42	9.3	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR5	10:10:40	1.0	Surface	1	2	26.4	8.19	29.31	93.6	6.4	9.9	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR5	10:09:29	4.8	Bottom	3	1	26.4	8.19	29.34	93.6	6.4	9.9	15
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR5	10:10:29	4.8	Bottom	3	2	26.41	8.19	29.38	93.5	6.38	10.8	15
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:08:44	1.0	Surface	1	1	26.66	7.76	30.33	87.4	5.91	7.2	8
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:08:15	1.0	Surface	1	2	26.67	7.75	30.35	87.3	5.9	7.6	6
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:08:05	3.2	Middle	2	1	26.68	7.74	30.42	87.3	5.89	8.1	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:08:35	3.2	Middle	2	2	26.67	7.75	30.39	87.3	5.9	7.8	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:07:54	5.3	Bottom	3	1	26.68	7.73	30.45	87.5	5.91	7.8	11
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10A	09:08:25	5.3	Bottom	3	2	26.67	7.75	30.4	87.2	5.89	7.9	11
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10B	09:03:03	1.0	Surface	1	1	26.73	7.71	30.81	85.4	5.75	12.2	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10B	09:02:49	1.0	Surface	1	2	26.73	7.71	30.78	85.7	5.78	11.8	17
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10B	09:02:39	4.0	Bottom	3	1	26.73	7.71	30.82	85.7	5.77	11.9	16
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	SR10B	09:02:57	4.0	Bottom	3	2	26.73	7.71	30.83	85.5	5.75	11.9	18
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:23:08	1.0	Surface	1	1	26.53	8.19	29.07	94.3	6.43	7.5	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:23:54	1.0	Surface	1	2	26.55	8.19	29.03	94.9	6.47	7.3	8
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:22:59	3.6	Middle	2	1	26.45	8.19	29.31	93.7	6.4	10	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:23:35	3.6	Middle	2	2	26.44	8.19	29.32	93.6	6.39	10.5	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:23:23	6.2	Bottom	3	1	26.43	8.19	29.38	93.8	6.4	10.6	6
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS2	11:22:43	6.2	Bottom	3	2	26.42	8.19	29.4	93.5	6.38	10.3	8
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:36:11	1.0	Surface	1	1	26.58	7.77	29.62	88.6	6.02	9.6	6
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:36:46	1.0	Surface	1	2	26.59	7.77	29.64	88.3	6	9.7	5
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:36:37	6.3	Middle	2	1	26.7	7.76	29.96	87.3	5.91	13.4	8
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:36:00	6.3	Middle	2	2	26.69	7.76	29.95	86.8	5.88	13.3	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:35:42	11.5	Bottom	3	1	26.81	7.75	30.55	88.3	5.95	13.6	7
HCLR	HY/2011/03	2013-10-23	Mid-Flood	Sunny	CS(M)F5	09:36:24	11.5	Bottom	3	2	26.76	7.76	30.55	88.7	5.98	13.6	6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:25:51	1.0	Surface	1	1	25.56	7.68	29.7	98.5	6.81	11.2	10.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:26:29	1.0	Surface	1	2	25.56	7.7	29.69	98.3	6.8	11.4	12
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:25:38	4.9	Middle	2	1	25.56	7.67	29.72	98	6.77	11.4	13.3
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:26:12	4.9	Middle	2	2	25.53	7.69	29.76	97.3	6.73	12.1	11.9
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:25:29	8.7	Bottom	3	1	25.56	7.67	29.74	98.2	6.79	11.1	11.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS5	12:26:05	8.7	Bottom	3	2	25.53	7.68	29.75	97.8	6.76	12.3	10.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F6	12:16:08	1.0	Surface	1	1	25.73	7.69	29.72	100.9	6.95	16.7	11.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F6	12:15:41	1.0	Surface	1	2	25.72	7.67	29.72	100.7	6.94	17.2	12.1
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F6	12:15:56	2.3	Bottom	3	1	25.73	7.68	29.72	100.7	6.94	19.5	15.1
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F6	12:15:28	2.3	Bottom	3	2	25.74	7.67	29.73	100.7	6.94	21.5	13.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS7	12:08:31	1.0	Surface	1	1	25.77	7.7	29.7	100.2	6.9	14	12.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS7	12:07:56	1.0	Surface	1	2	25.77	7.66	29.7	100	6.89	14	14.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS7	12:08:05	2.2	Bottom	3	1	25.77	7.67	29.71	99.9	6.88	13.8	12
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS7	12:07:48	2.2	Bottom	3	2	25.76	7.65	29.7	99.6	6.86	14.1	11.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS8	11:44:38	1.0	Surface	1	1	25.85	7.66	29.77	95.1	6.54	18.7	20.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS8	11:45:01	1.0	Surface	1	2	25.84	7.67	29.77	95.1	6.54	18.9	19.6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS8	11:44:46	2.6	Bottom	3	1	25.84	7.66	29.76	95.1	6.54	18.9	20.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS8	11:44:26	2.6	Bottom	3	2	25.79	7.65	29.76	94.9	6.53	19	20.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F9	12:01:08	1.0	Surface	1	1	25.59	7.65	29.54	98.3	6.8	15.7	13.6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F9	12:01:27	1.0	Surface	1	2	25.62	7.66	29.54	98.6	6.82	15.2	12.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F9	12:01:18	2.4	Bottom	3	1	25.57	7.65	29.54	98.3	6.8	16	13.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS(M)F9	12:01:02	2.4	Bottom	3	2	25.58	7.64	29.54	98.2	6.79	16	14.7
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:46:31	1.0	Surface	1	1	25.68	8.2	29.78	96.5	6.66	25.6	17
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:46:03	1.0	Surface	1	2	25.69	8.2	29.78	96.5	6.65	25.7	18.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:45:51	5.3	Middle	2	1	25.67	8.2	29.78	96	6.62	26.1	17.3
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:46:22	5.3	Middle	2	2	25.65	8.2	29.78	96.2	6.64	25.9	17

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:45:42	9.6	Bottom	3	1	25.68	8.2	29.81	95.9	6.61	25.8	17.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	IS10	11:46:15	9.6	Bottom	3	2	25.66	8.2	29.78	96.1	6.63	25.8	17.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR3	12:34:18	0.8	Middle	2	1	25.56	7.71	29.7	98.7	6.82	11.1	12.9
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR3	12:34:13	0.8	Middle	2	2	25.56	7.71	29.7	98.9	6.83	11	13.6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR4	11:50:23	1.0	Surface	1	1	25.67	7.64	29.82	94	6.48	17.4	7.6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR4	11:50:53	1.0	Surface	1	2	25.74	7.66	29.81	91.9	6.33	18.7	8.1
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR4	11:50:44	2.7	Bottom	3	1	25.75	7.66	29.8	92.5	6.35	17.1	7.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR4	11:49:58	2.7	Bottom	3	2	25.75	7.62	29.78	91.9	6.33	16.9	8.1
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR5	11:56:00	1.0	Surface	1	1	25.69	8.2	29.78	96.5	6.66	25.7	19.3
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR5	11:56:24	1.0	Surface	1	2	25.69	8.2	29.78	96.5	6.65	25.5	16.9
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR5	11:56:13	3.5	Bottom	3	1	25.67	8.2	29.78	96.5	6.66	25.6	19.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR5	11:55:49	3.5	Bottom	3	2	25.66	8.2	29.78	96.4	6.65	25.7	18
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:44:38	1.0	Surface	1	1	26.32	7.67	31.14	84.5	5.72	5	5.7
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:45:15	1.0	Surface	1	2	26.32	7.68	31.15	84.3	5.71	5.5	5.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:44:25	3.4	Middle	2	1	26.31	7.67	31.2	84.1	5.69	5.4	10.3
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:45:02	3.4	Middle	2	2	26.31	7.68	31.21	84	5.69	5.6	7.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:44:13	5.8	Bottom	3	1	26.31	7.66	31.22	84.1	5.69	5.2	10
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10A	10:44:54	5.8	Bottom	3	2	26.31	7.67	31.22	84.1	5.69	5.1	10.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10B	10:37:39	1.0	Surface	1	1	26.36	7.67	31.31	83.8	5.67	5.5	7.7
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10B	10:37:16	1.0	Surface	1	2	26.36	7.65	31.31	84	5.68	5.6	8.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10B	10:37:08	4.6	Bottom	3	1	26.36	7.64	31.32	83.9	5.67	5.4	8.3
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	SR10B	10:37:27	4.6	Bottom	3	2	26.36	7.66	31.33	83.9	5.67	5.5	7.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:17:46	1.0	Surface	1	1	25.87	8.2	30.02	95	6.52	9.5	13.5
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:17:04	1.0	Surface	1	2	25.89	8.2	30.01	95.3	6.54	9.1	14.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:17:34	4.0	Middle	2	1	25.79	8.2	30.03	94.4	6.49	10.8	15.1
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:16:53	4.0	Middle	2	2	25.82	8.2	30.03	94.7	6.5	10.6	15.2
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:16:41	6.9	Bottom	3	1	25.8	8.2	30.04	95	6.53	11.8	13
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS2	13:17:22	6.9	Bottom	3	2	25.81	8.2	30.04	94.8	6.52	11.5	13.6
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:14:39	1.0	Surface	1	1	26.36	7.68	30.27	91.6	6.23	4.8	8.8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:13:46	1.0	Surface	1	2	26.3	7.66	30.34	88.5	6.02	4.7	8
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:14:18	6.7	Middle	2	1	26.23	7.65	30.85	85.9	5.84	5.1	8.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:13:35	6.7	Middle	2	2	26.27	7.65	30.92	86.4	5.86	4.7	10.4
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:14:08	12.3	Bottom	3	1	26.28	7.65	30.93	86.9	5.89	5	11.7
HCLR	HY/2011/03	2013-10-25	Mid-Ebb	Sunny	CS1(M/F)5	11:13:21	12.3	Bottom	3	2	26.26	7.65	30.9	89.1	6.04	4.8	11.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:08:15	1.0	Surface	1	1	26.2	7.7	29.42	102.9	7.04	8.4	13.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:07:38	1.0	Surface	1	2	25.74	7.69	29.45	100.9	6.95	8.5	13
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:08:00	5.0	Middle	2	1	25.87	7.69	29.49	100.9	6.96	8.6	12.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:07:24	5.0	Middle	2	2	25.69	7.68	29.5	98.6	6.81	9	14.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:07:15	9.0	Bottom	3	1	25.62	7.67	29.49	98.6	6.82	9.4	14.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS5	15:07:52	9.0	Bottom	3	2	25.75	7.69	29.49	101	6.97	8.9	12.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)6	15:21:12	1.0	Surface	1	1	25.89	7.74	29.42	106.6	7.34	11.1	18.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)6	15:20:28	1.0	Surface	1	2	25.88	7.73	29.42	106.3	7.32	11.3	17.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)6	15:20:52	2.9	Bottom	3	1	25.89	7.74	29.44	106.1	7.3	11.4	17.1
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)6	15:20:15	2.9	Bottom	3	2	25.89	7.73	29.44	106	7.3	11.8	15.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS7	15:29:30	1.0	Surface	1	1	25.82	7.73	29.36	107.5	7.41	11.8	17.6
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS7	15:28:44	1.0	Surface	1	2	25.82	7.72	29.35	107.4	7.4	11	17.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS7	15:29:16	3.2	Bottom	3	1	25.91	7.73	29.42	107.3	7.39	13.5	16.1
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS7	15:28:30	3.2	Bottom	3	2	25.85	7.71	29.43	107.2	7.39	12.4	15.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS8	16:05:04	1.0	Surface	1	1	26.07	7.67	29.68	95.7	6.56	16.6	16.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS8	16:05:19	1.0	Surface	1	2	26.07	7.68	29.68	95.7	6.56	16	17.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS8	16:04:56	3.2	Bottom	3	1	26.07	7.66	29.69	95.6	6.55	16.8	20
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS8	16:05:11	3.2	Bottom	3	2	26.07	7.68	29.7	95.5	6.55	16.5	18.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)9	15:48:29	1.0	Surface	1	1	25.9	7.66	29.44	101.9	7.02	11.6	17.9
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)9	15:48:15	1.0	Surface	1	2	25.9	7.65	29.43	101.9	7.02	11.8	18.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)9	15:48:08	2.8	Bottom	3	1	25.91	7.65	29.53	101.9	7.01	11.6	18.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS1(M/F)9	15:48:22	2.8	Bottom	3	2	25.92	7.66	29.53	102.2	7.03	11.6	19.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:22:42	1.0	Surface	1	1	25.86	8.22	29.95	94.1	6.46	11	58.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:23:26	1.0	Surface	1	2	25.9	8.22	29.9	94.6	6.5	10.9	57
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:23:13	5.2	Middle	2	1	25.9	8.22	30.01	93.4	6.41	11.4	56
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:22:28	5.2	Middle	2	2	25.94	8.22	30.04	93.2	6.39	11.3	57.6
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:22:19	9.4	Bottom	3	1	25.95	8.22	30.1	93.6	6.42	11.6	58.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	IS10	16:23:01	9.4	Bottom	3	2	25.97	8.22	30.12	94.1	6.45	11.4	59.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR3	14:54:20	0.9	Middle	2	1	25.61	7.65	29.54	98.9	6.83	11.7	14.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR3	14:54:29	0.9	Middle	2	2	25.62	7.67	29.53	98.9	6.84	11.5	13.1
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR4	15:59:17	1.0	Surface	SR4	1	25.59	7.65	29.41	97	6.64	7.5	22.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR4	15:58:57	1.0	Surface	1	2	26.21	7.64	29.37	97.4	6.67	7.4	21.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR4	15:58:48	3.0	Bottom	3	1	26.14	7.63	29.5	97.2	6.66	8.9	22.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR4	15:59:08	3.0	Bottom	3	2	26.14	7.65	29.53	97	6.65	9.2	20.5
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR5	16:12:14	1.0	Surface	1	1	25.89	8.22	30.01	94.6	6.49	11.6	57.4
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR5	16:12:33	1.0	Surface	1	2	25.89	8.22	30.05	94.6	6.49	11.8	56.5
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR5	16:12:24	3.6	Bottom	3	1	25.91	8.21	30.05	94.6	6.49	11.7	56
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR5	16:12:06	3.6	Bottom	3	2	25.92	8.21	30.05	94.6	6.51	11.7	56
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:04:49	1.0	Surface	SR10A	1	26.35	7.64	31.26	84.9	5.74	5.6	7.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:05:24	1.0	Surface	1	2	26.35	7.65	31.26	84.8	5.73	5.6	8.9
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:05:12	3.5	Middle	2	1	26.36	7.65	31.33	84.5	5.71	5.6	6.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:04:38	3.5	Middle	2	2	26.37	7.64	31.35	84.8	5.73	5.3	6.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:05:03	6	Bottom	3	1	26.35	7.65	31.35	84.5	5.71	5.7	7.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10A	17:04:27	6	Bottom	3	2	26.35	7.64	31.33	84.7	5.72	5.3	9.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10B	17:19:51	1.0	Surface	1	1	26.35	7.67	31.27	84.6	5.72	5.8	8.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10B	17:20:22	1.0	Surface	1	2	26.36	7.67	31.27	84.7	5.73	6	7.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10B	17:20:02	4.4	Bottom	3	1	26.36	7.67	31.32	84.5	5.71	5.8	7.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	SR10B	17:19:38	4.4	Bottom	3	2	26.36	7.67	31.32	84.5	5.71	5.7	9.3
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:57:51	1.0	Surface	1	1	25.89	8.27	29.89	96.1	6.6	8	12.5
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:57:20	1.0	Surface	1	2	25.89	8.28	29.9	95.9	6.58	8	12.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:57:39	4.0	Middle	2	1	25.97	8.27	30.05	95.3	6.53	7.5	13
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:57:09	4.0	Middle	2	2	25.97	8.27	30.05	94.7	6.49	7.5	12.9
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:56:44	7.0	Bottom	3	1	25.99	8.28	30.07	95.3	6.53	7.7	10.9
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS2	14:57:30	7.0	Bottom	3	2	25.95	8.27	30.03	96.5	6.61	8	11.9
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:36:18	1.0	Surface	1	1	26.2	7.69	30.38	89.1	6.07	5.2	7.5
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:36:59	1.0	Surface	2	2	26.18	7.7	30.37	90	6.13	4.9	5.8
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:36:00	6.9	Middle	2	1	26.39	7.67	31.27	86.5	5.85	3.8	7.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:36:43	6.9	Middle	2	2	26.39	7.68	31.26	86.8	5.86	4	7.2
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:35:51	12.7	Bottom	3	1	26.38	7.67	31.24	87.9	5.94	4.2	8.7
HCLR	HY/2011/03	2013-10-25	Mid-Flood	Sunny	CS(MWF)	16:36:31	12.7	Bottom	3	2	26.36	7.68	31.2	89	6.02	4.4	8.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:29:23	1.0	Surface	1	1	24.52	7.76	30.85	102.3	7.1	6.1	3.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:30:05	1.0	Surface	1	2	24.38	7.77	30.81	100.6	7.06	6.1	5.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:29:17	4.6	Middle	2	1	24.6	7.76	31.82	100.9	7.05	6.3	5.8
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:29:56	4.6	Middle	2	2	24.62	7.76	31.83	100.6	6.97	6.3	5.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:29:46	8.1	Bottom	3	1	24.66	7.76	32	100.2	6.95	6.4	6
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS5	07:29:04	8.1	Bottom	3	2	24.56	7.76	31.99	100.8	7.01	6.5	4.8
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MWF)	07:21:30	1.0	Surface	1	1	24.48	7.76	30.29	106.7	7.49	8.2	7.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MWF)	07:21:42	1.0	Surface	1	2	24.48	7.76	30.3	106.8	7.49	8.2	7.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MWF)	07:21:22	2.1	Bottom	3	1	24.48	7.76	30.31	106.7	7.49	8.4	7.6
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MWF)	07:21:37	2.1	Bottom	3	2	24.48	7.76	30.31	106.7	7.49	8.3	6.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS7	07:15:36	1.0	Surface	1	1	24.58	7.74	30.34	103.5	7.25	6.7	7.7
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS7	07:15:26	1.0	Surface	1	2	24.58	7.74	30.34	103.5	7.25	6.7	8.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS7	07:15:31	2.4	Bottom	3	1	24.58	7.74	30.34	103.5	7.25	6.6	6.5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS7	07:15:20	2.4	Bottom	3	2	24.58	7.74	30.34	103.5	7.25	6.7	7.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS8	06:52:17	1.0	Surface	1	1	24.41	7.75	30.62	104.5	7.32	5.5	7
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS8	06:52:27	1.0	Surface	1	2	24.4	7.76	30.62	104.5	7.33	5.2	8.9
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS8	06:52:12	2.3	Bottom	3	1	24.41	7.75	30.62	104.3	7.32	5.6	11.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS8	06:52:22	2.3	Bottom	3	2	24.4	7.76	30.62	104.5	7.32	5.3	10.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MF)	07:09:05	1.0	Surface	1	1	24.63	7.74	30.53	103.3	7.22	7	7.8
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MF)	07:09:24	1.0	Surface	1	2	24.63	7.74	30.53	103.4	7.23	6.9	8.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS(MF)	07:08:59	2.3	Bottom	3	1	24.64	7.74	30.54	103.2	7.21	7	8.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS10	07:10:29	1.0	Surface	1	1	24.76	8.26	31.44	99.9	6.93	2.5	4.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS10	07:10:16	5.4	Middle	2	1	24.69	8.26	31.5	99.2	6.89	2.5	3.5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS10	07:09:34	5.4	Middle	2	2	24.68	8.26	31.52	99.1	6.88	2.5	4.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS10	07:09:24	9.7	Bottom	3	1	24.67	8.26	31.56	98.6	6.85	2.5	3.9
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	IS10	07:10:05	9.7	Bottom	3	2	24.68	8.26	31.56	98.8	6.86	2.5	4.5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR3	07:37:10	0.8	Middle	2	1	24.25	7.78	30.93	106.1	7.45	3.7	5.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR3	07:37:03	0.8	Middle	2	2	24.25	7.78	30.92	106	7.44	3.7	5.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR4	06:58:17	1.0	Surface	1	1	24.49	7.65	29.81	90.9	6.39	5.4	3.7
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR4	06:58:26	1.0	Surface	1	2	24.49	7.65	29.89	90.5	6.38	5.3	3.8
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR4	06:58:12	2.3	Bottom	3	1	24.5	7.65	29.86	90.5	6.37	5.4	10.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR4	06:58:22	2.3	Bottom	3	2	24.4	7.65	29.87	90.4	6.36	5.3	8.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR5	07:19:03	1.0	Surface	1	1	24.77	8.26	31.44	100.3	6.96	2.5	5.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR5	07:18:45	1.0	Surface	1	2	24.76	8.26	31.44	100.2	6.95	2.5	6
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR5	07:18:36	3.5	Bottom	3	1	24.75	8.26	31.46	100.2	6.95	2.6	4.6
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR5	07:18:54	3.5	Bottom	3	2	24.77	8.26	31.45	100.1	6.95	2.5	3.7
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:24	1.0	Surface	1	1	25.83	7.69	31.72	84.6	5.75	2.1	3.4
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:51	1.0	Surface	1	2	25.83	7.69	31.72	84.4	5.74	2.2	2.9
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:17	3.3	Middle	2	1	25.84	7.69	31.73	84.5	5.75	2.1	3.7
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:43	3.3	Middle	2	2	25.84	7.69	31.73	84.3	5.73	2.2	4.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:07	5.5	Bottom	3	1	25.84	7.69	31.74	84.4	5.74	2.3	4.5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10A	05:44:34	5.5	Bottom	3	1	25.84	7.69	31.73	84.3	5.74	2.3	5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10B	05:38:41	1.0	Surface	1	1	25.8	7.66	31.67	83.9	5.71	2.7	5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10B	05:38:26	1.0	Surface	1	2	25.81	7.65	31.66	84.1	5.72	2.9	4.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10B	05:38:35	3.6	Bottom	3	1	25.81	7.66	31.67	83.7	5.7	2.9	3.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	SR10B	05:38:16	3.6	Bottom	3	2	25.81	7.65	31.66	84.1	5.73	2.7	4.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:37:36	1.0	Surface	1	1	24.83	8.27	31.35	100.8	6.99	2.7	4.1
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:38:16	1.0	Surface	1	2	24.84	8.28	31.33	101	7	2.5	3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:37:53	6.7	Bottom	3	1	24.74	8.27	32.21	100.3	6.94	3.6	3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:37:23	3.9	Middle	2	1	24.69	8.28	31.7	99.3	6.89	3	3.8
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:37:23	3.9	Middle	2	2	24.7	8.28	31.67	100	6.94	3.1	3.4
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS2	08:38:05	3.9	Middle	2	1	25.24	7.67	31.19	98.5	6.17	3.5	3.9
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS1(MF)5	06:20:37	1.0	Surface	1	2	25.24	7.68	31.49	90.8	6.26	3.5	4.5
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS1(MF)5	06:20:14	6.5	Middle	2	1	25.3	7.67	31.21	89.7	6.17	3.7	3.2
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS1(MF)5	06:19:34	6.5	Middle	2	2	25.37	7.66	31.24	89.5	6.15	3.7	3.9
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS1(MF)5	06:20:03	12.0	Bottom	3	1	25.36	7.67	31.29	88.4	6.09	3.7	4.3
HCLR	HY/2011/03	2013-10-28	Mid-Ebb	Sunny	CS1(MF)5	06:19:22	12.0	Bottom	3	2	25.39	7.65	31.32	87.8	6.04	3.7	5.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:21	1.0	Surface	1	1	24.97	7.91	30.46	117	8.14	5.5	8.5
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:44	1.0	Surface	1	2	24.9	7.9	30.53	117.3	8.16	5.7	7.3
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:07	4.6	Middle	2	1	24.76	7.89	30.72	114.5	8	5.6	9
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:37	4.6	Middle	2	2	24.8	7.9	30.69	116.8	8.11	5.8	8.9
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:30	8.1	Bottom	3	1	24.87	7.91	30.61	116	8.08	5.8	8.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS5	14:26:02	8.1	Bottom	3	2	24.75	7.89	30.74	114.2	7.96	5.6	11.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)6	14:33:27	1.0	Surface	1	1	25.03	7.93	30.49	123.8	8.6	7	8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)6	14:33:46	1.0	Surface	1	2	25.03	7.93	30.46	124	8.61	6.8	6.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)6	14:33:32	2.5	Bottom	3	1	25.04	7.93	30.49	123.2	8.56	7	7.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)6	14:33:21	2.5	Bottom	3	2	25.05	7.93	30.47	123.5	8.58	7	7.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS7	14:40:31	1.0	Surface	1	1	25.24	7.9	30.45	122.1	8.45	8	7.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS7	14:40:18	1.0	Surface	1	2	25.3	7.91	30.42	122	8.44	8.1	7.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS7	14:40:23	2.3	Bottom	3	1	25.24	7.9	30.45	122	8.44	8.2	6.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS7	14:40:01	2.3	Bottom	3	2	25.19	7.9	30.49	120.7	8.36	8.3	8.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS8	14:02:25	1.0	Surface	1	1	25.15	7.83	30.54	104.9	7.27	14.2	16.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS8	14:02:41	1.0	Surface	1	2	25.21	7.83	30.53	105.2	7.28	14	18
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS8	14:02:31	2.4	Bottom	3	1	25.18	7.84	30.49	104.9	7.27	14.5	16.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS8	14:02:19	2.4	Bottom	3	2	25.18	7.82	30.46	104.7	7.26	14.3	16.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)9	14:47:56	1.0	Surface	1	1	25.07	7.86	30.68	112.3	7.79	9.5	9.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)9	14:47:32	1.0	Surface	1	2	25.11	7.88	30.67	113.2	7.84	9.6	10.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)9	14:47:45	2.3	Bottom	3	1	24.98	7.86	30.78	112.2	7.79	9.7	9.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS1(MF)9	14:47:20	2.3	Bottom	3	2	25.11	7.88	30.68	113	7.83	9.6	11.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:28:58	1.0	Surface	1	1	25.27	8.32	31.13	107.6	7.41	3.8	5.9
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:28:16	1.0	Surface	1	2	25.28	8.32	31.12	107.9	7.44	3.9	5.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:28:45	5.2	Middle	2	1	24.94	8.31	31.35	104.3	7.2	5.6	5.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:28:03	5.2	Middle	2	2	24.93	8.31	31.35	104.3	7.22	5.6	7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:28:33	9.3	Bottom	3	1	24.81	8.31	31.59	105.7	7.32	5.6	5.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	IS10	15:27:52	9.3	Bottom	3	2	24.9	8.31	31.49	106.4	7.36	5.8	7.3
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR3	14:19:01	0.7	Middle	2	1	24.97	7.9	30.38	117.1	8.15	7	7.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR3	14:19:04	0.7	Middle	2	2	24.97	7.9	30.37	117.4	8.17	7.1	7.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR4	13:55:52	1.0	Surface	1	1	25.12	7.89	30.42	109.3	7.58	9.1	11.5
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR4	13:55:28	1.0	Surface	1	2	25.13	7.89	30.43	109.3	7.58	8.9	11.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR4	13:55:15	2.4	Bottom	3	1	25.13	7.89	30.44	109.2	7.57	9.2	10.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR4	13:55:34	2.4	Bottom	3	2	25.11	7.89	30.43	109.1	7.57	9	13.3
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR5	15:17:43	1.0	Surface	1	1	25.17	8.32	31.18	109.6	7.57	3.2	3.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR5	15:17:21	1.0	Surface	1	2	25.13	8.32	31.18	109.6	7.57	3.1	4.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR5	15:17:33	3.5	Bottom	3	1	25.02	8.32	31.25	109.3	7.56	3.3	4.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR5	15:17:10	3.5	Bottom	3	2	25.01	8.32	31.26	109.9	7.6	3.2	6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:57:32	1.0	Surface	1	1	25.82	7.73	31.81	85.3	5.8	3.4	5.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:57:01	1.0	Surface	1	2	25.83	7.73	31.85	84.9	5.77	3.5	4.5
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:57:18	3.1	Middle	2	1	25.83	7.73	31.87	84.8	5.77	3.5	5.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:56:55	3.1	Middle	2	2	25.83	7.73	31.88	84.7	5.76	3.7	5.4
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:57:08	5.2	Bottom	3	1	25.83	7.73	31.87	84.6	5.75	3.8	6.4
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10A	15:56:44	5.2	Bottom	3	2	25.83	7.73	31.89	84.7	5.76	3.7	4.9
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10B	16:02:48	1.0	Surface	1	1	25.89	7.7	31.9	85.8	5.82	4	5.5
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10B	16:02:31	1.0	Surface	1	2	25.89	7.7	31.9	85.5	5.94	4.1	5.4
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10B	16:02:38	4.1	Bottom	3	1	25.89	7.7	31.91	85.1	5.78	4.1	4.6
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	SR10B	16:02:23	4.1	Bottom	3	2	25.89	7.7	31.91	86.3	5.86	4.4	4.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:47:26	1.0	Surface	1	1	25.57	8.33	30.7	108.9	7.49	2.6	5.9
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:46:49	1.0	Surface	1	2	25.54	8.34	30.78	108.7	7.47	2.6	6.1
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:46:11	6.9	Bottom	3	1	25.57	8.33	31.51	105	7.24	4.4	6.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:47:15	4.0	Middle	2	1	25.19	8.34	30.94	106.5	7.36	2.5	4.3
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:46:29	4.0	Middle	2	2	25.17	8.34	31.19	105.2	7.26	2.5	4.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:47:03	6.9	Bottom	3	1	25.1	8.37	31.27	106.6	7.36	4.4	4.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS2	13:46:11	6.9	Bottom	3	2	25.07	8.37	31.51	105	7.24	4.4	6.7
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:25:21	1.0	Surface	1	1	25.51	7.78	31.41	90.6	6.21	3.9	2.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:24:41	1.0	Surface	1	2	25.51	7.75	31.48	88.8	6.07	4.1	3.3
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:25:07	6.5	Middle	2	1	25.53	7.75	31.61	88.6	6.06	4.4	5
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:24:34	6.5	Middle	2	2	25.53	7.74	31.61	87.7	6	4.4	4.8
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:24:27	12	Bottom	3	1	25.53	7.74	31.62	87.4	5.98	4.7	3.2
HCLR	HY/2011/03	2013-10-28	Mid-Flood	Sunny	CS(M)F5	15:25:00	12	Bottom	3	2	25.53	7.75	31.62	87.1	5.96	4.5	4.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:36:16	1.0	Surface	1	1	25.39	7.85	31.29	113	7.77	6.5	6.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:36:51	1.0	Surface	1	2	25.34	7.84	31.3	112	7.7	6.2	6.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:36:04	4.2	Middle	2	1	25.1	7.85	31.28	111.7	7.72	6.7	9
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:36:41	4.2	Middle	2	2	25.05	7.85	31.3	111.5	7.64	6.5	8.3
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:36:32	7.4	Bottom	3	1	25.05	7.86	31.32	111	7.67	6.7	9.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS5	10:35:54	7.4	Bottom	3	2	25.07	7.85	31.29	111.8	7.72	6.6	8.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F6	10:24:44	1.0	Surface	1	1	25.06	7.92	31.25	124.9	8.63	11.6	11.2
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F6	10:24:22	1.0	Surface	1	2	25.05	7.91	31.27	123.9	8.56	11.9	10.9
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F6	10:24:13	2.1	Bottom	3	1	25.05	7.91	31.25	123.8	8.56	12.7	13.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F6	10:24:30	2.1	Bottom	3	2	25.04	7.91	31.26	124	8.57	12.3	12
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS7	10:17:45	1.0	Surface	1	1	24.94	7.91	30.84	120.8	8.39	6.2	11.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS7	10:17:29	1.0	Surface	1	2	24.93	7.91	30.85	120.6	8.37	6.3	13.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS7	10:17:18	2.1	Bottom	3	1	24.89	7.91	30.83	119.8	8.32	6.2	14.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS7	10:17:35	2.1	Bottom	3	2	24.9	7.91	30.83	120.5	8.37	6.4	13.4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS8	09:52:27	1.0	Surface	1	1	24.74	7.86	30.94	112	7.8	14.5	8.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS8	09:52:46	1.0	Surface	1	2	24.75	7.86	30.89	112.3	7.82	14.3	8.4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS8	09:52:18	3.2	Bottom	3	1	24.76	7.85	31.2	111.8	7.77	14.5	8.8
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS8	09:52:36	3.2	Bottom	3	2	24.75	7.85	31.18	112.3	7.81	14.2	8.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F9	10:09:19	1.0	Surface	1	1	24.86	7.88	31.09	116.6	8.08	9.6	13
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F9	10:09:01	1.0	Surface	1	2	24.87	7.88	31.09	116.5	8.08	9.5	13.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F9	10:09:10	2.8	Bottom	3	1	24.83	7.88	31.27	116.5	8.09	9.7	13.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS(M)F9	10:08:50	2.8	Bottom	3	2	24.84	7.88	31.24	116.3	8.07	9.4	13.4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:56:12	1.0	Surface	1	1	25.03	8.3	29.78	111.5	7.77	3.2	4.2
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:55:24	1.0	Surface	1	2	25.05	8.3	29.82	111.1	7.74	3.6	3
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:55:57	5.2	Middle	2	1	25.13	8.29	30.59	108.8	7.54	5.2	3.8
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:55:12	5.2	Middle	2	2	25.11	8.29	30.49	109	7.56	5.1	4.9
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:55:45	9.3	Bottom	3	1	25.16	8.28	30.96	109.2	7.55	6.1	5.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	IS10	09:54:59	9.3	Bottom	3	2	25.16	8.28	30.97	109.2	7.55	6.6	5.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR3	10:44:29	0.7	Middle	2	1	25.42	7.84	31.27	112.9	7.76	6	9.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR3	10:44:35	0.7	Middle	2	2	25.42	7.84	31.27	112.7	7.74	6.2	7.4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR4	09:58:36	1.0	Surface	1	1	24.55	7.76	30.33	100.9	7.08	5.4	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR4	09:58:17	1.0	Surface	1	2	24.56	7.76	30.34	101	7.08	5.3	6.2
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR4	09:58:25	2.7	Bottom	3	1	24.56	7.76	30.4	100.9	7.07	5.3	7.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR4	09:58:08	2.7	Bottom	3	2	24.58	7.76	30.46	101.1	7.08	5.2	6.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR5	10:06:08	1.0	Surface	1	1	25.04	8.31	29.82	113.2	7.89	2.5	5.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR5	10:05:36	1.0	Surface	1	2	25.04	8.3	29.83	112.6	7.85	2.6	4.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR5	10:05:51	4.4	Bottom	3	1	25.08	8.3	30.27	112.4	7.81	2.8	4.2
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR5	10:05:26	4.4	Bottom	3	2	25.07	8.3	30.27	112.6	7.82	2.7	4.2
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:46:45	1.0	Surface	1	1	25.61	7.69	31.86	86.7	5.92	3.2	4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:46:16	1.0	Surface	1	2	25.61	7.69	31.86	86.7	5.92	3	5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:46:35	3.3	Middle	2	1	25.61	7.69	31.86	86.6	5.91	3.1	4.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:46:04	3.3	Middle	2	2	25.61	7.69	31.86	86.6	5.91	2.9	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:46:26	5.6	Bottom	3	1	25.61	7.69	31.86	86.5	5.9	3.1	6.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10A	08:45:55	5.6	Bottom	3	2	25.61	7.68	31.86	86.7	5.92	3	5.6
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10B	08:41:09	1.0	Surface	1	1	25.63	7.62	31.87	85.8	5.85	3.3	5.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10B	08:40:46	1.0	Surface	1	2	25.64	7.6	31.86	85.7	5.85	3.2	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10B	08:40:59	3.9	Bottom	3	1	25.64	7.61	31.87	85.5	5.83	3.2	5.3
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	SR10B	08:40:36	3.9	Bottom	3	2	25.64	7.59	31.87	85.5	5.85	3.3	4.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:20:44	1.0	Surface	1	1	25.08	8.3	28.46	114.1	8.01	2.6	5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:21:25	1.0	Surface	1	2	25.08	8.3	28.41	114.2	8.02	2.5	5.3
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:20:33	3.3	Middle	2	1	25.07	8.3	28.58	113.8	7.97	2.7	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:21:05	3.3	Middle	2	2	25.06	8.3	28.69	113.6	7.98	2.6	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:20:22	5.6	Bottom	3	1	25.06	8.3	29.34	113.6	7.94	2.5	4.4
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS2	11:20:56	5.6	Bottom	3	2	25.06	8.29	29.19	113.7	7.95	2.7	4.8
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:20:13	1.0	Surface	1	1	24.99	7.81	31.06	99.6	6.9	3.7	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:20:51	1.0	Surface	1	2	24.99	7.81	31.06	98.5	6.82	4	6.1
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:20:01	6.2	Middle	2	1	25.14	7.76	31.32	98.6	6.75	4.1	7.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:20:39	6.2	Middle	2	2	25.29	7.75	31.42	98.3	6.74	4.3	6.5
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:19:49	11.3	Bottom	3	1	25.38	7.75	31.78	95.1	6.56	4.4	6.3
HCLR	HY/2011/03	2013-10-30	Mid-Ebb	Sunny	CS(M)F5	09:20:28	11.3	Bottom	3	2	25.38	7.75	31.69	93.1	6.41	4.5	6.1
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:16:49	1.0	Surface	1	1	25.48	8	30.99	133.5	9.18	11.8	10.3
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:16:13	1.0	Surface	1	2	25.47	7.99	31.04	132.2	9.08	11.6	10.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:16:02	4.3	Middle	2	1	25.46	7.99	31.1	131.3	9.02	12.1	9.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:16:38	4.3	Middle	2	2	25.47	7.99	31.08	131.2	9.01	12.1	10.4
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:15:51	7.5	Bottom	3	1	25.45	7.99	31.14	130.5	8.96	12.5	9.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS5	15:16:24	7.5	Bottom	3	2	25.45	7.98	31.16	131.1	9	12	10.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F6	15:22:50	1.0	Surface	1	1	25.56	8.01	30.79	140.5	9.66	7.4	10.7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F6	15:22:29	2.1	Bottom	3	2	25.56	8.01	30.79	140.5	9.65	7.6	9.7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F6	15:22:38	2.1	Bottom	3	1	25.56	8.01	30.8	140.5	9.65	7.8	10.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F6	15:22:15	2.1	Bottom	3	2	25.56	8.01	30.79	140.5	9.65	7.3	9.4
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS7	15:29:40	1.0	Surface	1	1	25.55	7.97	30.69	133	9.15	9.7	10.4
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS7	15:29:24	1.0	Surface	1	2	25.55	7.97	30.69	132.8	9.13	9.6	10.5
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS7	15:29:13	2.2	Bottom	3	1	25.53	7.97	30.71	132.4	9.1	9.1	11.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS7	15:29:31	2.2	Bottom	3	2	25.54	7.97	30.7	133	9.15	9.5	10.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS8	15:57:37	1.0	Surface	1	1	25.3	7.98	30.81	129	8.9	12.4	9.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS8	15:57:18	1.0	Surface	1	2	25.34	7.99	30.78	128.5	8.86	12.4	8.7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS8	15:57:28	3.0	Bottom	3	1	25.15	7.98	30.97	128.7	8.9	13.6	10.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS8	15:57:08	3.0	Bottom	3	2	25.15	7.99	30.98	128.1	8.85	13.7	11
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F9	15:38:23	1.0	Surface	1	1	25.42	7.98	30.81	129.4	8.91	9.2	9
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F9	15:38:46	1.0	Surface	1	2	25.42	7.98	30.81	130.9	9.01	9.5	10.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F9	15:38:34	2.6	Bottom	3	1	25.22	7.96	30.91	129.9	8.97	11.6	9.3
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS(M)F9	15:38:10	2.6	Bottom	3	2	25.22	7.94	30.96	125.9	8.71	11.4	9.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:14:56	1.0	Surface	1	1	25.48	8.34	29.31	117.6	8.16	4.2	4.1
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:15:37	1.0	Surface	1	2	25.54	8.35	29.23	120.9	8.38	4.1	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:15:24	5.3	Middle	2	1	25.25	8.33	29.95	116.5	8.08	5.4	5
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:14:48	5.3	Middle	2	2	25.27	8.33	29.74	115.5	8.02	5.6	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:14:35	9.6	Bottom	3	1	25.19	8.33	30.53	116.7	8.08	7.4	5.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	IS10	16:15:14	9.6	Bottom	3	2	25.25	8.33	30.32	118.2	8.18	7	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR3	15:06:44	0.7	Middle	2	1	25.51	8.03	30.89	133.7	9.19	7.2	10
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR3	15:06:51	0.7	Middle	2	2	25.5	8.02	30.91	134.9	9.27	7.1	10.1
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR4	15:48:25	1.0	Surface	1	1	25.39	8	30.88	134.3	9.25	8.5	10
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR4	15:48:55	1.0	Surface	1	2	25.39	7.99	30.86	133.6	9.2	8.3	9.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR4	15:48:42	2.6	Bottom	3	1	25.14	8.01	31.03	134.1	9.27	8.1	11.5
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR4	15:48:12	2.6	Bottom	3	2	25.08	8.02	31.07	134.2	9.28	8.4	10.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR5	16:05:20	1.0	Surface	1	1	25.52	8.35	29.27	121.1	8.39	2.9	4.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR5	16:04:57	1.0	Surface	1	2	25.47	8.35	29.33	118.1	8.2	3	4.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR5	16:04:49	4.6	Bottom	3	1	25.26	8.33	29.69	117	8.13	3.3	5.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR5	16:05:10	4.6	Bottom	3	2	25.35	8.34	29.54	120.3	8.35	3.1	5.1
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:08:09	1.0	Surface	1	1	25.63	7.73	31.71	90.1	6.15	6.15	7.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:09:01	1.0	Surface	1	2	25.63	7.73	31.71	90.1	6.15	4.1	7.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:08:48	3.3	Middle	2	1	25.63	7.73	31.74	89.9	6.14	4.4	5.6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:08:00	3.3	Middle	2	2	25.63	7.73	31.74	90.1	6.15	4.3	6.3
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:07:42	5.6	Bottom	3	1	25.63	7.73	31.75	90.2	6.16	4.2	7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10A	17:08:33	5.6	Bottom	3	2	25.63	7.73	31.77	89.8	6.13	4.4	6.2
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10B	17:16:51	1.0	Surface	1	1	25.63	7.73	31.69	90.1	6.15	4.1	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10B	17:16:23	1.0	Surface	1	2	25.63	7.73	31.7	90.1	6.15	4.3	4.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10B	17:16:35	4.2	Bottom	3	1	25.62	7.73	31.72	90	6.14	4.3	6
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	SR10B	17:16:11	4.2	Bottom	3	2	25.62	7.73	31.73	89.9	6.14	4.1	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:49:07	1.0	Surface	1	1	25.74	8.4	28.47	134.3	9.32	3	5.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:48:19	1.0	Surface	1	2	25.41	8.4	28.6	128.5	8.92	3.1	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:48:06	3.3	Middle	2	1	25.41	8.4	29	117.6	8.19	3.4	7.5
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:48:49	3.3	Middle	2	2	25.35	8.41	28.93	122.6	8.54	3.1	6.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:47:51	5.6	Bottom	3	1	25.22	8.42	29.57	110.7	7.7	4	7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS2	14:48:39	5.6	Bottom	3	2	25.24	8.43	29.34	125.3	8.72	4.2	7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:32:09	1.0	Surface	1	1	25.31	7.86	30.98	106.7	7.36	5.5	3.9
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:31:33	1.0	Surface	1	2	25.3	7.85	30.94	104.5	7.2	5.4	4.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:31:20	6.4	Middle	2	1	25.31	7.78	31.35	104.4	7.18	6.7	4.7
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:31:59	6.4	Middle	2	2	25.29	7.81	31.19	106.3	7.31	6.7	3.8
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:31:10	11.8	Bottom	3	1	25.31	7.8	31.38	98.8	6.8	8.3	4.3
HCLR	HY/2011/03	2013-10-30	Mid-Flood	Sunny	CS(M/F)5	16:31:47	11.8	Bottom	3	2	25.31	7.81	31.35	101.4	6.98	8.4	4.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:14:34	1.0	Surface	1	1	25.62	7.88	30.21	124	8.54	8.1	8.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:15:07	1.0	Surface	1	2	25.65	7.88	30.21	124.7	8.58	8.2	7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:15:02	4.7	Middle	2	1	25.64	7.88	30.22	124	8.54	8.4	10.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:14:28	4.7	Middle	2	2	25.62	7.88	30.21	123.8	8.52	8.2	9.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:14:17	8.4	Bottom	3	1	25.59	7.87	30.22	123.5	8.51	8.4	12.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS5	12:14:52	8.4	Bottom	3	2	25.6	7.88	30.23	123.7	8.52	8.6	11.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)6	12:05:55	1.0	Surface	1	1	25.66	7.92	30.38	132	9.08	16.2	11.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)6	12:05:43	1.0	Surface	1	2	25.64	7.92	30.38	131.9	9.07	16.4	12.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)6	12:05:37	2.4	Bottom	3	1	25.66	7.92	30.38	132	9.07	17	11.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)6	12:05:49	2.4	Bottom	3	2	25.64	7.92	30.39	132	9.08	16.7	13.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS7	11:57:57	1.0	Surface	1	1	25.34	7.9	30.31	128.6	8.9	8.2	5.9
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS7	11:58:32	1.0	Surface	1	2	25.34	7.91	30.29	128.8	8.91	8	6.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS7	11:58:22	2.4	Bottom	3	1	25.31	7.89	30.35	127.1	8.79	9.4	7.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS7	11:57:45	2.4	Bottom	3	2	25.31	7.89	30.34	126.6	8.76	9.8	6.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS8	11:29:01	1.0	Surface	1	1	25.38	7.89	30.2	125.5	8.68	7.4	7.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS8	11:27:49	1.0	Surface	1	2	25.42	7.89	30.09	126.2	8.73	7.3	7.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS8	11:28:52	2.5	Bottom	3	1	25.35	7.89	30.3	124.2	8.59	8.4	7.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS8	11:27:38	2.5	Bottom	3	2	25.34	7.87	30.3	124.3	8.59	8.1	8.2
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)9	11:50:00	1.0	Surface	1	1	25.67	7.93	30.03	139.6	9.61	7.5	7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)9	11:50:30	1.0	Surface	1	2	25.66	7.94	30.05	139.8	9.63	7.1	6.5
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)9	11:50:17	2.4	Bottom	3	1	25.45	7.92	30.22	137	9.46	9.3	8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS(M/F)9	11:49:48	2.4	Bottom	3	2	25.45	7.92	30.22	137.4	9.49	9.7	6.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:32:38	1.0	Surface	1	1	25.8	8.3	28.81	120.4	8.33	5.6	5.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:33:26	1.0	Surface	1	2	25.81	8.32	28.77	124.2	8.6	4.5	4.5
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:33:03	5.5	Middle	2	1	25.45	8.28	29.91	117.2	8.11	8	5.9
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:32:25	5.5	Middle	2	2	25.44	8.27	29.94	115.9	8.02	7.9	6.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:32:16	9.9	Bottom	3	1	25.44	8.27	29.98	116.9	8.09	7.4	6.5
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	IS10	11:32:55	9.9	Bottom	3	2	25.46	8.28	29.95	118.6	8.2	8	7.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR3	12:25:35	0.6	Middle	2	1	25.66	7.9	30.21	125.7	8.65	5.2	13.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR3	12:25:38	0.6	Middle	2	2	25.66	7.89	30.21	125.8	8.66	5.5	12.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR4	11:40:21	1.0	Surface	1	1	25.42	7.9	30.13	127.5	8.81	7.4	8.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR4	11:40:58	1.0	Surface	1	2	25.41	7.9	30.15	127.9	8.84	7.2	7.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR4	11:40:38	2.5	Bottom	3	1	25.35	7.88	30.33	125.4	8.67	8.1	11.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR4	11:39:59	2.5	Bottom	3	2	25.35	7.88	30.32	125.6	8.68	8.7	13.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR5	11:44:16	1.0	Surface	1	1	25.73	8.33	28.78	123.5	8.56	4.6	4.9
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR5	11:43:49	1.0	Surface	1	2	25.71	8.32	28.79	123.2	8.54	4.5	4.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR5	11:43:38	4.4	Bottom	3	1	25.54	8.31	29.83	122.6	8.47	5.9	4.3
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR5	11:44:01	4.4	Bottom	3	2	25.51	8.31	29.86	122.2	8.45	6	4.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:09:32	1.0	Surface	1	1	25.55	7.68	31.62	92.9	6.36	3.9	6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:10:13	1.0	Surface	1	2	25.55	7.69	31.57	93.4	6.39	3.9	5.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:10:08	3.3	Middle	2	1	25.55	7.68	31.62	92.8	6.35	3.8	7.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:09:24	3.3	Middle	2	2	25.55	7.68	31.65	92.8	6.35	3.9	6.9
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:09:59	5.6	Bottom	3	1	25.55	7.68	31.67	92.8	6.34	3.9	8.3
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10A	10:09:17	5.6	Bottom	3	2	25.55	7.68	31.64	92.7	6.34	4	9.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10B	10:00:10	1.0	Surface	1	1	25.58	7.68	31.6	93.1	6.37	4	7.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10B	09:59:58	1.0	Surface	1	2	25.58	7.68	31.59	93.2	6.37	4.1	6.3
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10B	09:59:51	4.5	Bottom	3	1	25.58	7.68	31.58	93.1	6.37	4.4	9
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	SR10B	10:00:04	4.5	Bottom	3	2	25.58	7.68	31.59	93.1	6.37	4.3	10.3
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:53:50	1.0	Surface	1	1	25.61	8.3	28.46	119.2	8.29	3.8	5.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:52:59	1.0	Surface	1	2	25.68	8.3	28.37	117.3	8.16	4	5.7
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:53:30	3.6	Middle	2	1	25.45	8.29	29.85	114.5	7.92	5.5	5.8
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:52:48	3.6	Middle	2	2	25.43	8.29	29.65	115.4	7.96	5.3	4.6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:53:14	6.2	Bottom	3	1	25.45	8.28	30.49	115.4	7.96	8	5.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS2	12:52:32	6.2	Bottom	3	2	25.42	8.28	30.37	114.7	7.92	8.4	6.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:47:12	1.0	Surface	1	1	25.52	7.74	30.71	100	6.87	4.2	4.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:48:00	1.0	Surface	1	2	25.52	7.73	30.81	100.2	6.89	4.2	5.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:46:52	12.5	Bottom	3	1	25.52	7.72	30.96	98.7	6.78	4.4	7.3
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:47:57	6.8	Middle	2	2	25.53	7.71	31.09	97.9	6.72	4.4	6
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:47:07	6.8	Middle	2	1	25.53	7.69	31.42	96.3	6.6	4.5	6.4
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:47:43	12.5	Bottom	3	1	25.47	7.99	30.21	139	9.51	6.7	9.1
HCLR	HY/2011/03	2013-11-01	Mid-Ebb	Sunny	CS(M)F5	10:46:52	12.5	Bottom	3	2	25.97	7.99	30.21	139.1	9.51	6.5	9.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:03:29	1.0	Surface	1	1	26.03	8	30.2	139.1	9.51	6.5	9.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:02:45	1.0	Surface	1	2	25.99	7.99	30.22	138	9.45	6.9	10.7
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:03:17	4.8	Middle	2	1	25.99	7.99	30.22	138	9.45	6.8	9.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:02:40	4.8	Middle	2	2	25.99	7.99	30.22	138	9.45	6.8	9.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:03:03	8.5	Bottom	3	1	25.78	7.99	30.24	137	9.41	7.2	9.5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS5	16:02:28	8.5	Bottom	3	2	25.78	7.98	30.24	137	9.41	7.4	9.6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F6	16:12:17	1.0	Surface	1	1	26.37	8.02	30.01	156.6	10.66	7.9	8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F6	16:11:47	1.0	Surface	1	2	26.45	8.03	30.02	156.5	10.64	8	9.1
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F6	16:11:35	2.5	Bottom	3	1	26.05	8.03	30.14	155.6	10.64	8.5	8.2
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F6	16:12:00	2.5	Bottom	3	2	25.97	8.03	30.19	156	10.68	8.2	9.7
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS7	16:19:24	1.0	Surface	1	1	25.69	7.98	29.98	141.5	9.74	8.5	8.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS7	16:19:41	1.0	Surface	1	2	25.75	7.98	29.95	141.8	9.76	8.5	9.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS7	16:19:32	2.5	Bottom	3	1	25.7	7.98	30.03	141.3	9.73	8.8	8.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS7	16:19:19	2.5	Bottom	3	2	25.68	7.98	30.04	141	9.71	8.5	10.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS8	16:44:50	1.0	Surface	1	1	26.13	7.96	29.93	144.5	9.88	24.4	10.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS8	16:44:38	1.0	Surface	1	2	26.03	7.95	29.96	144.1	9.87	24.4	10.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS8	16:44:32	2.6	Bottom	3	1	25.63	7.91	30.09	138.6	9.55	24.7	12.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS8	16:44:44	2.6	Bottom	3	2	25.64	7.91	30.05	138.3	9.53	24.8	12.2
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F9	16:25:52	1.0	Surface	1	1	25.78	7.97	30.03	139.8	9.61	22.5	17.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F9	16:26:02	1.0	Surface	1	2	25.78	7.97	30.04	139.9	9.62	22.6	19.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F9	16:25:46	2.5	Bottom	3	1	25.78	7.97	30.04	139.6	9.6	22.6	19.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS(M)F9	16:25:56	2.5	Bottom	3	2	25.78	7.97	30.05	139.8	9.61	22.9	20.1
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:08:27	1.0	Surface	1	1	25.86	8.33	28.72	130.3	9.01	7	4.5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:09:07	1.0	Surface	1	2	25.89	8.33	28.66	130.7	9.04	6.6	5.5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:08:16	5.3	Middle	2	1	25.76	8.33	29.3	125.7	8.67	11.1	5.6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:08:51	5.3	Middle	2	2	25.82	8.33	29.34	126.9	8.8	11.2	6.1
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:08:07	9.5	Bottom	3	1	25.87	8.33	29.51	121.8	8.38	12.5	5.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	IS10	17:08:42	9.5	Bottom	3	2	25.85	8.33	29.58	130.9	9.01	12.1	6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR3	15:52:11	0.7	Middle	2	1	26.02	7.97	30.15	137.4	9.4	5.7	4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR3	15:52:08	0.7	Middle	2	2	26.03	7.97	30.14	136.9	9.36	5.4	5.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR4	16:34:14	1.0	Surface	1	1	25.92	7.94	29.96	142.1	9.75	23.4	5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR4	16:34:26	1.0	Surface	1	2	25.92	7.93	29.98	141.6	9.72	23.6	5.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR4	16:34:20	2.5	Bottom	3	1	25.62	7.91	30.1	139	9.58	24.6	5.5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR4	16:34:08	2.5	Bottom	3	2	25.63	7.92	30.09	139.1	9.58	24.4	5.5
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR5	16:58:45	1.0	Surface	1	1	25.88	8.29	28.67	127.6	8.82	3.2	6.6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR5	16:59:15	1.0	Surface	1	2	25.84	8.3	28.8	127.5	8.82	3	8.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR5	16:58:58	4.6	Bottom	3	1	25.74	8.29	29.1	126.6	8.76	4	13
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR5	16:58:29	4.6	Bottom	3	2	25.74	8.27	29.09	126.5	8.75	4.4	12.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:03:01	1.0	Surface	1	1	25.66	7.71	31.49	98.5	6.73	6.7	8.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:03:37	1.0	Surface	1	2	25.66	7.72	31.46	99.2	6.78	6.5	9.8

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:02:55	3.3	Middle	2	1	25.66	7.71	31.53	98.2	6.71	7.4	8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:03:31	3.3	Middle	2	2	25.66	7.71	31.5	98.6	6.74	7.1	9.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:02:46	5.6	Bottom	3	1	25.66	7.71	31.54	98.1	6.7	7.5	15
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10A	18:03:21	5.6	Bottom	3	2	25.66	7.71	31.54	98.4	6.72	7.2	15.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10B	18:14:07	1.0	Surface	1	1	25.66	7.72	31.48	100.8	6.89	5.5	17.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10B	18:14:27	1.0	Surface	1	2	25.66	7.72	31.45	100.6	6.87	5.2	19
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10B	18:14:13	4.5	Bottom	3	1	25.66	7.72	31.51	100.6	6.87	5.8	18.2
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	SR10B	18:13:54	4.5	Bottom	3	2	25.66	7.72	31.49	100.8	6.88	5.8	19
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:44:58	1.0	Surface	1	1	26.02	8.26	28.85	127.7	8.8	3.1	5.3
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:44:19	1.0	Surface	1	2	26.02	8.21	28.89	125.8	8.67	3	5.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:44:06	3.5	Middle	2	1	25.94	8.23	28.98	119.6	8.25	3.8	7.9
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:44:44	3.5	Middle	2	2	25.91	8.24	28.95	123.2	8.5	3.4	7.6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:43:56	6.0	Bottom	3	1	25.66	8.22	29.3	114.1	7.89	4.7	8.4
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS2	15:44:34	6.0	Bottom	3	2	25.64	8.22	29.3	113.3	7.8	5	7.8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:25:42	1.0	Surface	1	1	25.54	7.76	30.83	100.8	6.93	6	7.6
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:26:41	1.0	Surface	1	2	25.54	7.75	30.95	101	6.94	6	8.7
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:26:30	6.8	Middle	2	1	25.55	7.73	31.18	99	6.79	8.2	8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:25:35	6.8	Middle	2	2	25.55	7.74	31.17	99.2	6.8	8.1	8
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:26:07	12.6	Bottom	3	1	25.55	7.72	31.36	97.9	6.71	11.2	10.1
HCLR	HY/2011/03	2013-11-01	Mid-Flood	Sunny	CS1(M/F)	17:25:14	12.6	Bottom	3	2	25.55	7.72	31.35	97.9	6.7	11.6	8.8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:19:49	1.0	Surface	1	1	25	7.83	30.74	99.7	6.92	12	15.8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:20:28	1.0	Surface	1	2	25.01	7.83	30.69	99.6	6.92	11.9	16.3
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:20:17	4.5	Middle	2	1	24.99	7.83	30.78	99.2	6.88	12	17.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:19:24	4.5	Middle	2	2	24.98	7.83	30.84	99	6.86	12	16.7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:19:15	8.0	Bottom	3	1	24.98	7.83	30.84	99	6.87	12.2	19.9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS5	12:19:15	8.0	Bottom	3	2	24.98	7.83	30.85	98.8	6.85	12.1	19.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:26:10	1.0	Surface	1	1	24.98	7.84	30.46	105.6	7.34	8	9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:26:24	1.0	Surface	1	2	24.98	7.84	30.46	106.2	7.38	8	8.4
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:25:58	2.3	Bottom	3	1	24.97	7.83	30.49	105.3	7.32	8.3	9.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:26:14	2.3	Bottom	3	2	24.97	7.84	30.46	106	7.37	8	10.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS7	12:32:42	1.0	Surface	1	1	25.01	7.83	30.37	103.2	7.17	12.3	14.8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS7	12:32:52	1.0	Surface	1	2	25.01	7.84	30.37	103.3	7.18	12	13.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS7	12:32:38	2.6	Bottom	3	1	25.01	7.83	30.37	103.2	7.17	12.3	16.3
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS7	12:32:47	2.6	Bottom	3	2	25.02	7.84	30.37	103.2	7.18	12.2	15
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS8	11:56:21	1.0	Surface	1	1	25.16	7.82	30.87	102.2	7.07	7.7	9.4
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS8	11:56:36	1.0	Surface	1	2	25.17	7.83	30.8	102.8	7.11	7.8	7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS8	11:56:29	2.6	Bottom	3	1	25.17	7.82	30.83	102.6	7.1	7.7	9.4
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS8	11:56:16	2.6	Bottom	3	2	25.16	7.82	30.91	102.1	7.06	7.8	7.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:40:02	1.0	Surface	1	1	25.07	7.84	30.31	104.1	7.24	11.9	12.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:39:44	1.0	Surface	1	2	25.06	7.84	30.31	103.9	7.22	11.7	12.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:39:57	2.4	Bottom	3	1	25.07	7.84	30.31	104	7.23	12.1	13.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS1(M/F)	12:39:40	2.4	Bottom	3	2	25.06	7.83	30.32	103.8	7.21	11.9	14.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:17:08	1.0	Surface	1	1	25.1	8.24	30.76	103.7	7.18	6.2	8.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:17:53	1.0	Surface	1	2	25.1	8.25	30.76	103.6	7.18	6.6	8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:17:35	5.4	Middle	2	1	25.1	8.24	30.78	103.2	7.14	7.8	10.3
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:16:54	5.4	Middle	2	2	25.1	8.24	30.78	103.2	7.15	7.6	11.9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:16:44	9.8	Bottom	3	1	25.11	8.24	30.78	103.3	7.16	8.3	12.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	IS10	13:17:25	9.8	Bottom	3	2	25.1	8.24	30.78	103.3	7.15	8.5	13.4
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR3	12:13:07	0.8	Middle	2	1	24.98	7.83	30.79	101.8	7.06	10.7	14.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR3	12:13:09	0.8	Middle	2	2	24.98	7.83	30.8	101.8	7.06	11.1	14.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR4	11:52:14	1.0	Surface	1	1	25.12	7.81	30.9	98	6.78	8	7.3
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR4	11:51:57	1.0	Surface	1	2	25.13	7.81	30.94	98	6.78	8	7.8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR4	11:52:04	2.6	Bottom	3	1	25.13	7.81	30.95	98	6.77	8	7.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR4	11:51:48	2.6	Bottom	3	2	25.1	7.81	30.93	98	6.78	7.9	7.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR5	13:06:10	1.0	Surface	1	1	25.1	8.2	30.75	103.2	7.15	6.1	9.9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR5	13:06:27	1.0	Surface	1	2	25.1	8.21	30.76	103.3	7.15	5.9	9.9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR5	13:06:19	4.5	Bottom	3	1	25.1	8.21	30.77	103.1	7.14	6.3	8.7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR5	13:05:57	4.5	Bottom	3	2	25.1	8.19	30.78	102.7	7.11	6.6	8.9
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:40:12	1.0	Surface	1	1	25.35	7.72	31.9	92	6.3	7.7	5.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:39:40	1.0	Surface	1	2	25.35	7.72	31.9	92.6	6.34	7.5	7.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:40:06	3.1	Middle	2	1	25.35	7.72	31.9	91.9	6.29	8	9.8
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:39:34	3.1	Middle	2	2	25.35	7.72	31.9	92.4	6.33	8.1	7.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:39:51	5.1	Bottom	3	1	25.35	7.72	31.9	91.9	6.29	8.4	9.7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10A	13:39:24	5.1	Bottom	3	2	25.35	7.72	31.91	92.3	6.32	8.3	9.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10B	13:47:12	1.0	Surface	1	1	25.35	7.72	31.89	91.8	6.29	7.7	12.3
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10B	13:47:27	1.0	Surface	1	2	25.35	7.72	31.89	91.9	6.3	7.2	11.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10B	13:47:04	3.8	Bottom	3	1	25.35	7.72	31.89	91.8	6.29	7.6	14.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	SR10B	13:47:17	3.8	Bottom	3	2	25.35	7.72	31.89	91.7	6.29	7.4	16.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:55:39	1.0	Surface	1	1	25.13	8.2	30.78	103.6	7.17	5.9	10.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:54:40	1.0	Surface	1	2	25.13	8.2	30.8	102.6	7.1	6.2	11.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:54:31	3.6	Middle	2	1	25.12	8.22	30.82	102.2	7.04	6.7	11.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:55:24	3.6	Middle	2	2	25.13	8.22	30.8	102.2	7.07	6.6	10.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:55:14	6.1	Bottom	3	1	25.12	8.21	30.84	101.7	7.04	7.4	11.1
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS2	11:54:10	6.1	Bottom	3	2	25.12	8.22	30.89	99.3	6.87	7.2	10.6
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:14:30	1.0	Surface	1	1	25.34	7.78	31.36	100.5	6.91	5.5	4.7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:13:41	1.0	Surface	1	2	25.35	7.76	31.46	97	6.65	5.5	5.7
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:13:30	6.5	Middle	2	1	25.37	7.72	31.77	96.1	6.6	5.8	6.4
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:14:11	6.5	Middle	2	2	25.37	7.73	31.76	96.1	6.59	5.7	7.2
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:14:00	12.0	Bottom	3	1	25.36	7.73	31.81	94.2	6.46	6.1	10.5
HCLR	HY/2011/03	2013-11-04	Mid-Ebb	Cloudy	CS(M)FS	13:13:17	12.0	Bottom	3	2	25.36	7.73	31.78	94.2	6.46	6	10.5
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:42:16	1.0	Surface	1	1	25.19	7.79	30.36	100	6.94	8.2	6.3
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:41:44	1.0	Surface	1	2	25.15	7.79	30.37	100.1	6.95	8.3	6.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:42:00	4.6	Middle	2	1	25.04	7.79	30.39	99.8	6.93	8.7	9.9
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:41:28	4.6	Middle	2	2	25.03	7.79	30.4	100	6.95	8.9	9.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:41:53	8.1	Bottom	3	1	25.07	7.79	30.39	99.5	6.91	8.8	10.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS5	07:41:21	8.1	Bottom	3	2	25.04	7.79	30.42	100	6.94	9.1	10.5
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F6	07:33:28	1.0	Surface	1	1	24.98	7.79	30.38	102.1	7.1	14.4	15.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F6	07:33:52	1.0	Surface	1	2	24.93	7.8	30.37	101.8	7.08	14.2	18
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F6	07:33:33	2.5	Bottom	3	1	24.98	7.79	30.38	101.7	7.08	14.3	21.2
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F6	07:33:24	2.5	Bottom	3	2	24.97	7.79	30.38	102	7.09	14.5	20.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS7	07:27:02	1.0	Surface	1	1	25.01	7.79	30.38	101.8	7.08	9.5	14.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS7	07:27:19	1.0	Surface	1	2	24.98	7.8	30.36	101.6	7.07	9.4	12.9
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS7	07:27:07	2.4	Bottom	3	1	25.01	7.8	30.39	101.5	7.06	9.4	14.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS7	07:26:57	2.4	Bottom	3	2	25.01	7.79	30.38	101.6	7.06	9.4	14.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS8	07:04:06	1.0	Surface	1	1	25.18	7.81	30.46	101.2	7.01	9.5	13.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS8	07:03:57	1.0	Surface	1	2	25.19	7.8	30.46	101.4	7.02	9.6	13.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS8	07:03:50	2.0	Bottom	3	1	25.18	7.8	30.47	101.2	7.01	9.5	14.9
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS8	07:04:01	2.4	Bottom	3	2	25.19	7.81	30.46	101.2	7.01	9.5	15.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F9	07:21:23	1.0	Surface	1	1	25.14	7.81	30.29	102.4	7.11	10.6	16.2
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F9	07:21:31	1.0	Surface	1	2	25.17	7.81	30.34	102.5	7.11	10.4	16.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F9	07:21:07	2.4	Bottom	3	1	25.18	7.8	30.37	102.2	7.08	10.8	16.2
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS(M)F9	07:21:27	2.4	Bottom	3	2	25.14	7.81	30.32	102.4	7.1	10.9	18.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:25:11	1.0	Surface	1	1	25.06	8.24	30.62	101.8	7.06	9.2	16.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:24:35	1.0	Surface	1	2	25.08	8.23	30.64	101.6	7.04	9.4	17.3
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:24:54	5.6	Middle	2	1	25.08	8.24	30.66	101.4	7.03	9.3	14.7
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:24:22	5.6	Middle	2	2	25.09	8.23	30.66	101.2	7.01	9	15.7
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:24:46	10.2	Bottom	3	1	25.09	8.23	30.68	101.4	7.03	9.2	18.7
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	IS10	07:24:14	10.2	Bottom	3	2	25.08	8.22	30.66	101.1	7.01	9.3	19.2
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR3	07:49:38	0.8	Middle	2	1	25.2	7.79	30.37	99.1	6.87	7.7	12.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR3	07:49:38	0.8	Middle	2	2	25.2	7.79	30.37	99.1	6.87	8	11.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR4	07:09:59	1.0	Surface	1	1	25.13	7.78	30.55	100.1	6.93	8	6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR4	07:09:45	1.0	Surface	1	2	25.12	7.78	30.51	100.4	6.96	7.5	5.3
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR4	07:09:52	2.3	Bottom	3	1	25.13	7.78	30.51	99.9	6.92	8.1	7.3
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR4	07:09:37	2.3	Bottom	3	2	25.12	7.78	30.59	100.2	6.95	7.9	6.2
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR5	07:35:19	1.0	Surface	1	1	25.07	8.25	30.63	101.2	7.02	9.9	17.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR5	07:35:50	1.0	Surface	1	2	25.07	8.25	30.63	100.4	6.96	10.4	17.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR5	07:35:37	4.5	Bottom	3	1	25.08	8.25	30.65	100.4	6.96	10.1	16.7
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR5	07:35:04	4.5	Bottom	3	2	25.08	8.25	30.64	100.9	7	9.7	16
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:58	1.0	Surface	1	1	25.37	7.68	31.55	92.4	6.34	8.5	10.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:31	1.0	Surface	1	2	25.37	7.68	31.54	92.5	6.35	8.6	11.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:20	3.4	Middle	2	1	25.37	7.68	31.55	92.5	6.35	8.7	10.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:49	3.4	Middle	2	2	25.37	7.68	31.56	92.2	6.33	8.5	11.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:42	5.7	Bottom	3	1	25.37	7.68	31.56	92.2	6.33	8.8	10.7
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10A	06:05:13	5.7	Bottom	3	2	25.38	7.68	31.55	92.4	6.34	8.9	11.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10B	06:00:31	1.0	Surface	1	1	25.34	7.61	31.52	92.7	6.37	14.9	21.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10B	06:01:05	1.0	Surface	1	2	25.36	7.64	31.57	92	6.32	14.9	19.5
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10B	06:00:38	3.6	Bottom	3	1	25.37	7.62	31.53	92.1	6.32	15.7	21.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	SR10B	06:00:08	3.6	Bottom	3	2	25.36	7.5	31.39	96.2	6.61	15.7	23.6
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:47:02	1.0	Surface	1	1	25.1	8.25	30.92	101.6	7.03	13.3	26.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:46:08	1.0	Surface	1	2	25.1	8.25	30.92	101.6	7.02	13.6	27.4
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:46:40	3.7	Middle	2	1	25.11	8.25	30.9	101.2	7	14.2	27.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:45:53	3.7	Middle	2	2	25.11	8.25	30.91	101.2	7	14.6	29.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:45:40	6.3	Bottom	3	1	25.11	8.25	30.91	101.1	6.99	15.5	28
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CS2	08:46:28	6.3	Bottom	3	2	25.12	8.25	30.9	101.1	7	15.2	26.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:33:50	1.0	Surface	1	1	25.29	7.79	31.06	96.6	6.67	8.7	6.8
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:34:28	1.0	Surface	1	2	25.3	7.79	31.07	96.6	6.65	9.2	8.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:34:15	6.8	Middle	2	1	25.39	7.78	31.31	96.3	6.62	9.4	5.9
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:33:35	6.8	Middle	2	2	25.39	7.78	31.3	96.6	6.64	9	7.9
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:33:27	12.6	Bottom	3	1	25.37	7.78	31.28	96.6	6.66	9.1	7.1
HCLR	HY/2011/03	2013-11-04	Mid-Flood	Cloudy	CSI(M)F5	06:34:04	12.6	Bottom	3	2	25.38	7.78	31.29	95.7	6.57	9.4	6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:38:42	1.0	Surface	1	1	24.75	7.8	31.45	90.4	6.27	16	14.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:38:01	1.0	Surface	1	2	24.75	7.8	31.46	90.3	6.27	16.5	14.9
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:37:50	4.7	Middle	2	1	24.74	7.8	31.47	90.1	6.25	16.9	13
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:38:26	4.7	Middle	2	2	24.73	7.8	31.46	90	6.25	19	14.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:37:35	8.3	Bottom	3	1	24.74	7.79	31.48	90.2	6.25	16.7	14.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS5	13:38:16	8.3	Bottom	3	2	24.74	7.8	31.46	90.1	6.25	17	14.5
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F6	13:44:48	1.0	Surface	1	1	25.06	7.78	31.41	92.7	6.4	18.6	7.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F6	13:45:06	1.0	Surface	1	2	25.05	7.79	31.42	92.7	6.4	18.8	5.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F6	13:44:57	2.3	Bottom	3	1	24.97	7.79	31.39	92.5	6.39	21.2	13
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F6	13:44:39	2.3	Bottom	3	2	24.96	7.78	31.39	92.7	6.41	20.1	13
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS7	13:51:24	1.0	Surface	1	1	24.9	7.78	31.27	92.9	6.44	11.6	10
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS7	13:51:42	1.0	Surface	1	2	24.84	7.79	31.28	92.6	6.42	11.6	7.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS7	13:51:37	2.5	Bottom	3	1	24.88	7.79	31.29	92.7	6.43	12	8.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS7	13:51:16	2.5	Bottom	3	2	24.83	7.78	31.29	92.8	6.44	11.8	8.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS8	14:19:46	1.0	Surface	1	1	24.97	7.8	32.02	89.5	6.17	11.2	9.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS8	14:19:27	1.0	Surface	1	2	24.98	7.8	32.03	89.8	6.19	11.1	7.9
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS8	14:19:38	2.6	Bottom	3	1	24.97	7.8	32.03	89.4	6.16	11.2	8.3
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS8	14:19:20	2.6	Bottom	3	2	24.99	7.8	32.04	89.8	6.18	11.2	10
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F9	13:59:08	1.0	Surface	1	1	25.19	7.8	31.24	94.4	6.51	11.1	8.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F9	13:58:49	1.0	Surface	1	2	25.09	7.79	31.25	94.4	6.52	11	6.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F9	13:58:58	2.5	Bottom	3	1	24.94	7.79	31.36	94	6.51	11.4	10.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS(M)F9	13:58:40	2.5	Bottom	3	2	25.01	7.78	31.34	94	6.5	11	12.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:13:27	1.0	Surface	1	1	25.39	8.18	31.25	94.5	6.5	5.5	7.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:12:20	1.0	Surface	1	2	25.37	8.17	31.18	94.3	6.49	5.3	7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:13:07	5.3	Middle	2	1	25.1	8.19	31.65	93.9	6.47	5.8	6.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:11:59	5.3	Middle	2	2	25.09	8.18	31.65	93.7	6.45	6	6.3
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:12:46	9.6	Bottom	3	1	24.93	8.18	31.72	93.1	6.43	7.6	7.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	IS10	15:11:37	9.6	Bottom	3	2	24.96	8.17	31.7	93.1	6.43	7.5	7.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR3	13:23:19	0.9	Middle	2	1	24.82	7.77	31.51	92.1	6.38	12.8	9.5
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR3	13:23:27	0.9	Middle	2	2	24.81	7.78	31.51	92	6.38	12.9	8.2
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR4	14:10:57	2.7	Bottom	3	1	25.11	8.08	31.98	90.8	6.25	10	12.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR5	14:58:30	4.3	Bottom	3	2	25.42	8.08	31.13	92.3	6.34	5.1	9.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR5	14:57:44	1.0	Surface	1	1	25.4	8.08	31.14	92	6.33	5.2	10.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR5	14:58:08	4.3	Bottom	3	2	25.26	8.08	31.51	92.4	6.36	4.9	10.5
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR5	14:57:23	4.3	Bottom	3	1	25.23	8.07	31.52	91.8	6.31	4.8	10.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:25:45	1.0	Surface	1	1	25.16	7.75	32.08	86.8	5.96	10.7	6.9
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:26:25	1.0	Surface	1	2	25.17	7.75	32.06	86.8	5.96	9.7	6.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:26:15	3.3	Middle	2	1	25.15	7.75	32.09	86.6	5.94	10	12.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:25:34	3.3	Middle	2	2	25.16	7.75	32.08	86.6	5.95	11.2	12.7
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:26:01	5.5	Bottom	3	1	25.16	7.75	32.08	86.6	5.95	10.1	13.2
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10A	15:25:16	5.5	Bottom	3	2	25.15	7.74	32.1	86.5	5.94	12.1	12.9
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10B	15:37:06	1.0	Surface	1	1	25.15	7.75	32.08	86.8	5.96	10.1	11.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10B	15:37:27	1.0	Surface	1	2	25.16	7.75	32.07	86.9	5.97	11	13.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10B	15:37:18	4.4	Bottom	3	1	25.16	7.75	32.07	86.6	5.95	11	14.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	SR10B	15:36:56	4.4	Bottom	3	2	25.15	7.75	32.08	86.7	5.95	10.3	12.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:52:21	1.0	Surface	1	1	25.13	8.03	31.45	92.7	6.39	6.8	9.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:53:32	1.0	Surface	1	2	25.11	8.03	31.44	92.6	6.39	6.6	9.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:51:57	4.0	Middle	2	1	25.15	8	31.56	92.1	6.34	7.3	9.8
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:53:13	4.0	Middle	2	2	25.14	8.01	31.57	92.8	6.39	7.5	9.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:52:49	7.0	Bottom	3	1	25.03	8.17	31.72	92	6.35	8.1	10.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS2	13:51:34	7.0	Bottom	3	2	25.02	7.99	31.71	91.4	6.3	7.8	9.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:58:12	1.0	Surface	1	1	25.32	7.79	31.85	91.7	6.29	5.3	7.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:57:25	1.0	Surface	1	2	25.33	7.79	31.84	92.3	6.33	5.2	6.3
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:57:59	6.6	Middle	2	1	25.28	7.78	31.91	90.3	6.19	5.6	6.1
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:57:06	6.6	Middle	2	2	25.27	7.78	31.91	90.6	6.21	5.7	6.2
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:56:50	12.1	Bottom	3	1	25.24	7.78	31.9	91.1	6.25	5.7	6.4
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Cloudy	CS(M)FS	14:57:44	12.1	Bottom	3	2	25.15	7.78	31.93	90.2	6.2	7.4	7.4
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:59:32	1.0	Surface	1	1	24.75	7.79	31.16	90.6	6.3	11.6	9.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:58:55	1.0	Surface	1	2	24.73	7.78	31.17	90.6	6.3	12.5	10.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:58:42	4.8	Middle	2	1	24.67	7.78	31.2	90.1	6.27	13.3	12.3
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:59:16	4.8	Middle	2	2	24.67	7.79	31.21	90	6.27	13.1	11.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:58:25	8.5	Bottom	3	1	24.68	7.78	31.21	90.4	6.29	13	11
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	ISS	09:59:08	8.5	Bottom	3	2	24.68	7.78	31.22	90.4	6.29	12.8	11.5
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F6	09:50:56	1.0	Surface	1	1	24.74	7.77	31.08	91.9	6.39	11.8	9.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F6	09:51:13	1.0	Surface	1	2	24.74	7.78	31.09	91.9	6.39	11.5	8.3
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F6	09:50:46	2.3	Bottom	3	1	24.73	7.77	31.16	91.9	6.39	13.5	9.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F6	09:51:03	2.3	Bottom	3	2	24.73	7.77	31.15	91.8	6.39	12.5	9.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS7	09:44:26	1.0	Surface	1	1	24.72	7.77	31.09	91.1	6.34	14.8	13.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS7	09:44:03	1.0	Surface	1	2	24.71	7.75	31.12	90.8	6.32	16.2	13.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS7	09:44:13	2.4	Bottom	3	1	24.7	7.76	31.19	90.7	6.31	16.8	13.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS7	09:43:55	2.4	Bottom	3	2	24.71	7.74	31.21	90.8	6.32	17.9	14.4
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS8	09:23:46	1.0	Surface	1	1	24.82	7.76	31.36	92.3	6.4	11.2	9.5
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS8	09:23:30	1.0	Surface	1	2	24.82	7.76	31.37	92.3	6.4	11.3	9.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS8	09:23:38	2.7	Bottom	3	1	24.81	7.76	31.45	92.3	6.4	12.9	10.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS8	09:23:21	2.7	Bottom	3	2	24.81	7.75	31.46	92.5	6.41	12.6	8.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F9	09:38:19	1.0	Surface	1	1	24.83	7.75	31.19	91.6	6.36	15.9	12.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F9	09:38:01	1.0	Surface	1	2	24.83	7.74	31.2	91.6	6.36	15.4	12.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F9	09:38:09	2.4	Bottom	3	1	24.83	7.74	31.22	91.6	6.36	15	15
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS(M)F9	09:37:52	2.4	Bottom	3	2	24.83	7.73	31.22	91.7	6.37	15.3	16.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:18:32	1.0	Surface	1	1	24.77	8.18	31.58	92.4	6.41	17	27
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:19:58	1.0	Surface	1	2	24.76	8.18	31.6	92.4	6.41	16.8	25.1
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:18:15	5.4	Middle	2	1	24.73	8.17	31.62	91	6.31	18.9	28.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:19:28	5.4	Middle	2	2	24.74	8.18	31.61	90.9	6.31	19.3	29.3
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:19:05	9.8	Bottom	3	1	24.74	8.18	31.63	90.6	6.28	20.6	29
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	IS10	09:17:57	9.8	Bottom	3	2	24.74	8.17	31.63	90.8	6.29	20.2	30.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR3	10:09:14	0.9	Middle	2	1	24.73	7.77	31.16	93	6.47	13.2	11.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR3	10:09:22	0.9	Middle	2	2	24.73	7.78	31.17	92.3	6.42	14.2	13.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR4	09:29:31	1.0	Surface	1	1	24.82	7.78	31.38	92.1	6.39	11.4	8.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR4	09:29:12	1.0	Surface	1	2	24.82	7.78	31.39	91.9	6.37	11.6	9.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR4	09:29:04	2.5	Bottom	3	1	24.82	7.78	31.46	91.7	6.36	13	9.1
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR4	09:29:22	2.5	Bottom	3	2	24.81	7.78	31.47	92	6.38	12.7	8.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR5	09:30:12	1.0	Surface	1	1	24.75	8.19	31.57	92.5	6.41	18.9	28.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR5	09:29:27	1.0	Surface	1	2	24.75	8.19	31.57	92.5	6.42	18.8	30
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR5	09:29:52	4.4	Bottom	3	1	24.75	8.19	31.58	92.4	6.41	19.1	28.5
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR5	09:29:06	4.4	Bottom	3	2	24.75	8.19	31.57	92.5	6.41	19	30.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:22:02	1.0	Surface	1	1	25.08	7.73	31.9	87.5	6.03	16.2	13.5
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:21:30	1.0	Surface	1	2	25.08	7.72	31.91	87.4	6.02	14.7	13.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:21:17	3.4	Middle	2	1	25.09	7.72	31.91	87.4	6.01	16.2	12.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:21:52	3.4	Middle	2	2	25.08	7.73	31.91	87.3	6.01	17.2	12
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:21:43	5.7	Bottom	3	1	25.08	7.73	31.91	87.3	6.01	16.4	12.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10A	08:21:06	5.7	Bottom	3	2	25.09	7.72	31.92	87.4	6.02	16.6	11.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10B	08:12:13	1.0	Surface	1	1	25.09	7.69	32.01	86.9	5.98	15.9	20.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10B	08:12:32	1.0	Surface	1	2	25.09	7.7	32	86.8	5.97	16	20.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10B	08:12:03	4.4	Bottom	3	1	25.09	7.69	32.01	86.9	5.97	15.7	19.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	SR10B	08:12:24	4.4	Bottom	3	2	25.09	7.7	32.01	86.7	5.97	16	18.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:26:07	1.0	Surface	1	1	24.79	8.2	31.74	93.6	6.48	18.3	22.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:27:14	1.0	Surface	1	2	24.8	8.2	31.74	93.3	6.46	17.9	24.2
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:25:43	3.8	Middle	2	1	24.78	8.2	31.75	94	6.51	19.8	20.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:26:52	3.8	Middle	2	2	24.78	8.2	31.74	93.9	6.5	20	21.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:26:29	6.6	Bottom	3	1	24.78	8.2	31.74	94.8	6.56	20.6	22.5
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS2	10:25:20	6.6	Bottom	3	2	24.77	8.2	31.75	95.1	6.59	20.5	22.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:52:11	1.0	Surface	1	1	25.02	7.73	31.67	90.9	6.27	13	9.8
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:51:28	1.0	Surface	1	2	25.01	7.72	31.66	90.9	6.28	12.3	9.9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:51:56	6.7	Middle	2	1	25.02	7.72	31.7	90.4	6.23	16.6	9.7
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:51:14	6.7	Middle	2	2	25.02	7.72	31.7	90.5	6.24	16.1	9.6
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:51:44	12.3	Bottom	3	1	25.02	7.71	31.69	90.5	6.24	16.3	9
HCLR	HY/2011/03	2013-11-06	Mid-Flood	Cloudy	CS(M)F5	08:51:00	12.3	Bottom	3	2	25.02	7.71	31.69	90.5	6.24	15.3	9.6
HCLR	HY/2011/03	2013-11-06	Mid-Ebb	Fine	IS5	15:30:47	1.0	Surface	1	1	25.01	7.79	31.05	88.6	6.14	13.9	16.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS5	15:31:25	1.0	Surface	1	2	25.01	7.79	31.06	88.4	6.12	14.1	16.8
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS5	15:31:08	4.5	Middle	2	1	25.01	7.79	31.11	88.2	6.1	14.1	18.6
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS5	15:30:35	4.5	Middle	2	2	25.01	7.79	31.11	88.4	6.12	14	16.7
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS5	15:30:28	8.0	Bottom	3	1	25.01	7.79	31.12	88.3	6.12	14.4	19.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS5	15:30:59	8.0	Bottom	3	2	25.01	7.79	31.12	88.2	6.1	14.4	18.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F6	15:37:40	1.0	Surface	1	1	25.09	7.79	31.08	89.9	6.21	12.1	11.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F6	15:37:52	1.0	Surface	1	2	25.09	7.79	31.08	89.3	6.18	12.2	11.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F6	15:37:35	2.3	Bottom	3	1	25.1	7.79	31.05	89.6	6.2	12.2	12
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F6	15:37:45	2.3	Bottom	3	2	25.14	7.79	31.07	89.2	6.17	12.1	12.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS7	15:45:45	1.0	Surface	1	1	25.43	7.81	31.03	92.6	6.38	11.1	10.6
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS7	15:45:24	1.0	Surface	1	2	25.47	7.81	31.03	92.9	6.39	10.8	10.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS7	15:45:12	2.4	Bottom	3	1	25.29	7.8	30.98	92.8	6.37	11.5	9.6
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS7	15:45:34	2.4	Bottom	3	2	25.29	7.8	30.99	92.5	6.37	11.1	9.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS8	15:07:58	1.0	Surface	1	1	25.39	7.81	30.89	94.3	6.49	6.3	7.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS8	15:08:10	1.0	Surface	1	2	25.47	7.81	30.88	94.3	6.49	6.2	6.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS8	15:08:03	2.4	Bottom	3	1	25.59	7.81	30.79	94.1	6.47	6.2	6.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS8	15:07:49	2.4	Bottom	3	2	25.26	7.81	30.83	93.7	6.47	6.6	5.7
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F9	15:51:19	1.0	Surface	1	1	25.7	7.81	31.15	95.9	6.58	7.6	7.7
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F9	15:51:04	1.0	Surface	1	2	25.72	7.81	31.16	96.6	6.61	7.4	7.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F9	15:50:57	2.4	Bottom	3	1	25.78	7.81	31.1	96.5	6.59	7.5	6.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS(M)F9	15:51:11	2.4	Bottom	3	2	25.56	7.81	31.04	95.9	6.56	7.6	6.9
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:29:29	1.0	Surface	1	1	25.28	7.88	29.91	100.7	6.91	10.5	5.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:30:31	1.0	Surface	1	2	25.29	7.89	29.88	101.6	6.97	10.8	5.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:30:12	5.0	Middle	2	1	24.96	7.87	30.37	98.1	6.74	11.7	6.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:29:01	5.0	Middle	2	2	24.98	7.87	30.27	97.8	6.73	12.1	6
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:29:51	9.0	Bottom	3	1	24.94	7.87	30.59	99.2	6.81	12.8	6.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	IS10	17:28:28	9.0	Bottom	3	2	24.92	7.87	30.7	98.7	6.78	13.3	5.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR3	15:23:49	0.8	Middle	2	1	25.03	7.79	31.02	92.4	6.4	14	17.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR3	15:23:46	0.8	Middle	2	2	25.03	7.79	31.02	92.9	6.43	14.2	18.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR4	15:02:09	1.0	Surface	1	1	25.61	7.84	30.95	92.2	6.33	6.2	4.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR4	15:02:20	1.0	Surface	1	2	25.62	7.84	30.93	92.3	6.33	6.1	5.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR4	15:02:13	2.3	Bottom	3	1	25.6	7.84	30.94	92.2	6.33	6.1	5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR4	15:02:03	2.3	Bottom	3	2	25.59	7.85	30.96	92.2	6.33	6.4	3.8
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR5	17:15:32	4.6	Bottom	3	1	25.04	7.77	31.41	87.1	6	5	6.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:51:37	1.0	Surface	1	2	25.19	7.77	31.47	86	5.92	5.2	7.8
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:52:02	1.0	Surface	1	1	25.11	7.76	31.61	85.4	5.88	5.5	5.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:51:55	3.1	Middle	2	2	25.18	7.77	31.46	86.9	5.99	5.5	7.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:51:26	3.1	Middle	2	1	25.18	7.77	31.46	86.9	5.99	5.5	7.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:51:19	5.1	Bottom	3	1	25.18	7.77	31.46	86.7	5.98	5.6	8.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10A	16:51:49	5.1	Bottom	3	2	25.13	7.77	31.59	85.4	5.89	5.6	6.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10B	17:01:20	1.0	Surface	1	1	25.14	7.77	31.5	85.3	5.88	5	5.8
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10B	17:01:03	1.0	Surface	1	2	25.15	7.77	31.52	85.9	5.92	5	5.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10B	17:00:57	4.0	Bottom	3	1	25.15	7.77	31.52	85.6	5.9	5.3	5.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	SR10B	17:01:13	4.0	Bottom	3	2	25.14	7.77	31.56	85.2	5.87	5.2	5.4
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:08:21	1.0	Surface	1	1	25.28	7.93	29.55	107.3	7.37	5.9	5.1
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:07:18	1.0	Surface	1	2	25.25	7.95	29.65	104.9	7.21	5.7	5.4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:06:51	3.5	Middle	2	1	25.05	7.96	30.03	99.6	6.85	7	5.8
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:08:00	3.5	Middle	2	2	25.03	7.95	29.93	101.4	6.98	6.7	5.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:06:33	5.9	Bottom	3	1	24.96	7.97	30.37	96.8	6.66	7.8	5.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS2	16:07:33	5.9	Bottom	3	2	24.95	7.97	30.17	102.6	7.07	8	5.3
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:26:16	1.0	Surface	1	1	25.26	7.78	31.38	84.7	5.83	6.7	6.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:25:05	1.0	Surface	1	2	25.25	7.78	31.32	85	5.85	6.6	6.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:26:05	6.6	Middle	2	1	25.07	7.78	31.51	83.6	5.77	7	7.2
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:24:55	6.6	Middle	2	2	25.08	7.77	31.57	84.3	5.81	7	6.5
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:24:48	12.2	Bottom	3	1	25.09	7.77	31.64	84	5.79	7.5	6.7
HCLR	HY/2011/03	2013-11-08	Mid-Ebb	Fine	CS(MWF)	16:25:48	12.2	Bottom	3	2	25.08	7.77	31.7	83.1	5.73	7.3	6.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:09:56	1.0	Surface	1	1	25.01	7.79	31.48	90.2	6.23	12.3	13
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:10:35	1.0	Surface	1	2	25.13	7.79	31.48	90.4	6.23	12	14.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:09:48	4.5	Middle	2	1	24.92	7.79	31.47	90.2	6.23	12.3	14.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:10:23	4.5	Middle	2	2	24.92	7.79	31.47	89.8	6.21	12.7	14.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:10:07	8.0	Bottom	3	1	24.92	7.79	31.45	89.7	6.21	13.1	14.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	ISS	12:09:43	8.0	Bottom	3	2	25.03	7.79	31.44	89.9	6.22	13.1	13.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)6	12:01:49	1.0	Surface	1	1	25.2	7.8	31.43	93.6	6.45	15.3	10.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)6	12:01:57	1.0	Surface	1	2	25.2	7.8	31.42	92.9	6.39	15.3	10.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)6	12:01:53	2.4	Bottom	3	1	25.22	7.8	31.42	92.7	6.39	15.1	11.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)6	12:01:41	2.4	Bottom	3	2	25.2	7.8	31.42	93	6.41	15.8	11.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS7	11:56:15	1.1	Surface	1	1	25.16	7.8	31.41	91.8	6.33	15.5	13.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS7	11:55:50	1.0	Surface	1	2	25.08	7.79	31.42	91.6	6.33	15.3	12.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS7	11:55:43	2.3	Bottom	3	1	25.08	7.79	31.41	91.3	6.3	15.7	11.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS7	11:55:53	2.3	Bottom	3	2	25.09	7.79	31.41	91.2	6.29	15.9	12.3
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS8	11:34:20	1.0	Surface	1	1	24.92	7.8	31.42	91.6	6.34	8.5	8.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS8	11:34:12	1.0	Surface	1	2	24.92	7.8	31.42	92.2	6.38	8.3	7.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS8	11:34:16	2.3	Bottom	3	1	24.93	7.8	31.41	91.5	6.33	8.4	8.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS8	11:34:09	2.3	Bottom	3	2	24.94	7.8	31.41	91.8	6.36	8.3	9.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)9	11:50:20	1.0	Surface	1	1	25.01	7.81	31.49	92.9	6.42	11.1	7.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)9	11:50:07	1.0	Surface	1	2	24.99	7.81	31.49	93.3	6.45	11.6	7.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)9	11:50:02	2.3	Bottom	3	1	25	7.81	31.48	93	6.43	11.9	9.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS(MF)9	11:50:12	2.3	Bottom	3	2	25.01	7.81	31.48	92.6	6.4	11.4	9.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:16:30	1.0	Surface	1	1	24.8	7.85	30.33	96.6	6.66	12.2	13.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:15:36	1.0	Surface	1	2	24.81	7.85	30.35	96.3	6.64	12.6	14.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:15:21	5.2	Middle	2	1	24.84	7.84	30.7	95.2	6.55	13.1	15.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:16:14	5.2	Middle	2	2	24.85	7.84	30.75	95	6.53	13.9	13.9
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:15:57	9.4	Bottom	3	1	24.86	7.84	30.95	95.3	6.54	13.2	14.8
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	IS10	11:15:00	9.4	Bottom	3	2	24.86	7.83	30.95	95.3	6.54	13.5	14.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR3	12:17:22	0.8	Middle	2	1	25.07	7.79	31.46	91.5	6.31	13.1	12.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR3	12:17:19	0.8	Middle	2	2	25.07	7.79	31.46	91.6	6.33	13.4	12.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR4	11:40:35	1.0	Surface	1	1	25.03	7.79	31.38	91.2	6.3	10.6	14
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR4	11:40:26	1.0	Surface	1	2	25.06	7.79	31.38	91.7	6.33	10.7	12.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR4	11:40:30	2.6	Bottom	3	1	25.03	7.79	31.38	91	6.29	10.7	12.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR4	11:40:18	2.6	Bottom	3	2	25.08	7.79	31.4	91.3	6.31	10.7	13.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR5	11:25:26	1.0	Surface	1	1	24.81	7.85	30.32	97.1	6.7	8.5	15.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR5	11:24:47	1.0	Surface	1	2	24.81	7.85	30.32	96.9	6.68	8.9	16.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR5	11:25:06	4.5	Bottom	3	1	24.82	7.85	30.55	96.8	6.65	8.6	15.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR5	11:24:30	4.5	Bottom	3	2	24.82	7.85	30.57	96.8	6.66	8.5	16.5
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:12:07	1.0	Surface	1	1	25.12	7.77	31.8	86.9	5.99	8.8	11.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:12:29	1.0	Surface	1	2	25.1	7.77	31.82	86.5	5.96	9.3	12.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:12:23	3.1	Middle	2	1	25.09	7.77	31.85	86.4	5.95	9.6	11.6
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:11:57	3.1	Middle	2	2	25.09	7.76	31.85	86.8	5.98	9.3	11.3
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:12:18	5.1	Bottom	3	1	25.09	7.77	31.84	86.4	5.95	9.6	11.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10A	10:11:47	5.1	Bottom	3	2	25.09	7.76	31.86	86.7	5.97	9.7	10.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10B	10:07:10	1.0	Surface	1	1	25.04	7.76	32.18	86.4	5.95	10.8	15.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10B	10:06:53	1.0	Surface	1	2	25.05	7.75	32.22	86.5	5.95	10.9	16.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10B	10:06:40	3.4	Bottom	3	1	25.05	7.75	32.23	86.2	5.92	11	18.4
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	SR10B	10:06:57	3.4	Bottom	3	2	25.05	7.75	32.21	86.1	5.93	11.1	20.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:41:04	1.0	Surface	1	1	24.82	7.84	29.55	97.1	6.73	6.9	8.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:42:05	1.0	Surface	1	2	24.82	7.84	29.52	97.4	6.75	6.6	7.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:41:43	3.4	Middle	2	1	24.83	7.84	29.75	96.7	6.69	8.6	7.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:40:49	3.4	Middle	2	2	24.83	7.84	29.67	96.8	6.7	8.9	8

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:40:34	5.8	Bottom	3	1	24.83	7.84	30.09	96.8	6.68	9.2	6.1
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS2	12:41:24	5.8	Bottom	3	2	24.83	7.84	30.01	96.8	6.69	8.9	6.9
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:43:11	1.0	Surface	1	1	25.17	7.8	31.47	88.4	6.1	6.1	5.2
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:44:20	1.0	Surface	1	2	25.17	7.8	31.43	90.1	6.21	6	6.9
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:43:01	6.5	Middle	2	1	25	7.79	31.5	87.7	6.06	6.5	6.9
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:43:48	6.5	Middle	2	2	25	7.8	31.49	87.6	6.06	6.4	6.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:43:37	12	Bottom	3	1	25	7.8	31.5	87.5	6.04	6.7	6.7
HCLR	HY/2011/03	2013-11-08	Mid-Flood	Fine	CS(M)F5	10:42:52	12	Bottom	3	2	25	7.79	31.5	87.7	6.06	6.6	6.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:54:49	1.0	Surface	1	1	24.83	7.76	30.88	91.4	6.36	9.7	12.8
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:55:26	1.0	Surface	1	2	24.83	7.76	30.87	91.3	6.35	10.1	12.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:54:40	4.2	Middle	2	1	24.84	7.76	30.89	91.2	6.34	9.6	11.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:55:15	4.2	Middle	2	2	24.84	7.76	30.89	91	6.32	10.1	12.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:55:07	7.4	Bottom	3	1	24.84	7.76	30.9	91	6.33	10.1	11.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS5	07:54:29	7.4	Bottom	3	2	24.84	7.76	30.58	91.3	6.35	9.8	11.6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F6	07:47:09	1.0	Surface	1	1	24.7	7.78	30.57	94.2	6.58	24.1	26.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F6	07:46:50	1.0	Surface	1	2	24.7	7.78	30.57	94.3	6.58	24.2	25.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F6	07:46:39	2.1	Bottom	3	1	24.69	7.78	30.57	94.3	6.58	24.5	28.1
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F6	07:46:58	2.1	Bottom	3	2	24.69	7.78	30.58	94.3	6.58	24.3	30.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS7	07:40:46	1.0	Surface	1	1	24.72	7.78	30.64	94.3	6.58	13.9	14.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS7	07:40:30	1.0	Surface	1	2	24.72	7.78	30.64	94.3	6.58	13.3	16.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS7	07:40:38	2.0	Bottom	3	1	24.72	7.78	30.64	94.2	6.57	13.3	16.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS7	07:40:19	2.0	Bottom	3	2	24.72	7.78	30.64	94.2	6.57	13.8	15.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS8	07:17:49	1.0	Surface	1	1	24.76	7.78	30.6	92.5	6.45	11.5	13.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS8	07:17:26	1.0	Surface	1	2	24.76	7.77	30.6	92.6	6.46	11.3	13.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS8	07:17:14	3.0	Bottom	3	1	24.76	7.77	30.6	92.5	6.46	11.2	12.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS8	07:17:38	3.0	Bottom	3	2	24.76	7.77	30.6	92.5	6.45	11.5	13
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F9	07:34:22	1.0	Surface	1	1	24.75	7.78	30.64	93.8	6.54	17.3	15.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F9	07:34:42	1.0	Surface	1	2	24.74	7.78	30.64	93.6	6.53	17.8	16.6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F9	07:34:30	2.6	Bottom	3	1	24.74	7.78	30.65	93.6	6.53	17.5	16.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS(M)F9	07:34:12	2.6	Bottom	3	2	24.74	7.78	30.64	93.8	6.54	17.5	17.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:59:07	1.0	Surface	1	1	24.94	8.13	30.19	94.4	6.57	3.8	7.8
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:58:21	1.0	Surface	1	2	24.94	8.13	30.19	94.4	6.58	4	6.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:57:55	4.8	Middle	2	1	24.92	8.13	30.23	94	6.55	5.3	5.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:58:46	4.8	Middle	2	2	24.92	8.13	30.23	94	6.55	5.5	6.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:57:44	8.6	Bottom	3	1	24.92	8.13	30.26	94	6.55	5.8	8
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	IS10	06:58:31	8.6	Bottom	3	2	24.93	8.13	30.22	94.1	6.56	6	6.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR3	08:03:06	0.7	Middle	2	1	24.83	7.76	30.88	91.5	6.36	9.8	14.1
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR3	08:03:14	0.7	Middle	2	2	24.84	7.76	30.88	91.5	6.36	9.7	12.1
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR4	07:24:13	1.0	Surface	1	1	24.66	7.71	30.24	88.2	6.17	7.7	9.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR4	07:23:56	1.0	Surface	1	2	24.66	7.71	30.25	88.4	6.19	7.9	9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR4	07:24:05	2.7	Bottom	3	1	24.66	7.71	30.25	88.3	6.18	7.9	11
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR4	07:23:48	2.7	Bottom	3	2	24.65	7.71	30.25	88.6	6.2	7.8	11
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR5	07:18:08	1.0	Surface	1	1	24.93	8.13	30.19	94.2	6.56	5.5	8.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR5	07:17:47	1.0	Surface	1	2	24.93	8.13	30.2	94.2	6.57	5.1	7.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR5	07:17:39	4.4	Bottom	3	1	24.93	8.13	30.21	94.1	6.55	6.2	10.6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR5	07:17:55	4.4	Bottom	3	2	24.93	8.13	30.2	94.1	6.55	6	10.7
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:08:42	1.0	Surface	1	1	25.03	7.7	31.6	85.1	5.87	4.1	5.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:08:12	1.0	Surface	1	2	25.02	7.7	31.58	85.2	5.88	4.2	5.6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:08:30	3.2	Middle	2	1	25.02	7.7	31.59	85.1	5.87	4.2	6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:08:03	3.2	Middle	2	2	25.03	7.69	31.58	85	5.87	4.2	5.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:08:21	5.4	Bottom	3	1	25.02	7.69	31.59	85.1	5.88	4.1	5.9
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10A	06:07:52	5.4	Bottom	3	2	25.04	7.69	31.6	85	5.87	4.2	6.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10B	06:02:09	1.0	Surface	1	1	25.02	7.65	31.47	85	5.87	5.5	6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10B	06:02:30	1.0	Surface	1	2	25.03	7.66	31.49	85	5.87	5.6	6.3
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10B	06:02:20	4.0	Bottom	3	1	25.02	7.65	31.48	84.8	5.86	5.5	7.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	SR10B	06:01:58	4.0	Bottom	3	2	25.02	7.64	31.46	85	5.87	5.6	7
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:31:37	1.0	Surface	1	1	24.93	8.13	30.16	94.4	6.58	3.3	6.7
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:31:00	1.0	Surface	1	2	24.93	8.13	30.16	94.4	6.58	3.3	6.7
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:30:43	3.2	Middle	2	1	24.93	8.13	30.18	94	6.55	3.2	6.4
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:31:24	3.2	Middle	2	2	24.93	8.13	30.16	94.3	6.57	3.5	5.8
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:30:37	5.3	Bottom	3	1	24.93	8.13	30.18	94.1	6.56	5.3	6.5
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS2	08:31:08	5.3	Bottom	3	2	24.93	8.13	30.18	94.3	6.57	5.4	6.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS(M)F5	06:45:55	1.0	Surface	1	1	24.92	7.76	30.78	88.8	6.17	4.2	8.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS(M)F5	06:45:11	1.0	Surface	1	2	24.92	7.76	30.81	88.7	6.16	4	7.6
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS(M)F5	06:45:02	6.3	Middle	2	1	24.98	7.75	31.08	88.3	6.12	4.1	7.1
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS(M)F5	06:45:42	6.3	Middle	2	2	24.99	7.75	31.12	88	6.09	4.3	5.2
HCLR	HY/2011/03	2013-11-11	Mid-Ebb	Fine	CS(M)F5	06:44:49	11.5	Bottom	3	1	24.98	7.75	31.16	88.9	6.15	4.2	11.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(M)F5	06:45:30	11.5	Bottom	3	2	24.99	7.75	31.25	88.4	6.12	4.3	13
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:40:32	1.0	Surface	1	1	24.81	7.76	31.12	94	6.53	18.4	20.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:41:02	1.0	Surface	1	2	24.81	7.76	31.11	93.9	6.52	18.2	22.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:40:51	4.4	Middle	2	1	24.81	7.76	31.12	93.6	6.5	18.8	19.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:40:21	4.4	Middle	2	2	24.81	7.76	31.13	93.6	6.5	18.8	21.5
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:40:08	7.7	Bottom	3	1	24.81	7.76	31.13	93.6	6.5	18.4	20.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS5	13:40:42	7.7	Bottom	3	2	24.81	7.76	31.12	93.6	6.5	19.3	23.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F6	13:47:14	1.0	Surface	1	1	24.85	7.77	31.04	94.7	6.57	23.8	30.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F6	13:47:01	1.0	Surface	1	2	24.85	7.77	31.03	94.7	6.58	23.6	29.5
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F6	13:46:51	2.0	Bottom	3	1	24.85	7.77	31.03	94.8	6.58	23.5	32.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F6	13:47:08	2.0	Bottom	3	2	24.85	7.77	31.03	94.7	6.58	23.6	32.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS7	13:53:55	1.0	Surface	1	1	24.89	7.77	30.99	95.9	6.65	16.8	20.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS7	13:53:38	1.0	Surface	1	2	24.88	7.77	30.99	96	6.67	16.8	21.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS7	13:53:29	2.1	Bottom	3	1	24.88	7.77	31	96.1	6.67	17.1	21.8
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS7	13:53:46	2.1	Bottom	3	2	24.88	7.77	30.99	95.9	6.66	16.9	20.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS8	14:17:22	1.0	Surface	1	1	24.97	7.78	31.16	92.8	6.43	11.3	13.8
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS8	14:17:04	1.0	Surface	1	2	24.97	7.78	31.17	92.8	6.42	11.7	13.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS8	14:16:50	2.9	Bottom	3	1	24.97	7.77	31.17	92.8	6.43	11.4	12
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS8	14:17:10	2.9	Bottom	3	2	24.97	7.78	31.16	92.7	6.42	11.7	11.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F9	14:00:29	1.0	Surface	1	1	24.97	7.78	30.83	93.6	6.5	17.7	20.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F9	14:00:08	1.0	Surface	1	2	24.99	7.78	30.83	93.8	6.51	17.7	20
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F9	13:59:58	2.7	Bottom	3	1	24.99	7.78	30.83	93.7	6.5	18.3	23
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS(M)F9	14:00:18	2.7	Bottom	3	2	24.97	7.78	30.83	93.6	6.5	17.7	22
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:36:30	1.0	Surface	1	1	24.98	8.16	30.34	94.6	6.58	10.6	15.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:37:32	1.0	Surface	1	2	24.98	8.16	30.32	94.4	6.57	10.8	15.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:37:21	4.9	Middle	2	1	24.96	8.16	30.38	94.1	6.55	11.8	16.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:36:07	4.9	Middle	2	2	24.97	8.16	30.36	94.3	6.56	11.9	16.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:35:37	8.8	Bottom	3	1	24.97	8.16	30.36	94.3	6.56	11.7	17.8
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	IS10	14:37:13	8.8	Bottom	3	2	24.96	8.16	30.39	94.1	6.55	11.9	19.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR3	13:32:40	0.7	Middle	2	1	24.81	7.77	31.17	94.7	6.57	17.7	21.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR3	13:32:30	0.7	Middle	2	2	24.98	7.78	31.31	91.1	6.3	7.7	20.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR4	14:12:05	1.0	Surface	1	1	24.98	7.78	31.31	91.1	6.3	7.7	10.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR4	14:11:47	1.0	Surface	1	2	24.98	7.78	31.34	91.2	6.31	7.9	10.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR4	14:11:36	2.7	Bottom	3	1	24.97	7.78	31.35	91.3	6.31	7.9	9.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR4	14:11:55	2.7	Bottom	3	2	24.98	7.78	31.32	91.1	6.3	7.8	10.8
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR5	14:22:25	1.0	Surface	1	1	24.97	8.16	30.33	94.8	6.59	11.7	19.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR5	14:22:50	1.0	Surface	1	2	24.97	8.16	30.36	94.7	6.59	12.1	18.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR5	14:22:09	4.3	Bottom	3	1	24.95	8.16	30.39	94.6	6.59	13.8	24.1
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR5	14:22:38	4.3	Bottom	3	2	24.96	8.16	30.38	94.5	6.58	13.5	24.9
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:28:35	1.0	Surface	1	1	25.08	7.76	31.79	85.8	5.91	5.4	5.1
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:28:02	1.0	Surface	1	2	25.08	7.76	31.79	85.9	5.92	5.3	4.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:27:52	3.3	Middle	2	1	25.07	7.76	31.85	85.8	5.91	5.1	4.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:28:25	3.3	Middle	2	2	25.06	7.76	31.8	85.7	5.9	5.8	4.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:28:14	5.6	Bottom	3	1	25.06	7.76	31.84	85.6	5.9	5.8	4.1
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10A	15:27:37	5.6	Bottom	3	2	25.05	7.76	31.85	85.8	5.91	5.7	4.7
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10B	15:36:53	1.0	Surface	1	1	25.07	7.76	31.79	85.8	5.91	5.1	4.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10B	15:37:15	1.0	Surface	1	2	25.08	7.76	31.79	85.7	5.91	5.1	5
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10B	15:37:04	4.4	Bottom	3	1	25.07	7.76	31.8	85.5	5.89	5.4	4.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	SR10B	15:36:43	4.4	Bottom	3	2	25.06	7.76	31.81	85.7	5.9	5.5	5.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:08:27	1.0	Surface	1	1	25.03	8.19	30.08	94.7	6.59	10	17
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:09:09	1.0	Surface	1	2	25.03	8.19	30.01	94.1	6.55	9.6	15.3
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:08:57	3.6	Middle	2	1	25.04	8.19	29.99	94	6.55	10	16.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:08:03	3.6	Middle	2	2	25.03	8.2	30.07	95.2	6.62	10.5	14
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:07:51	6.1	Bottom	3	1	25.03	8.18	30.11	95.9	6.67	10.4	15.4
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS2	13:08:46	6.1	Bottom	3	2	25.04	8.19	29.99	94	6.55	10.2	16.2
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(M)F5	14:53:17	1.0	Surface	1	1	25.03	7.76	31.31	88.9	6.14	5.8	4.6
HCLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(M)F5	14:53:51	1.0	Surface	1	2	25.04	7.76	31.3	89.2	6.16	5.9	4

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HKLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(MF)S	14:53:39	6.5	Middle	2	1	25.01	7.76	31.37	88.3	6.11	7.9	6.2
HKLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(MF)S	14:53:06	6.5	Middle	2	2	25	7.75	31.39	87.9	6.08	7.8	5.1
HKLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(MF)S	14:53:29	11.9	Bottom	3	1	25.01	7.76	31.38	88.5	6.14	7.6	5.4
HKLR	HY/2011/03	2013-11-11	Mid-Flood	Fine	CS(MF)S	14:52:50	11.9	Bottom	3	2	25	7.75	31.41	88.5	6.12	7.7	5.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:24:38	1.0	Surface	1	1	24.2	7.74	31.29	91.4	6.41	10.2	8.6
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:25:12	1.0	Surface	2	2	24.18	7.74	31.23	91.6	6.43	10.6	9.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:24:59	4.2	Middle	2	1	24.27	7.74	31.52	91.3	6.38	12.6	7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:24:28	4.2	Middle	2	2	24.27	7.74	31.53	91.5	6.4	12.1	7.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:24:49	7.3	Bottom	3	1	24.27	7.74	31.56	91.3	6.38	12.8	8.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS5	10:24:15	7.3	Bottom	3	2	24.28	7.74	31.59	91.5	6.4	12.2	8.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)6	10:17:21	1.0	Surface	1	1	24.02	7.73	30.88	91.6	6.46	20.5	13.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)6	10:17:02	1.0	Surface	1	2	23.98	7.73	30.84	91.9	6.49	20.1	14.3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)6	10:17:12	2.2	Bottom	3	1	24.09	7.73	30.97	91.9	6.47	20.3	12.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS7	10:16:49	2.2	Bottom	3	2	24.13	7.72	31.02	92	6.47	20.4	14.8
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS7	10:10:17	1.0	Surface	1	1	23.96	7.73	31	93	6.56	8.4	7.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS7	10:10:02	1.0	Surface	1	2	23.96	7.73	31	93.1	6.57	8.4	8.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS7	10:09:52	2.2	Bottom	3	1	23.97	7.73	31	93.3	6.58	8.2	11.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS7	10:10:07	2.2	Bottom	3	2	23.97	7.73	31	93.1	6.57	8.5	9.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS8	09:45:25	1.0	Surface	1	1	24.2	7.73	31.16	90.6	6.36	9.6	10.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS8	09:45:48	1.0	Surface	1	2	24.19	7.73	31.18	90.6	6.36	9.8	10
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS8	09:45:37	3.0	Bottom	3	1	24.3	7.73	31.28	90.5	6.33	15.5	9.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS8	09:45:11	3.0	Bottom	3	2	24.32	7.72	31.3	90.3	6.32	15.6	9.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)9	10:03:41	1.0	Surface	1	1	24.05	7.72	31.02	92.1	6.49	9.2	10.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)9	10:03:25	1.0	Surface	1	2	24.05	7.72	31.03	92.1	6.49	9.2	10.2
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)9	10:03:15	2.7	Bottom	3	1	24.03	7.72	31.02	91.9	6.47	9.6	9.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS(MF)9	10:03:33	2.7	Bottom	3	2	24.04	7.72	31.02	92.1	6.49	9.7	10.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:34:15	1.0	Surface	1	1	24.47	8.03	29.29	92.8	6.55	3	3.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:35:25	1.0	Surface	1	2	24.49	8.07	29.27	92	6.49	3.1	2
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:35:14	5.6	Middle	2	1	24.57	8.08	29.4	91.8	6.45	3.1	3.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:34:08	5.6	Middle	2	2	24.48	8.03	29.32	92.8	6.54	3.3	4.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:35:07	10.2	Bottom	3	1	24.6	8.06	30.92	91.6	6.41	3.3	5.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	IS10	09:33:47	10.2	Bottom	3	2	24.6	8.01	30.86	92.7	6.48	3.4	4.3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR3	10:31:04	0.8	Middle	2	1	24.17	7.74	31.24	91.8	6.44	7.6	9.4
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR3	10:30:56	0.8	Middle	2	2	24.17	7.74	31.23	91.8	6.44	7.7	7.5
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR4	09:51:44	1.0	Surface	1	1	23.65	7.67	30.1	87.1	6.21	5.9	2.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR4	09:52:01	1.0	Surface	1	2	23.67	7.67	30.11	86.6	6.17	5.9	2.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR4	09:51:52	2.8	Bottom	3	1	23.69	7.67	30.24	87	6.19	6	3.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR4	09:51:34	2.8	Bottom	3	2	23.67	7.67	30.23	87.7	6.24	6	4.3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR5	09:43:33	1.0	Surface	1	1	24.47	8.08	29.23	92.3	6.52	2.5	3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR5	09:43:48	1.0	Surface	1	2	24.47	8.08	29.23	92.4	6.52	2.5	2.1
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR5	09:43:38	4.0	Bottom	3	1	24.47	8.08	29.23	92.3	6.52	2.5	3.3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR5	09:43:25	4.0	Bottom	3	2	24.46	8.08	29.23	92.1	6.51	2.6	4
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:34:27	1.0	Surface	1	1	24.61	7.7	32.1	86	5.96	4.4	5.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:33:57	1.0	Surface	1	2	24.61	7.7	32.08	86.2	5.98	4.4	5.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:33:48	3.2	Middle	2	1	24.61	7.7	32.1	86.2	5.97	4.9	3.8
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:34:19	3.2	Middle	2	2	24.6	7.7	32.13	86	5.96	4.8	3.2
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:33:38	5.3	Bottom	3	1	24.62	7.7	32.13	85.9	5.96	4.9	6.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10A	08:34:10	5.3	Bottom	3	2	24.61	7.7	32.13	85.9	5.95	4.9	5.8
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10B	08:27:50	1.0	Surface	1	1	24.62	7.64	31.96	85.9	5.96	4.9	5.6
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10B	08:28:12	1.0	Surface	1	2	24.63	7.65	32	85.8	5.95	4.9	4.4
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10B	08:27:38	4.3	Bottom	3	1	24.62	7.64	31.99	85.6	5.94	4.8	5.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	SR10B	08:28:00	4.3	Bottom	3	2	24.62	7.65	31.99	85.7	5.94	4.8	5.2
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:47	1.0	Surface	1	1	24.61	8.08	28.6	91.5	6.47	2	3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:22	1.0	Surface	1	2	24.61	8.08	28.66	91.6	6.47	2.1	2.7
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:13	4.1	Middle	2	1	24.64	8.09	28.98	91.6	6.46	2.2	2.6
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:38	4.1	Middle	2	2	24.65	8.08	28.76	91.5	6.45	2.2	3
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:00	7.1	Bottom	3	1	24.6	8.08	29.26	91.5	6.46	2.3	4
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS2	10:46:32	7.1	Bottom	3	2	24.64	8.08	28.88	91.4	6.45	2.2	3.6
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(MF)S	09:09:42	1.0	Surface	1	1	24.56	7.73	31.89	87	6.04	3.7	4
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(MF)S	09:08:50	1.0	Surface	1	2	24.56	7.73	31.9	87	6.04	3.9	2.2
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(MF)S	09:08:36	6.5	Middle	2	1	24.64	7.72	32.12	85.9	5.95	4.6	3.9
HKLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(MF)S	09:09:25	6.5	Middle	2	2	24.63	7.72	32.1	86	5.96	4.5	3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(M)F5	09:09:12	12.0	Bottom	3	1	24.66	7.72	32.16	86	5.95	5.1	5.1
HCLR	HY/2011/03	2013-11-13	Mid-Ebb	Cloudy	CS(M)F5	09:08:27	12.0	Bottom	3	2	24.66	7.72	32.16	86	5.96	5.3	5.9
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:49	1.0	Surface	1	1	24.07	7.73	31.06	90.7	6.38	11.8	15.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:21	1.0	Surface	1	2	24.08	7.73	31.07	90.6	6.38	12.2	13.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:37	4.1	Middle	2	1	24.11	7.73	31.1	90.5	6.36	11.9	13.9
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:13	4.1	Middle	2	2	24.13	7.73	31.09	90.3	6.35	11.6	13.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:30	7.2	Bottom	3	1	24.09	7.73	31.1	90.5	6.36	12.1	16.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS5	15:11:06	7.2	Bottom	3	1	24.13	7.73	31.14	90.4	6.35	11.7	15.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F6	15:18:37	1.0	Surface	1	1	23.88	7.72	31.01	92.2	6.51	16.5	9.7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F6	15:18:51	1.0	Surface	1	2	23.88	7.72	31.01	91.8	6.48	16.4	8.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F6	15:18:27	2.2	Bottom	3	1	23.89	7.71	31.02	92.4	6.53	16.7	11.4
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F6	15:18:42	2.2	Bottom	3	2	23.89	7.72	31.02	92	6.5	16.8	10.7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS7	15:25:59	1.0	Surface	1	1	23.92	7.71	30.96	92.1	6.51	8.7	9.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS7	15:26:16	1.0	Surface	1	2	23.92	7.71	30.95	91.8	6.48	8.7	8.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS7	15:26:07	2.1	Bottom	3	1	23.91	7.71	30.97	91.8	6.49	8.9	7.7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS7	15:25:49	2.1	Bottom	3	2	23.91	7.71	30.96	92.2	6.51	8.7	9.4
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS8	15:50:13	1.0	Surface	1	2	23.96	7.72	31.09	90.8	6.4	13.3	11.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS8	15:50:35	1.0	Surface	1	1	23.97	7.72	31.09	90.5	6.38	13.5	12.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS8	15:50:00	2.8	Bottom	3	1	24.08	7.71	31.25	91.1	6.4	13	12.5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS8	15:50:23	2.8	Bottom	3	2	24.1	7.71	31.27	90.9	6.39	13.6	13.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F9	15:32:45	1.0	Surface	1	1	24.03	7.72	31.05	91.8	6.47	9.6	8.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F9	15:33:03	1.0	Surface	1	2	24.06	7.72	31.07	91.4	6.43	10.1	9.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F9	15:32:36	2.7	Bottom	3	1	24.05	7.72	31.13	91.9	6.47	10.1	8.5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS(M)F9	15:32:54	2.7	Bottom	3	2	24.06	7.72	31.14	91.7	6.45	10.7	7.6
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:53:02	1.0	Surface	1	1	24.45	8.11	29.44	92.4	6.51	3.2	4.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:52:40	1.0	Surface	1	2	24.44	8.11	29.43	92.7	6.52	3.3	4.7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:52:33	5.6	Middle	2	1	24.45	8.1	30.06	92.4	6.51	3.5	4.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:52:56	5.6	Middle	2	2	24.46	8.1	30.01	92.2	6.48	3.4	3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:52:49	10.2	Bottom	3	1	24.45	8.1	30.54	92.2	6.48	3.4	6.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	IS10	15:52:24	10.2	Bottom	3	2	24.45	8.09	30.36	92.3	6.49	3.5	5.4
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR3	15:01:22	0.7	Middle	2	1	24.03	7.72	31.03	92.6	6.53	12.8	17.9
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR3	15:01:14	0.7	Middle	2	2	24.04	7.72	31.05	93.3	6.57	13.1	16.5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR4	15:44:38	1.0	Surface	1	1	24.08	7.7	31.14	91	6.4	22.2	12.7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR4	15:44:52	2.9	Bottom	3	1	24.08	7.7	31.16	93.6	6.58	22.5	21.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR4	15:44:29	2.9	Bottom	3	2	24.08	7.7	31.16	93.6	6.58	22.5	21.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR4	15:44:45	2.9	Bottom	3	1	24.08	7.7	31.16	93.6	6.58	22.5	21.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR5	15:36:58	1.0	Surface	1	1	24.46	8.1	29.51	92.9	6.55	3.3	4.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR5	15:36:43	1.0	Surface	1	2	24.42	8.1	29.28	92.9	6.56	3.3	4.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR5	15:36:51	3.9	Bottom	3	1	24.45	8.09	29.69	92.8	6.55	3.2	4.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR5	15:36:29	3.9	Bottom	3	2	24.45	8.1	30.24	92.9	6.52	3.4	4.5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:03:53	1.0	Surface	1	1	24.55	7.72	32.34	85.4	5.92	6.6	7.5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:04:18	1.0	Surface	1	2	24.54	7.72	32.33	85.2	5.91	6.7	8.6
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:04:10	3.3	Middle	2	1	24.55	7.72	32.34	85.3	5.91	6.8	6.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:04:02	3.3	Middle	2	2	24.55	7.72	32.33	85.2	5.91	6.7	5.6
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:03:35	5.6	Bottom	3	1	24.55	7.72	32.33	85.2	5.9	6.8	7.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10A	17:03:35	5.6	Bottom	3	2	24.56	7.72	32.34	85.3	5.91	6.6	7
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10B	17:14:00	1.0	Surface	1	1	24.55	7.73	32.31	85.1	5.9	5.3	6.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10B	17:13:43	1.0	Surface	1	2	24.55	7.72	32.32	85.1	5.9	5.3	6.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10B	17:13:35	4.3	Bottom	3	1	24.55	7.72	32.32	85	5.89	5.4	7.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	SR10B	17:13:51	4.3	Bottom	3	2	24.55	7.73	32.3	85.1	5.9	6.7	7.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:37:30	1.0	Surface	1	1	24.5	8.13	29.27	92.8	6.53	3.3	4.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:36:52	1.0	Surface	1	2	24.49	8.13	29.26	94.7	6.62	3.3	4.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:37:18	4.2	Middle	2	1	24.57	8.13	29.58	92.5	6.49	3.3	4.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:37:18	4.2	Middle	2	2	24.57	8.13	29.58	92.5	6.49	3.3	4.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:36:34	4.2	Middle	2	1	24.57	8.15	29.7	93.5	6.6	3.4	3.3
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:37:08	7.4	Bottom	3	1	24.55	8.12	30.69	92.1	6.48	3.5	5
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS2	14:36:18	7.4	Bottom	3	2	24.56	8.15	30.72	93.1	6.55	3.4	3.6
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:30:19	1.0	Surface	1	1	24.56	7.72	32.05	86.8	6.03	8.6	9.4
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:29:47	1.0	Surface	1	2	24.56	7.72	32.06	87	6.04	8.7	9.4
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:29:38	6.6	Middle	2	1	24.56	7.72	32.06	86.8	6.02	8.9	8.8
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:30:08	6.6	Middle	2	2	24.56	7.72	32.06	86.5	6.01	8.6	9.1
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:29:59	12.2	Bottom	3	1	24.56	7.72	32.06	86.5	6	8.7	9.2
HCLR	HY/2011/03	2013-11-13	Mid-Flood	Cloudy	CS(M)F5	16:29:28	12.2	Bottom	3	2	24.56	7.72	32.06	86.8	6.02	8.9	8.1

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:18:19	1.0	Surface	1	1	23.55	7.83	31.23	92.6	6.57	11.1	10.9
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:19:00	1.0	Surface	1	2	23.61	7.84	31.24	92.7	6.57	10.6	11.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:18:08	4.7	Middle	2	1	23.5	7.83	31.27	92.3	6.56	12.2	12.3
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:18:41	4.7	Middle	2	2	23.49	7.84	31.29	92.3	6.55	12.6	10.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:18:34	8.4	Bottom	3	1	23.46	7.84	31.33	92.2	6.54	13	11.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS5	12:18:02	8.4	Bottom	3	2	23.5	7.83	31.28	92.3	6.55	12.2	11.4
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F6	12:10:45	1.0	Surface	1	1	23.68	7.78	30.82	91.3	6.48	19.9	8.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F6	12:11:09	1.0	Surface	1	2	23.75	7.79	30.83	91.7	6.5	20.5	9.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F6	12:10:51	2.3	Bottom	3	1	23.6	7.78	30.84	91.2	6.49	23	10.6
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F6	12:10:34	2.3	Bottom	3	2	23.66	7.77	30.82	91.5	6.48	23.1	9.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS7	12:01:44	1.0	Surface	1	1	23.64	7.78	30.84	93.7	6.65	9.3	12.4
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS7	12:02:00	1.0	Surface	1	2	23.71	7.78	30.81	93.9	6.66	8.7	11.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS7	12:01:49	2.3	Bottom	3	1	23.62	7.78	30.8	93.6	6.65	12	11.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS7	12:01:36	2.3	Bottom	3	2	23.68	7.77	30.81	93.7	6.67	12.2	11.6
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS8	11:36:28	1.0	Surface	1	1	23.71	7.77	30.82	92.6	6.57	8.4	8.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS8	11:36:07	1.0	Surface	1	2	23.64	7.76	30.84	93.3	6.63	9	9.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS8	11:36:00	2.6	Bottom	3	1	23.68	7.76	30.8	94	6.67	9.1	9.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS8	11:36:15	2.6	Bottom	3	2	23.57	7.77	30.82	92.7	6.59	8.9	9.7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F9	11:55:27	1.0	Surface	1	1	23.49	7.79	30.8	91.4	6.51	13.5	12.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F9	11:55:12	1.0	Surface	1	2	23.43	7.79	30.81	91.9	6.55	13.6	11.9
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F9	11:55:18	2.4	Bottom	3	1	23.45	7.79	30.78	91.6	6.53	13.1	15
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS(M)F9	11:55:07	2.4	Bottom	3	2	23.45	7.78	30.79	92	6.56	13.7	14.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:14:30	1.0	Surface	1	1	23.9	8.1	30.29	92.6	6.57	7.5	4.6
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:15:06	1.0	Surface	1	2	23.93	8.1	30.26	92.8	6.58	7.4	5.7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:14:55	5.3	Middle	2	1	23.79	8.09	30.69	91.5	6.5	8.7	5.1
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:14:19	5.3	Middle	2	2	23.78	8.1	30.71	91.8	6.49	8.5	5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:14:09	9.6	Bottom	3	1	23.75	8.1	30.83	91.7	6.5	8.7	6.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	IS10	11:14:44	9.6	Bottom	3	2	23.77	8.09	30.77	92.3	6.54	8.5	7.3
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR3	12:28:01	0.9	Middle	2	1	23.6	7.84	31.22	93.6	6.63	11	9.6
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR3	12:28:11	0.9	Middle	2	2	23.61	7.84	31.21	93.2	6.61	11.7	10.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR4	11:43:26	1.0	Surface	1	1	23.65	7.77	30.49	90.9	6.47	6.5	5.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR4	11:44:00	1.0	Surface	1	2	23.67	7.77	30.48	90	6.44	6.1	4.4
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR4	11:43:39	2.7	Bottom	3	1	23.61	7.77	30.59	90.2	6.41	7.1	7.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR4	11:43:17	2.7	Bottom	3	2	23.65	7.77	30.53	91.4	6.5	6.9	5.7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR5	11:23:27	1.0	Surface	1	1	23.9	8.1	30.27	93.4	6.62	4.5	5.7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR5	11:23:47	1.0	Surface	1	2	23.91	8.09	30.23	93.8	6.65	4.6	6.2
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR5	11:23:36	3.5	Bottom	3	1	23.85	8.09	30.46	93.6	6.64	4.5	8.6
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR5	11:23:17	3.5	Bottom	3	2	23.82	8.09	30.53	93.2	6.61	4.6	7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:26:17	1.0	Surface	1	1	24.27	7.76	31.14	89.4	6.27	4.2	5.2
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:25:32	1.0	Surface	1	2	24.3	7.76	31.1	90.1	6.31	4.2	4.7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:25:17	3.3	Middle	2	1	24.05	7.76	31.61	87.8	6.17	4.6	5.3
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:26:06	3.3	Middle	2	2	24.05	7.76	31.64	87.8	6.16	4.6	4.2
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:25:56	5.5	Bottom	3	1	24.07	7.76	32.04	88.9	6.22	4.5	5.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10A	10:25:08	5.5	Bottom	3	2	24.09	7.75	31.83	89	6.23	4.4	5.2
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10B	10:12:29	1.0	Surface	1	1	24.19	7.71	31.22	89.8	6.3	4.3	3.3
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10B	10:12:08	1.0	Surface	1	2	24.12	7.7	31.26	89.6	6.3	4.3	3.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10B	10:12:19	4.7	Bottom	3	1	24.07	7.7	31.57	89.5	6.28	4.6	3.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	SR10B	10:11:57	4.7	Bottom	3	2	24.11	7.68	31.45	90	6.32	4.5	3.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:47:25	1.0	Surface	1	1	23.89	8.1	30.04	93.8	6.66	7	5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:46:48	1.0	Surface	1	2	23.88	8.1	30.07	93.7	6.65	7.4	5.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:47:13	4.1	Middle	2	1	23.63	8.1	30.65	93	6.61	11.2	8.2
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:46:37	4.1	Middle	2	2	23.63	8.1	30.67	93.2	6.62	11	6.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:47:04	7.1	Bottom	3	1	23.61	8.1	30.89	92.9	6.6	12.8	7
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS2	12:46:16	7.1	Bottom	3	2	23.61	8.1	30.84	92.9	6.6	12.5	6.8
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:57:30	1.0	Surface	1	1	24.18	7.8	31.37	88	6.17	4.4	3.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:58:12	1.0	Surface	1	2	24.12	7.81	31.37	87.5	6.15	4.5	4.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:58:01	6.7	Middle	2	1	24.07	7.8	32.07	86.6	6.06	4.6	3
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:57:17	6.7	Middle	2	2	24.08	7.79	32.05	86.7	6.07	4.9	4.9
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:57:04	12.3	Bottom	3	1	24.07	7.79	32.05	87.7	6.14	4.4	3.5
HCLR	HY/2011/03	2013-11-15	Mid-Ebb	Sunny	CS(M)F5	10:57:43	12.3	Bottom	3	2	24.08	7.79	32.02	87.9	6.15	4.5	5.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS5	15:57:50	1.0	Surface	1	1	24.01	7.83	31.27	93.8	6.6	11.5	12.8
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS5	15:57:10	1.0	Surface	1	2	24.03	7.83	31.28	94.6	6.65	11.9	11.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	ISS	15:57:00	4.7	Middle	2	1	24.05	7.83	31.31	94.5	6.65	11.7	13.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	ISS	15:57:35	4.7	Middle	2	2	23.81	7.83	31.37	93	6.56	12.2	13.6
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	ISS	15:56:50	8.4	Bottom	3	1	23.92	7.83	31.32	94.4	6.61	12.3	11.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	ISS	15:57:23	8.4	Bottom	3	2	23.92	7.83	31.32	93.9	6.64	12.8	13.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F6	16:05:37	1.0	Surface	1	1	24.08	7.81	31.19	93.6	6.58	22.2	10.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F6	16:05:19	1.0	Surface	1	2	24.09	7.8	31.17	94.6	6.65	20.8	11.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F6	16:05:28	2.2	Bottom	3	1	23.85	7.8	31.17	92.5	6.53	23.3	11.7
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F6	16:05:08	2.2	Bottom	3	2	23.92	7.79	31.15	94.1	6.64	21.8	11
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS7	16:13:27	1.0	Surface	1	1	23.95	7.83	31.15	95	6.7	11.8	6.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS7	16:13:13	1.0	Surface	1	2	23.89	7.82	31.16	94.3	6.65	12.7	5.5
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS7	16:13:20	2.4	Bottom	3	1	23.94	7.82	31.12	94.6	6.67	15	8.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS7	16:13:06	2.4	Bottom	3	2	23.79	7.82	31.12	94.2	6.66	15.7	6.5
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS8	16:39:57	1.0	Surface	1	1	24.08	7.79	31.23	94.2	6.62	6.2	6
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS8	16:40:10	1.0	Surface	1	2	24.08	7.8	31.21	94.1	6.62	6.2	6.7
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS8	16:39:49	2.7	Bottom	3	1	24.07	7.79	31.22	94	6.61	6.3	7.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS8	16:40:03	2.7	Bottom	3	2	24.07	7.8	31.21	94	6.61	6.2	6.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F9	16:20:41	1.0	Surface	1	1	23.75	7.81	31.07	91.2	6.46	21.6	19
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F9	16:20:23	1.0	Surface	1	2	23.71	7.81	31.08	91.4	6.47	21.1	20.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F9	16:20:31	2.4	Bottom	3	1	23.64	7.81	31.09	91	6.45	22.8	21.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS(M)F9	16:20:14	2.4	Bottom	3	2	23.65	7.81	31.09	91.6	6.49	23.7	19.8
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:12:30	1.0	Surface	1	1	24.07	8.12	30.01	93.9	6.65	5.6	5.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:11:46	1.0	Surface	1	2	24.07	8.12	30.02	93.5	6.62	5.7	4.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:12:17	5.4	Middle	2	1	23.99	8.12	30.18	92.8	6.57	7.6	5.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:11:35	5.4	Middle	2	2	23.94	8.12	30.25	92.1	6.53	7.8	5.7
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:12:05	9.8	Bottom	3	1	23.93	8.11	30.42	93.4	6.62	7.9	6.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	IS10	17:11:23	9.8	Bottom	3	2	23.89	8.11	30.49	93.1	6.59	7.8	5.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR3	15:43:16	0.8	Middle	2	1	24.05	7.82	31.31	97.1	6.82	11.5	8.8
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR3	15:43:23	0.8	Middle	2	2	24.05	7.82	31.31	96.6	6.79	11.3	9.6
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR4	16:32:58	1.0	Surface	1	1	24.09	7.78	31.27	94	6.61	7.3	7.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR4	16:32:27	1.0	Surface	1	2	24.06	7.77	31.3	94	6.6	7.7	7.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR4	16:32:50	2.5	Bottom	3	1	24.02	7.78	31.29	94	6.61	8.7	7.7
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR4	16:32:20	2.5	Bottom	3	2	24.01	7.76	31.31	93.7	6.59	8	7.7
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR5	16:59:45	1.0	Surface	1	1	24.09	8.12	29.99	95.6	6.77	3.4	6
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR5	16:58:51	1.0	Surface	1	2	24.09	8.12	29.99	95.7	6.77	3.5	6.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR5	16:59:29	3.6	Bottom	3	1	24.1	8.12	30.02	95.6	6.76	3.6	6.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR5	16:58:41	3.6	Bottom	3	2	24.09	8.12	30.02	95.8	6.78	3.5	6.8
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:53:51	1.0	Surface	1	1	24.15	7.83	32.53	87.3	6.08	6.7	7.5
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:54:24	1.0	Surface	1	2	24.15	7.84	32.53	87.2	6.08	6.7	6.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:53:40	3.4	Middle	2	1	24.15	7.83	32.54	87.2	6.08	7.3	8.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:54:11	3.4	Middle	2	2	24.15	7.84	32.54	87	6.06	7.1	9.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:54:04	5.7	Bottom	3	1	24.15	7.83	32.54	86.9	6.06	7.1	8.5
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10A	17:53:21	5.7	Bottom	3	2	24.15	7.83	32.54	87.2	6.08	7.1	7.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10B	18:05:39	1.0	Surface	1	1	24.14	7.84	32.53	86.9	6.06	6.7	7.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10B	18:05:57	1.0	Surface	1	2	24.15	7.84	32.52	87	6.06	6.9	8.4
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10B	18:05:30	4.6	Bottom	3	1	24.15	7.84	32.54	87	6.06	6.7	6.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	SR10B	18:05:48	4.6	Bottom	3	2	24.15	7.84	32.53	86.9	6.05	7	8.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:42:12	1.0	Surface	1	1	24.1	8.16	30.03	93.4	6.61	5.3	6.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:41:21	1.0	Surface	1	2	24.1	8.18	30.09	94.4	6.68	5.2	6.8
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:41:57	4.1	Middle	2	1	24.03	8.16	30.11	93.2	6.6	7.7	6.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:41:09	4.1	Middle	2	2	24.06	8.19	30.16	94.6	6.69	7.5	6.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:40:51	7.1	Bottom	3	1	23.98	8.23	30.28	95.9	6.79	7.6	6.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS2	15:41:48	7.1	Bottom	3	2	23.96	8.16	30.18	93.1	6.6	7.8	6
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:18:05	1.0	Surface	1	1	24.13	7.82	31.39	90.9	6.38	5.4	6.3
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:17:18	1.0	Surface	1	2	24.15	7.82	31.44	90.2	6.33	5.6	5.2
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:17:07	6.5	Middle	2	1	24.2	7.81	31.95	89.6	6.26	6	5.1
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:17:46	6.5	Middle	2	2	24.2	7.81	31.95	89.2	6.23	5.9	4.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:16:58	12	Bottom	3	1	24.18	7.81	32.08	90.5	6.32	6.3	5.9
HCLR	HY/2011/03	2013-11-15	Mid-Flood	Sunny	CS(M)F5	17:17:33	12	Bottom	3	2	24.17	7.82	32.15	89.6	6.25	6.8	4.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	ISS	11:54:04	1.0	Surface	1	1	23.1	7.87	31.02	93.6	6.7	9.5	5.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	ISS	11:54:39	1.0	Surface	1	2	23.09	7.87	31.02	93.3	6.68	10	4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	ISS	11:53:52	4.9	Middle	2	1	23.07	7.87	31.05	93.3	6.69	9.7	4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	ISS	11:54:28	4.9	Middle	2	2	23.07	7.87	31.04	93	6.66	9.9	4.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS5	11:53:43	8.8	Bottom	3	1	23.08	7.87	31.04	93.5	6.69	9.9	4.6
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS5	11:54:20	8.8	Bottom	3	2	23.08	7.87	31.04	93.3	6.68	9.8	5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F6	12:21:53	1.0	Surface	1	1	23.12	7.85	31.06	94.3	6.75	11.2	6.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F6	12:21:40	1.0	Surface	1	2	23.13	7.85	31.06	94.6	6.77	10.7	5.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F6	12:21:46	2.3	Bottom	3	1	23.12	7.85	31.06	94.3	6.75	10.8	5.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F6	12:21:31	2.3	Bottom	3	2	23.1	7.84	31.06	94.9	6.79	11.1	7.4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS7	12:27:33	1.0	Surface	1	1	23.19	7.81	30.97	95.9	6.86	21.1	4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS7	12:27:51	1.0	Surface	1	2	23.17	7.82	30.98	94.8	6.79	20.3	3.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS7	12:27:23	2.2	Bottom	3	1	23.21	7.81	30.98	96.5	6.9	23.7	5.6
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS7	12:27:41	2.2	Bottom	3	2	23.16	7.82	30.98	95.3	6.82	23.1	6
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS8	12:49:20	1.0	Surface	1	1	23.43	7.86	30.83	94.4	6.73	8.4	6.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS8	12:49:33	1.0	Surface	1	2	23.43	7.86	30.82	94.5	6.73	8.6	7.4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS8	12:49:27	2.6	Bottom	3	1	23.43	7.86	30.87	94.5	6.74	8.8	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS8	12:49:13	2.6	Bottom	3	2	23.48	7.85	30.9	94.8	6.75	8.5	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F9	12:34:11	1.0	Surface	1	1	23.28	7.84	31.04	97.4	6.95	8	4.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F9	12:34:29	1.0	Surface	1	2	23.33	7.85	31.04	97.1	6.92	7.8	5.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F9	12:34:03	2.5	Bottom	3	1	23.23	7.84	31.02	97.5	6.96	8.6	6.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS(M)F9	12:34:20	2.5	Bottom	3	2	23.15	7.84	31.06	96.9	6.93	8.3	5.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:21:58	1.0	Surface	1	1	23.45	8.05	29.51	92.2	6.62	7.6	7.2
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:21:17	1.0	Surface	1	2	23.24	8.06	30.48	92	6.59	7.8	7.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:21:43	5.3	Middle	1	1	23.21	8.06	30.82	91.6	6.55	8.1	8.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:21:08	5.3	Middle	1	2	23.21	8.05	30.82	91.7	6.56	7.9	9.4
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:21:32	9.5	Bottom	3	1	23.18	8.06	30.79	91.6	6.56	8.2	11.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	IS10	13:20:57	9.5	Bottom	3	2	23.2	8.05	30.76	91.8	6.57	8.3	12.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR3	11:43:01	0.9	Middle	2	1	23.08	7.87	31.03	94.7	6.78	9.9	8.2
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR3	11:42:52	0.9	Middle	2	2	23.07	7.87	31.03	94.9	6.8	9.7	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR4	12:42:03	1.0	Surface	1	1	23.51	7.86	30.75	96.1	6.84	7.8	5.2
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR4	12:41:33	1.0	Surface	1	2	23.47	7.84	30.82	94.5	6.73	8	4.6
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR4	12:41:26	2.6	Bottom	3	1	23.47	7.83	30.95	95	6.76	9.5	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR4	12:41:42	2.6	Bottom	3	2	23.43	7.85	30.85	95.2	6.78	8.7	8.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR5	13:10:53	1.0	Surface	1	1	23.26	8.04	30.32	94.2	6.75	5.7	6.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR5	13:11:14	1.0	Surface	1	2	23.25	8.04	30.36	93.6	6.71	5.9	7.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR5	13:11:05	3.6	Bottom	3	1	23.23	8.04	30.46	93.6	6.71	5.9	12.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR5	13:10:45	3.6	Bottom	3	2	23.24	8.04	30.44	94.3	6.76	5.9	13.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10A	13:58:03	1.0	Surface	1	1	23.72	7.85	32.21	88	6.19	6.1	4.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10A	13:57:44	5.6	Bottom	3	1	23.69	7.85	32.31	88	6.19	8	13.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10A	13:58:51	1.0	Surface	1	2	23.69	7.86	32.3	87.4	6.15	8.4	14
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10A	13:58:18	5.6	Bottom	3	1	23.69	7.86	32.3	87.4	6.15	8.4	14
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10B	14:12:35	1.0	Surface	1	1	23.74	7.87	32.18	88	6.19	5.6	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10B	14:12:10	1.0	Surface	1	2	23.73	7.87	32.19	87.9	6.18	5.8	5.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10B	14:12:18	4.3	Bottom	3	1	23.74	7.86	32.2	87.8	6.18	5.5	11.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	SR10B	14:12:18	4.3	Bottom	3	2	23.73	7.87	32.2	87.7	6.17	5.7	13.3
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:42:01	1.0	Surface	1	1	23.33	7.98	29.94	95.6	6.88	6.8	5.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:42:42	1.0	Surface	1	2	23.32	8.02	29.96	93.7	6.75	6.9	4.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:42:32	3.9	Middle	2	1	23.35	8.01	30.38	93.8	6.72	6.5	4.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:41:47	3.9	Middle	2	2	23.37	7.97	30.28	96.9	6.93	6.1	3.6
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:41:30	6.8	Bottom	3	1	23.31	7.91	30.84	99	7.07	6.5	9.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS2	11:42:23	6.8	Bottom	3	2	23.3	8	30.79	94	6.72	6.9	9.8
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:29:19	1.0	Surface	1	1	23.89	7.88	31.5	90.8	6.39	4.9	5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:28:19	1.0	Surface	1	2	23.81	7.88	31.58	90.6	6.38	5.3	4.5
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:28:05	6.8	Middle	2	1	23.68	7.87	31.98	89.3	6.3	5.9	8.7
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:29:01	6.8	Middle	2	2	23.68	7.88	31.99	88.4	6.23	6	8.1
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:27:56	12.5	Bottom	3	1	23.7	7.87	32.02	90.1	6.35	5.5	12.2
HCLR	HY/2011/03	2013-11-18	Mid-Ebb	Sunny	CS(M)F5	13:28:43	12.5	Bottom	3	2	23.69	7.88	32.02	89	6.27	5.8	13.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:37:56	1.0	Surface	1	1	23.06	7.86	31.08	93.2	6.68	11.3	5.3
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:38:32	1.0	Surface	1	2	23.05	7.86	31.08	93.1	6.67	11.4	7
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:37:45	4.9	Middle	2	1	23.05	7.85	31.08	93	6.66	11.6	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:38:20	4.9	Middle	2	2	23.04	7.86	31.08	92.9	6.66	11.8	7.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:38:09	8.7	Bottom	3	1	23.03	7.86	31.08	92.9	6.66	11.7	9.7
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS5	08:37:27	8.7	Bottom	3	2	23.05	7.85	31.08	93.1	6.67	11.3	10.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F6	08:27:28	1.0	Surface	1	1	22.99	7.84	30.99	93.9	6.74	20.2	7.6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F6	08:27:48	1.0	Surface	1	2	22.96	7.85	31	93	6.68	19.8	8.3
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F6	08:27:39	2.4	Bottom	3	1	22.96	7.84	30.99	93.3	6.7	20.9	7.3
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F6	08:27:22	2.4	Bottom	3	2	22.97	7.84	30.99	94.3	6.77	21.1	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS7	08:19:03	1.0	Surface	1	1	23.05	7.82	30.94	93.2	6.68	15.1	3.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS7	08:19:17	1.0	Surface	1	2	23.04	7.83	30.94	92.9	6.66	14.7	3.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS7	08:19:10	2.3	Bottom	3	1	23.04	7.83	30.94	93	6.67	15.1	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS7	08:18:56	2.3	Bottom	3	2	23.04	7.82	30.94	93.4	6.7	15.6	7
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS8	07:50:09	1.0	Surface	1	1	23.46	7.83	30.93	92.4	6.58	10.2	7.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS8	07:50:24	1.0	Surface	1	2	23.47	7.83	30.94	92.4	6.58	10.9	7.8
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS8	07:50:02	2.8	Bottom	3	1	23.47	7.82	30.95	92.6	6.59	10.6	11
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS8	07:50:17	2.8	Bottom	3	2	23.47	7.83	30.95	92.3	6.57	11	9.4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F9	08:13:10	1.0	Surface	1	1	23.12	7.85	31.03	94.6	6.77	8.9	3.6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F9	08:12:55	1.0	Surface	1	2	23.13	7.84	31.03	95	6.8	8.9	3.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F9	08:12:48	2.5	Bottom	3	1	23.12	7.84	31.03	95.1	6.8	9.2	6.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS(M)F9	08:13:04	2.5	Bottom	3	2	23.11	7.85	31.04	94.7	6.78	8.9	7.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:46:01	1.0	Surface	1	1	23.35	8.03	31.04	92.5	6.59	8.1	4.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:45:13	1.0	Surface	1	2	23.35	8.02	31.05	92.7	6.61	8	4.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:45:39	9.6	Bottom	3	1	23.36	8.02	31.06	92.5	6.59	9.2	5.7
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:45:03	5.3	Middle	2	1	23.36	8.03	31.07	92.2	6.57	9.5	6.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:45:52	5.3	Middle	2	2	23.36	8.02	31.1	92.7	6.6	9.6	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:44:51	9.6	Bottom	3	1	23.37	8.03	31.11	92.3	6.57	9.6	6.4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	IS10	07:45:39	9.6	Bottom	3	2	23.37	8.03	31.11	92.3	6.57	10.6	5.8
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR3	08:46:01	0.8	Middle	2	1	23.06	7.86	31.08	93.3	6.68	10.3	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR3	08:46:08	0.8	Middle	2	2	23.06	7.86	31.08	93.2	6.68	10.3	6.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR4	07:59:40	1.0	Surface	1	1	23.44	7.78	30.98	90.8	6.46	10.2	5.6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR4	07:59:26	1.0	Surface	1	2	23.44	7.78	30.98	90.8	6.52	10.3	5.4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR4	07:59:32	2.5	Bottom	3	1	23.45	7.79	30.99	91.2	6.49	10.2	10.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR4	07:59:17	2.5	Bottom	3	2	23.43	7.77	30.98	92.5	6.58	10.2	10
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR5	07:55:37	1.0	Surface	1	1	23.32	8.04	31	92.6	6.61	7.4	5.4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR5	07:55:17	1.0	Surface	1	2	23.32	8.04	31.01	92.6	6.61	7.5	5.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR5	07:55:29	3.6	Bottom	3	1	23.33	8.04	31	92.5	6.6	7.5	11.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR5	07:55:07	3.6	Bottom	3	2	23.32	8.04	31.01	92.5	6.6	7.5	11.6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:52:00	1.0	Surface	1	1	23.65	7.87	31.73	88.3	6.24	8.1	3.7
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:51:30	1.0	Surface	1	2	23.66	7.86	31.74	88.5	6.25	7.5	4.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:51:16	3.4	Middle	2	1	23.66	7.86	31.76	88.4	6.24	8	6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:51:50	3.4	Middle	2	2	23.66	7.87	31.76	88.2	6.23	7.9	5.3
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:51:41	5.8	Bottom	3	1	23.66	7.86	31.76	88.2	6.23	7.7	11.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10A	06:51:07	5.8	Bottom	3	2	23.66	7.86	31.76	88.4	6.24	7.8	11.6
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10B	06:42:55	1.0	Surface	1	1	23.7	7.84	32.09	88.6	6.24	13.7	4.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10B	06:42:24	1.0	Surface	1	2	23.69	7.83	32.06	89.3	6.29	12.9	4.4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10B	06:42:40	4.7	Bottom	3	1	23.7	7.83	32.1	88.7	6.24	13.7	8.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	SR10B	06:42:07	4.7	Bottom	3	2	23.7	7.82	32.05	89.8	6.33	12.9	8.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:23:33	1.0	Surface	1	1	23.13	8.04	30.13	91.6	6.59	7.9	4
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:23:05	1.0	Surface	1	2	23.13	8.04	30.13	91.6	6.59	7.8	4.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:22:53	4.1	Middle	2	1	23.21	8.04	30.55	91.6	6.57	8.1	7.2
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:23:23	4.1	Middle	2	2	23.2	8.04	30.44	91.6	6.57	8.3	5.1
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:22:40	7.1	Bottom	3	1	23.19	8.03	30.53	91.6	6.56	8.7	10.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS2	09:23:15	7.1	Bottom	3	2	23.19	8.03	30.5	91.5	6.56	8.6	10.3
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:20:26	1.0	Surface	1	1	23.48	7.86	31.04	89.2	6.35	10.5	4.8
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:19:51	1.0	Surface	1	2	23.44	7.86	31	90	6.4	9.9	5.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:19:35	6.8	Middle	2	1	23.71	7.85	31.67	89.3	6.3	11.8	6.5
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:20:15	6.8	Middle	2	2	23.7	7.86	31.64	89.2	6.3	12.2	5.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:20:05	12.6	Bottom	3	1	23.66	7.85	31.58	90	6.36	12.6	6.9
HCLR	HY/2011/03	2013-11-18	Mid-Flood	Sunny	CS(M)F5	07:19:22	12.6	Bottom	3	2	23.68	7.84	31.64	90.3	6.38	13.6	7.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:24:28	1.0	Surface	1	1	22.37	7.89	31.26	92	6.67	15.2	15
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:25:14	1.0	Surface	1	2	22.37	7.88	31.23	91.9	6.65	14.5	14.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:25:02	4.4	Middle	2	1	22.36	7.89	31.26	91.7	6.66	15.4	15.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:24:18	4.4	Middle	2	2	22.36	7.89	31.28	91.7	6.65	15.8	15
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:24:05	7.8	Bottom	3	1	22.36	7.89	31.29	91.7	6.64	15.9	17
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS5	13:24:51	7.8	Bottom	3	2	22.36	7.89	31.26	91.6	6.64	15.8	17.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F6	13:36:12	1.0	Surface	1	1	22.42	7.88	31	93.7	6.79	20.3	10.5
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F6	13:35:55	1.0	Surface	1	2	22.41	7.88	31	93.9	6.81	20.5	10.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F6	13:36:03	2.2	Bottom	3	1	22.41	7.88	31	93.8	6.8	20.3	13
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F6	13:35:46	2.2	Bottom	3	2	22.4	7.88	31	94	6.82	21.2	13
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS7	13:43:57	1.0	Surface	1	1	22.42	7.88	30.91	95	6.89	9.5	10
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS7	13:44:12	1.0	Surface	1	2	22.42	7.88	30.91	94.8	6.88	9.6	10.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS7	13:43:46	2.1	Bottom	3	1	22.42	7.88	30.92	95.1	6.89	9.7	11.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS7	13:44:03	2.1	Bottom	3	2	22.41	7.88	30.91	94.9	6.88	9.8	11.3
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS8	14:10:32	1.0	Surface	1	1	22.7	7.86	30.64	92.8	6.7	5.9	5.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS8	14:10:15	1.0	Surface	1	2	22.7	7.86	30.64	92.8	6.71	6.1	6.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS8	14:10:08	3.0	Bottom	3	1	22.69	7.86	30.65	92.8	6.71	6.1	5.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS8	14:10:23	3.0	Bottom	3	2	22.7	7.86	30.65	92.7	6.7	6.1	5.7
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F9	13:51:35	1.0	Surface	1	1	22.49	7.88	30.75	94.3	6.84	9.5	7.3
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F9	13:51:51	1.0	Surface	1	2	22.47	7.88	30.78	94.2	6.83	9.5	7.4
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F9	13:51:23	2.7	Bottom	3	1	22.42	7.87	30.87	94.1	6.83	9.4	8.5
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS(M)F9	13:51:42	2.7	Bottom	3	2	22.42	7.87	30.87	94.1	6.82	9.3	6.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:10:05	1.0	Surface	1	1	22.75	8.03	28.83	89.9	6.56	5.2	7.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:10:24	1.0	Surface	1	2	22.75	8.03	28.58	90.1	6.58	5.2	8.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:10:20	5.7	Middle	2	1	22.75	8.02	30.33	89.9	6.5	5.4	6.4
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:10:01	5.7	Middle	2	2	22.74	8.02	30.4	89.6	6.48	5.2	7.2
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:09:56	10.3	Bottom	3	1	22.74	8.01	30.48	89.1	6.44	5.5	9.2
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	IS10	14:10:15	10.3	Bottom	3	2	22.75	8.02	30.48	89.6	6.48	5.4	8.3
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR3	13:16:08	0.7	Middle	2	1	22.36	7.9	31.36	92.9	6.72	15.9	16.2
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR3	13:15:53	0.7	Middle	2	2	22.36	7.91	31.36	93.4	6.78	15.6	17.7
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR4	14:03:06	1.0	Surface	1	1	22.71	7.85	30.63	91.4	6.61	7.1	7.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR4	14:02:46	1.0	Surface	1	2	22.71	7.85	30.64	92	6.65	7.3	7.3
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR4	14:02:35	2.7	Bottom	3	1	22.71	7.85	30.66	92.1	6.65	7.6	7.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR4	14:02:56	2.7	Bottom	3	2	22.7	7.85	30.69	91.6	6.62	7.6	9.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR5	13:58:09	1.0	Surface	1	1	22.77	7.98	28.42	89.6	6.55	4.8	7.2
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR5	13:58:26	1.0	Surface	1	2	22.8	7.97	28.28	89	6.51	4.7	8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR5	13:58:01	4.5	Bottom	3	1	22.74	7.96	30.07	89.3	6.47	5	10.7
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR5	13:58:15	4.5	Bottom	3	2	22.79	7.97	29.49	89.2	6.48	4.8	10
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR5	15:16:25	1.0	Surface	1	1	23.26	7.87	31.57	88.7	6.27	5.6	9.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10A	15:16:55	1.0	Surface	1	2	23.25	7.87	31.59	87.1	6.24	5.8	9.7
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10A	15:16:15	3.2	Middle	2	1	23.26	7.86	31.57	87.6	6.25	5.8	9.9
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10A	15:16:44	3.2	Middle	2	2	23.26	7.87	31.6	87.6	6.24	5.9	8.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10A	15:16:33	5.4	Bottom	3	1	23.26	7.87	31.57	87.8	6.25	5.8	11.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10A	15:16:05	5.4	Bottom	3	2	23.26	7.86	31.57	87.2	6.25	5.8	12
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10B	15:25:28	1.0	Surface	1	1	23.25	7.86	31.62	87.2	6.21	5.8	7.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10B	15:25:11	1.0	Surface	1	2	23.25	7.86	31.62	87.3	6.21	5.9	8.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10B	15:25:03	3.7	Bottom	3	1	23.25	7.86	31.63	87.3	6.21	6.1	9.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	SR10B	15:25:20	3.7	Bottom	3	2	23.25	7.86	31.63	87.2	6.2	5.9	9.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:02:31	1.0	Surface	1	1	22.81	7.91	28.19	90.6	6.63	4.5	7.5
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:03:07	1.0	Surface	1	2	22.79	7.96	28.33	90.4	6.61	4.8	7.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:03:00	4.2	Middle	2	1	22.76	7.96	29.72	90.5	6.57	5.2	7.5
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:02:17	4.2	Middle	2	2	22.76	7.9	29.81	91.3	6.62	5.4	8.5
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:02:07	7.3	Bottom	3	1	22.81	7.87	30.49	91.4	6.6	5.4	7.4
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS2	13:02:48	7.3	Bottom	3	2	22.79	7.93	30.46	90.3	6.52	5.3	6.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:43:32	1.0	Surface	1	1	23.04	7.87	30.61	87.6	6.3	7.1	6.8
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:43:54	1.0	Surface	1	2	22.92	7.87	30.72	89.5	6.44	7.1	7.1
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:44:21	6.4	Middle	2	1	23.21	7.86	31.46	87.3	6.23	7.2	7
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:43:36	6.4	Middle	2	2	23.22	7.86	31.5	87.5	6.24	7	6.9
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:44:10	11.7	Bottom	3	1	23.21	7.86	31.57	88.5	6.3	7.2	5.6
HCLR	HY/2011/03	2013-11-20	Mid-Ebb	Fine	CS(M)F5	14:43:28	11.7	Bottom	3	2	23.19	7.86	31.54	88.3	6.29	7.1	7.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:49:08	1.0	Surface	1	1	22.33	7.88	30.81	92.5	6.73	15.6	17.3
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:49:43	1.0	Surface	1	2	22.33	7.88	30.82	92	6.71	15.2	18.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:49:31	4.4	Middle	2	1	22.35	7.88	30.82	92	6.69	15.8	20.3
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:48:56	4.4	Middle	2	2	22.36	7.88	30.83	92.2	6.7	15.1	20.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:48:47	7.7	Bottom	3	1	22.38	7.87	30.87	92.3	6.7	15.4	20.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS5	09:49:22	7.7	Bottom	3	2	22.38	7.88	30.87	92.2	6.69	15.4	19.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F6	09:41:34	1.0	Surface	1	1	22.37	7.87	30.74	93.1	6.77	24.4	21.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F6	09:41:53	1.0	Surface	1	2	22.37	7.88	30.74	92.7	6.73	24.3	22.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F6	09:41:25	2.3	Bottom	3	1	22.36	7.87	30.77	93.3	6.78	24.5	24.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F6	09:41:40	2.3	Bottom	3	2	22.37	7.87	30.77	92.9	6.75	24.7	25.7

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS7	09:34:11	1.0	Surface	1	1	22.4	7.87	30.67	92.4	6.71	17.8	22.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS7	09:34:25	1.0	Surface	1	2	22.4	7.87	30.67	92.3	6.71	17.4	21.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS7	09:34:17	2.2	Bottom	3	1	22.4	7.87	30.67	92.3	6.71	17.6	21.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS7	09:34:03	2.2	Bottom	3	2	22.4	7.87	30.67	92.4	6.71	17.9	21.3
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS8	09:09:13	1.0	Surface	1	1	22.67	7.85	30.57	90.3	6.53	9.7	11.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS8	09:08:54	1.0	Surface	1	2	22.67	7.85	30.56	90.4	6.54	9.6	11.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS8	09:09:03	3.1	Bottom	3	1	22.67	7.85	30.57	90.2	6.53	9.5	14.1
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS8	09:08:41	3.1	Bottom	3	2	22.66	7.85	30.58	90.5	6.54	10.2	13.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F9	09:27:17	1.0	Surface	1	1	22.44	7.86	30.49	92.9	6.75	11.1	10.3
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F9	09:27:39	1.0	Surface	1	2	22.45	7.86	30.49	92.7	6.74	11.2	10
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F9	09:27:08	2.7	Bottom	3	1	22.4	7.86	30.57	93	6.76	11.3	9.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS(M)F9	09:27:27	2.7	Bottom	3	2	22.41	7.86	30.57	92.7	6.74	11.6	8.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:26:50	1.0	Surface	1	1	22.78	8.05	30.55	90.8	6.55	11.9	18.1
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:26:20	1.0	Surface	1	2	22.78	8.05	30.55	90.8	6.56	11.8	16.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:26:42	5.8	Middle	2	1	22.79	8.04	30.6	90.6	6.54	12.5	16.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:26:07	5.8	Middle	2	2	22.79	8.03	30.61	90.7	6.55	12.2	17.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:25:56	10.6	Bottom	3	1	22.79	8.03	30.61	90.7	6.54	12.7	17.9
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	IS10	09:26:32	10.6	Bottom	3	2	22.78	8.04	30.61	90.5	6.53	12.7	18
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR3	09:57:44	0.7	Middle	2	1	22.33	7.88	30.8	92.7	6.74	15.4	17.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR3	09:57:37	0.7	Middle	2	2	22.33	7.88	30.8	92.7	6.74	15.5	17.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR4	09:16:27	1.0	Surface	1	1	22.6	7.85	30.61	89.7	6.49	10.5	12
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR4	09:16:06	1.0	Surface	1	2	22.6	7.85	30.61	89.6	6.5	10.7	13.1
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR4	09:16:15	2.8	Bottom	3	1	22.6	7.85	30.61	89.6	6.49	10.6	10.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR4	09:15:54	2.8	Bottom	3	2	22.61	7.85	30.61	90.1	6.53	10.6	11.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR5	09:38:05	1.0	Surface	1	1	22.78	8.06	30.56	90.8	6.56	11.4	19.1
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR5	09:38:23	1.0	Surface	1	2	22.78	8.06	30.55	90.8	6.55	11.1	19.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR5	09:37:59	4.5	Bottom	3	1	22.79	8.06	30.57	90.8	6.55	11.5	19
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR5	09:38:12	4.5	Bottom	3	2	22.78	8.06	30.57	90.8	6.55	11.6	19.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:11:31	1.0	Surface	1	1	23.21	7.87	31.32	87.5	6.24	8.4	8.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:10:58	1.0	Surface	1	2	23.21	7.86	31.32	87.6	6.25	8.7	8.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:10:45	3.2	Middle	2	1	23.21	7.86	31.33	87.6	6.25	8.4	9.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:11:20	3.2	Middle	2	2	23.21	7.86	31.33	87.3	6.23	8.3	11
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:11:08	5.4	Bottom	3	1	23.21	7.86	31.33	87.4	6.23	8.6	10.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10A	08:10:33	5.4	Bottom	3	2	23.21	7.86	31.31	87.6	6.25	8.4	10.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10B	08:05:42	1.0	Surface	1	1	23.23	7.83	31.69	87.2	6.21	10.9	16.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10B	08:06:01	1.0	Surface	1	2	23.23	7.84	31.7	87.1	6.2	11.2	16.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10B	08:05:33	4.0	Bottom	3	1	23.23	7.83	31.68	87.3	6.21	11	19.8
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	SR10B	08:05:52	4.0	Bottom	3	2	23.23	7.84	31.7	87.1	6.2	11.1	19.1
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:31	1.0	Surface	1	1	22.9	8.03	30.16	89.7	6.48	7.7	11.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:29:03	1.0	Surface	1	2	22.9	8.04	30.17	89.6	6.47	7.8	11
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:45	7.3	Bottom	3	1	22.9	8.04	30.17	89.5	6.46	8.4	10
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:21	4.2	Middle	2	2	22.9	8.03	30.21	89.5	6.46	8.5	10.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:55	4.2	Middle	2	2	22.91	8.04	30.21	89.5	6.46	8.5	10.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:09	7.3	Bottom	3	1	22.91	8.02	30.34	89.4	6.45	8.8	10.6
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS2	10:28:45	7.3	Bottom	3	2	22.91	8.03	30.28	89.5	6.46	8.6	11.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:42:35	1.0	Surface	1	1	22.84	7.87	30.52	89.2	6.44	9.3	7.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:41:54	1.0	Surface	1	2	22.86	7.87	30.53	89	6.42	9.3	7.2
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:41:42	6.6	Middle	2	1	22.95	7.86	30.72	88.6	6.37	10.2	6.4
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:42:21	6.6	Middle	2	2	22.96	7.86	30.74	88.7	6.38	10.5	6.5
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:41:30	12.1	Bottom	3	1	22.98	7.86	30.84	88.9	6.39	10.5	6.7
HCLR	HY/2011/03	2013-11-20	Mid-Flood	Fine	CS(M)F5	08:42:11	12.1	Bottom	3	2	22.97	7.86	30.85	89.3	6.41	10.3	6.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:12:40	1.0	Surface	1	1	22.2	7.86	30.21	92	6.73	12.1	15.5
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:13:11	1.0	Surface	1	2	22.19	7.86	30.25	91.7	6.7	12.8	15.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:13:04	4.3	Middle	2	1	22.19	7.86	30.3	91.6	6.7	12.8	15.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:12:26	4.3	Middle	2	2	22.19	7.87	30.34	91.7	6.7	12.4	13.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:12:18	7.6	Bottom	3	1	22.19	7.87	30.35	91.6	6.7	12.5	14.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS5	14:12:51	7.6	Bottom	3	2	22.19	7.86	30.32	91.7	6.69	12.7	15.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F6	14:19:28	1.0	Surface	1	1	22.55	7.86	30.11	94.7	6.89	11.3	10.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F6	14:19:10	1.0	Surface	1	2	22.53	7.86	30.14	94.3	6.87	11.2	10.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F6	14:19:01	2.2	Bottom	3	1	22.4	7.85	30.14	94.3	6.87	10.9	11.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F6	14:19:17	2.2	Bottom	3	2	22.42	7.86	30.12	94.3	6.87	11.3	11.7
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS7	14:26:09	1.0	Surface	1	1	22.54	7.86	30.02	95.4	6.94	8.2	11
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS7	14:25:49	1.0	Surface	1	2	22.55	7.86	30.02	95.3	6.93	8.3	10.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS7	14:25:39	2.2	Bottom	3	1	22.53	7.86	30.03	95.3	6.93	8.5	10.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS7	14:25:58	2.2	Bottom	3	2	22.53	7.86	30.03	95.3	6.93	8.5	11.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS8	14:48:48	1.0	Surface	1	1	22.67	7.85	29.52	93.2	6.78	8.2	7.9
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS8	14:48:34	1.0	Surface	1	2	22.63	7.85	29.55	93	6.77	8.1	8.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS8	14:48:41	2.7	Bottom	3	1	22.67	7.85	29.53	93	6.77	8.1	9
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS8	14:48:25	2.7	Bottom	3	2	22.65	7.85	29.55	92.9	6.76	7.9	8.5
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F9	14:32:34	1.0	Surface	1	1	22.53	7.85	29.74	95.3	6.95	7.4	9.7
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F9	14:32:19	1.0	Surface	1	2	22.51	7.85	29.75	95.5	6.96	7.6	8.9
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F9	14:32:12	2.7	Bottom	3	1	22.5	7.85	29.78	95.2	6.94	7.5	11.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS(M)F9	14:32:26	2.7	Bottom	3	2	22.48	7.85	29.81	95.1	6.94	7.5	11.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:20:15	1.0	Surface	1	1	22.69	8.09	28.92	90.3	6.59	5.3	5.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:20:50	1.0	Surface	1	2	22.64	8.09	27.74	90.1	6.63	5.8	4.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:19:52	6.0	Middle	2	1	22.48	8.08	29.7	89.4	6.53	6.7	5.7
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:20:37	6.0	Middle	2	2	22.47	8.08	29.7	89.4	6.52	6.7	3.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:19:40	11.0	Bottom	3	1	22.47	8.08	29.73	89.4	6.52	6.5	6.3
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	IS10	15:20:28	11.0	Bottom	3	2	22.47	8.08	29.68	89.6	6.54	6.7	5.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR3	14:00:45	0.7	Middle	2	1	22.21	7.9	30.34	93.9	6.86	13.1	14.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR3	14:00:50	0.7	Middle	2	2	22.21	7.9	30.34	93.6	6.84	12.8	14.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR4	14:42:46	1.0	Surface	1	1	22.55	7.84	29.51	92.3	6.73	8.2	11.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR4	14:42:32	1.0	Surface	1	2	22.55	7.84	29.51	92.4	6.74	8.2	11.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR4	14:42:38	2.7	Bottom	3	1	22.55	7.84	29.52	92.2	6.73	8.2	13.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR4	14:42:24	2.7	Bottom	3	2	22.55	7.84	29.52	92.8	6.77	8.2	11.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR5	15:10:52	1.0	Surface	1	1	22.79	8.07	27.56	91.2	6.7	4.4	6.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR5	15:11:24	1.0	Surface	1	2	22.83	8.06	27.41	91	6.68	4.2	6.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR5	15:11:04	4.5	Bottom	3	1	22.56	8.06	29.52	90.5	6.6	6.9	6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR5	15:10:38	4.5	Bottom	3	2	22.6	8.06	29.52	90.9	6.62	7.1	6.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:14:12	1.0	Surface	1	1	22.96	7.84	30.86	87.2	6.26	4.2	7.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:13:38	1.0	Surface	1	2	22.96	7.84	31.01	87.3	6.27	4.1	7.6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:13:29	3.2	Middle	2	1	22.96	7.84	31.09	87.3	6.26	4.1	6
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:14:04	3.2	Middle	2	2	22.96	7.84	31.1	86.9	6.24	4.1	5.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:13:48	5.4	Bottom	3	1	22.96	7.84	31.1	87	6.24	4.2	7.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10A	16:13:19	5.4	Bottom	3	2	22.96	7.83	31.15	87.4	6.27	4.2	8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10B	16:22:33	1.0	Surface	1	1	22.96	7.84	30.8	87.5	6.29	3.9	5.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10B	16:22:54	1.0	Surface	1	2	22.96	7.84	30.78	87.7	6.31	3.9	6.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10B	16:22:23	3.7	Bottom	3	1	22.96	7.84	31.02	87.3	6.27	3.7	5.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	SR10B	16:22:41	3.7	Bottom	3	2	22.96	7.84	29.89	87.5	6.29	4	4.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:58:05	1.0	Surface	1	1	22.71	8.12	27.89	90.7	6.66	4.7	5
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:58:28	1.0	Surface	1	2	22.64	8.12	28.13	91	6.68	4.2	4.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:58:14	3.6	Middle	2	1	22.73	8.13	29.35	92.5	6.73	5.9	6.1
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:58:57	3.6	Middle	2	2	22.83	8.12	29.37	90.6	6.6	6.2	3.7
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:57:51	6.1	Bottom	3	1	22.44	8.13	29.8	93.7	6.84	8.1	6.2
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS2	13:58:43	6.1	Bottom	3	2	22.46	8.11	29.67	90	6.57	8.3	5.3
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:46:53	1.0	Surface	1	1	22.83	7.84	30.32	86.7	6.26	5.4	9.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:46:00	1.0	Surface	1	2	22.87	7.84	30.41	86.7	6.26	5.5	8.4
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:46:40	6.1	Middle	2	1	22.91	7.84	30.99	85.6	6.15	5.8	8.3
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:45:50	6.1	Middle	2	2	22.89	7.83	31.08	86.2	6.19	5.7	6.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:45:42	11.2	Bottom	3	1	22.89	7.83	31.2	86.7	6.22	5.9	7.8
HCLR	HY/2011/03	2013-11-22	Mid-Ebb	Fine	CS(M)F5	15:46:25	11.2	Bottom	3	2	22.9	7.83	31.26	85.8	6.16	5.7	9
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:53	1.0	Surface	1	1	22.07	7.85	30.04	92.1	6.76	15.5	24.6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:25	1.0	Surface	1	2	22.07	7.85	30.05	92.2	6.77	15.9	25.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:45	4.3	Middle	2	1	22.06	7.85	30.11	92	6.75	15.7	26.5
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:17	4.3	Middle	2	2	22.07	7.85	30.12	92.1	6.75	16.6	24.6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:08	7.6	Bottom	3	1	22.06	7.85	30.14	92	6.74	16.2	25.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS5	11:01:35	7.6	Bottom	3	2	22.06	7.85	30.12	91.9	6.74	16.1	26.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)F6	10:53:05	1.0	Surface	1	1	22.28	7.85	30.08	94.1	6.87	17.3	20.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)F6	10:52:49	1.0	Surface	1	2	22.28	7.85	30.07	94.2	6.88	17.5	22
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)F6	10:52:56	2.2	Bottom	3	1	22.27	7.85	30.08	94	6.87	17.5	21.5
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)F6	10:52:41	2.2	Bottom	3	2	22.28	7.85	30.08	94.3	6.89	17.8	21.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS7	10:45:57	1.0	Surface	1	1	22.28	7.84	29.97	92.3	6.75	22.5	22
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS7	10:46:15	1.0	Surface	1	2	22.28	7.85	29.97	92.2	6.74	22.6	21.3
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS7	10:46:06	2.2	Bottom	3	1	22.28	7.85	29.97	92.2	6.74	22.4	22.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS7	10:45:48	2.2	Bottom	3	2	22.26	7.84	29.97	92.1	6.74	22.1	22.6

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS8	10:20:41	1.0	Surface	1	1	22.25	7.83	29.68	88.1	6.45	10.6	12.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS8	10:21:05	1.0	Surface	1	2	22.3	7.83	29.6	90.3	6.61	10.4	11.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS8	10:20:34	3.1	Bottom	3	1	22.23	7.83	29.77	88.1	6.45	10.6	11.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS8	10:20:50	3.1	Bottom	3	2	22.23	7.83	29.77	89.1	6.53	10.3	11.6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)/9	10:38:33	1.0	Surface	1	1	22.18	7.84	29.81	92.6	6.79	15.2	12
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)/9	10:38:14	1.0	Surface	1	2	22.18	7.84	29.81	92.7	6.8	15.2	13
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)/9	10:38:22	2.6	Bottom	3	1	22.14	7.84	29.82	92.5	6.78	15.3	13.7
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS(M)/9	10:38:05	2.6	Bottom	3	2	22.18	7.84	29.81	92.7	6.8	15.2	14.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS10	10:42:27	1.0	Surface	1	1	22.4	8.07	29.64	91	6.65	12	17.5
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS10	10:43:19	1.0	Surface	1	2	22.39	8.07	29.66	90.7	6.63	11.5	17.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS10	10:43:03	5.6	Middle	2	1	22.37	8.07	29.7	90.4	6.6	11.7	20.9
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS10	10:42:00	5.6	Middle	2	2	22.37	8.07	29.67	90.6	6.62	11.8	20.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	IS10	10:42:48	10.2	Bottom	3	1	22.37	8.07	29.7	90.4	6.61	12.8	20.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR3	11:08:35	0.7	Middle	2	1	22.08	7.85	30.02	90.8	6.64	12.3	19.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR3	11:08:43	0.7	Middle	2	2	22.08	7.85	30.02	92.3	6.77	18.9	23.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR4	10:27:28	1.0	Surface	1	1	22.29	7.83	29.57	90.6	6.63	12.6	15.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR4	10:27:42	1.0	Surface	1	2	22.29	7.83	29.56	90.4	6.62	12.6	14.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR4	10:27:16	2.8	Bottom	3	1	22.28	7.83	29.56	90.8	6.66	12.5	14.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR4	10:27:35	2.8	Bottom	3	2	22.29	7.83	29.55	90.5	6.63	12.7	15.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR5	10:54:31	1.0	Surface	1	1	22.39	8.08	29.66	90.6	6.62	13.2	18.7
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR5	10:55:43	1.0	Surface	1	2	22.46	8.07	29.61	90.8	6.63	12.6	19.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR5	10:55:28	4.6	Bottom	3	1	22.36	8.07	29.74	90.4	6.6	13.3	19.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR5	10:54:15	4.6	Bottom	3	2	22.36	8.07	29.74	90.4	6.6	13.3	20
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:20:02	1.0	Surface	1	1	22.81	7.81	30.21	87.2	6.31	6.2	11.9
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:20:35	1.0	Surface	1	2	22.8	7.81	30.2	87.2	6.31	6.2	13.3
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:20:23	3.3	Middle	2	1	22.82	7.81	30.27	87	6.28	6.5	13.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:19:52	3.3	Middle	2	2	22.84	7.81	30.42	87	6.28	6.6	14
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:19:43	5.5	Bottom	3	1	22.84	7.8	30.58	87.3	6.29	6.8	12.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10A	09:20:11	5.5	Bottom	3	2	22.84	7.81	30.54	87.1	6.28	6.7	12.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10B	09:13:17	1.0	Surface	1	1	22.9	7.81	31.16	87.9	6.31	7.1	10.7
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10B	09:13:38	1.0	Surface	1	2	22.9	7.82	31.17	87	6.24	7.3	9.3
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10B	09:13:08	4.0	Bottom	3	1	22.9	7.81	31.16	88.7	6.37	7.2	9.9
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	SR10B	09:13:28	4.0	Bottom	3	2	22.9	7.82	31.17	87.2	6.26	7.2	10
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:08:28	1.0	Surface	1	1	22.77	8.07	29.08	90.8	6.62	5	6.3
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:09:06	1.0	Surface	1	2	22.74	8.07	29.66	90.9	6.62	5.3	6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:08:12	3.4	Middle	2	1	22.52	8.07	29.56	90.5	6.6	8.2	8.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:08:55	3.4	Middle	2	2	22.5	8.07	29.61	90.6	6.61	7.8	8.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:08:00	5.7	Bottom	3	1	22.47	8.07	29.69	90.2	6.58	8.5	8.2
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS2	12:08:41	5.7	Bottom	3	2	22.5	8.07	29.66	90.2	6.58	8.1	8.8
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:52:15	1.0	Surface	1	1	22.74	7.84	29.93	86.7	6.29	8.9	8.6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:51:23	1.0	Surface	1	2	22.75	7.83	29.97	86.8	6.29	9	8.6
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:51:12	6.3	Middle	2	1	22.89	7.83	30.67	86.6	6.24	11.4	6.1
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:52:03	6.3	Middle	2	2	22.88	7.83	30.63	86	6.19	11.4	6.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:51:04	11.6	Bottom	3	1	22.87	7.83	30.66	87	6.27	11.2	9.4
HCLR	HY/2011/03	2013-11-22	Mid-Flood	Fine	CS(M)/5	09:51:52	11.6	Bottom	3	2	22.9	7.83	30.7	86.1	6.2	11.5	9.6
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:48:16	1.0	Surface	1	1	22.49	7.88	28.89	91.9	6.74	12.1	10.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:49:03	1.0	Surface	1	2	22.5	7.88	28.86	91.7	6.72	11.9	10.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:48:03	4.8	Middle	2	1	22.49	7.88	28.92	91.8	6.73	12.7	13.1
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:48:40	4.8	Middle	2	2	22.52	7.88	28.91	91.6	6.71	12.3	12.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:47:54	8.5	Bottom	3	1	22.49	7.88	28.91	91.9	6.73	12.6	12.3
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS5	05:48:31	8.5	Bottom	3	2	22.52	7.88	28.92	91.6	6.71	12.3	12.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)/6	05:40:50	1.0	Surface	1	1	21.85	7.84	28.76	95.4	7.08	16.5	11
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)/6	05:40:18	1.0	Surface	1	2	21.88	7.82	28.76	95	7.04	15.7	10.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)/6	05:40:37	2.0	Bottom	3	1	21.92	7.83	28.83	95.5	7.07	17	11.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)/6	05:40:03	2.0	Bottom	3	2	22.06	7.8	28.28	94.6	7.01	16.2	10.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS7	05:29:28	1.0	Surface	1	1	22.16	7.81	28.98	94.7	6.98	10.6	6.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS7	05:29:11	1.0	Surface	1	2	22.16	7.8	28.95	95.2	7.02	10.1	6.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS7	05:29:02	2.3	Bottom	3	1	22.16	7.79	29.06	95.7	7.04	13.4	18.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS7	05:29:17	2.3	Bottom	3	2	22.17	7.81	29.03	95.1	7	12.7	18.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS8	05:04:42	1.0	Surface	1	1	22.37	7.83	27.53	93	6.89	8.3	6.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS8	05:05:04	1.0	Surface	1	2	22.09	7.84	27.75	93.7	6.96	8.5	5.2

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS8	05:04:36	2.7	Bottom	3	1	22.43	7.81	29.08	93.8	6.87	11.7	21.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS8	05:04:52	2.7	Bottom	3	2	22.41	7.83	29.09	94.3	6.91	12	20.2
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)F9	05:21:38	1.0	Surface	1	1	22.36	7.84	28.99	96.1	7.05	5.8	4.4
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)F9	05:21:24	1.0	Surface	1	2	22.34	7.82	28.95	96.4	7.08	5.7	3.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)F9	05:21:17	2.6	Bottom	3	1	22.37	7.82	29.08	96.9	7.11	6	6.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS(M)F9	05:21:32	2.6	Bottom	3	2	22.36	7.83	29.09	96.3	7.06	6	6.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:03:35	1.0	Surface	1	1	22.35	8.06	26.02	90.6	6.77	3.4	3.4
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:03:00	1.0	Surface	1	2	22.33	8.05	26.02	90.6	6.77	3.2	4.4
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:02:45	5.2	Middle	2	1	22.74	8.05	27.87	89.7	6.58	4.5	4.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:03:22	5.2	Middle	2	2	22.69	8.05	27.98	89.9	6.6	4.5	5.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:02:35	9.4	Bottom	3	1	22.79	8.02	30.81	91.2	6.57	4.4	5.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	IS10	05:03:11	9.4	Bottom	3	2	22.61	8.03	30.48	91.3	6.62	4.5	6.3
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR3	05:59:04	0.9	Middle	2	1	22.52	7.88	28.89	91.7	6.71	11.8	12.6
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR4	05:58:54	0.9	Middle	2	2	22.53	7.88	28.89	91.6	6.7	11.6	12.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:12:10	1.0	Surface	1	1	22.19	7.86	27.99	94.5	7	7.1	7.2
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR4	05:12:29	1.0	Surface	1	2	22.18	7.86	28.24	94.7	7.01	6.7	7.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR4	05:12:00	2.6	Bottom	3	1	22.32	7.85	29.06	94.9	6.97	8.9	10.1
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR4	05:12:19	2.6	Bottom	3	2	22.31	7.86	28.78	95	6.99	8	8.6
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:12:49	1.0	Surface	1	1	22.37	8.04	26.09	92.2	6.88	2.2	4.2
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:13:07	1.0	Surface	1	2	22.31	8.04	26.03	92.3	6.9	2.2	3.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:12:57	3.6	Bottom	3	1	22.38	8.04	26.26	92.5	6.89	2.2	8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:12:41	3.6	Bottom	3	2	22.43	8.04	26.39	92.4	6.88	2.2	7.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR5	05:12:45	1.0	Surface	1	1	22.45	7.88	29.69	92.7	6.76	2.5	3.4
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10A	03:51:53	1.0	Surface	1	2	22.6	7.88	30.1	91.5	6.64	2.4	2.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10A	03:53:32	3.2	Middle	2	1	22.67	7.88	30.36	94.2	6.82	2.6	5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10A	03:51:47	3.2	Middle	2	2	22.64	7.88	30.16	91.6	6.64	2.5	4.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10A	03:51:41	5.4	Bottom	3	1	22.65	7.87	30.22	91.7	6.65	2.6	5.6
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10A	03:53:21	5.4	Bottom	3	2	22.7	7.88	30.37	97.1	7.03	2.6	5.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10B	03:41:58	1.0	Surface	1	1	22.66	7.86	30.48	90.6	6.56	2.6	3.3
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10B	03:42:19	1.0	Surface	1	2	22.67	7.86	30.56	90.1	6.52	2.6	3.3
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10B	03:41:41	4.6	Bottom	3	1	22.68	7.85	30.66	91.2	6.59	2.9	7.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	SR10B	03:42:07	4.6	Bottom	3	2	22.68	7.86	30.67	90.2	6.52	2.7	8.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:31:22	1.0	Surface	1	1	22.48	8.06	26.39	90.7	6.74	2.3	6.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:30:39	1.0	Surface	1	2	22.5	8.06	26.43	90.1	6.69	2.4	6.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:31:09	4.1	Middle	2	1	22.63	8.06	26.86	89.8	6.64	2.8	5.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:30:29	4.1	Middle	2	2	22.69	8.03	26.75	89.3	6.6	3	5.2
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:30:59	7.1	Bottom	3	1	22.69	8.03	30.31	90.7	6.57	3.2	4.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS2	06:30:21	7.1	Bottom	3	2	22.78	8.02	30.36	90.5	6.54	3.3	5.7
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:28:23	1.0	Surface	1	1	22.43	7.87	28.1	89.2	6.58	4.3	6.5
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:29:02	1.0	Surface	1	2	22.4	7.87	28.16	89.2	6.63	4.5	5.9
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:28:49	6.8	Middle	2	1	22.69	7.88	28.73	88.8	6.49	4.9	5.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:28:11	6.8	Middle	2	2	22.8	7.87	29.9	88.7	6.42	4.6	5.1
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:28:40	12.5	Bottom	3	1	22.86	7.87	31.08	89.3	6.42	4.2	7.8
HCLR	HY/2011/03	2013-11-25	Mid-Ebb	Fine	CS(M)F5	04:28:04	12.5	Bottom	3	2	22.89	7.87	31.26	89.6	6.43	4.1	6.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:47:30	1.0	Surface	1	1	22.35	7.92	28.26	94.7	6.98	11.2	10.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:48:09	1.0	Surface	1	2	22.32	7.93	28.17	95.1	7.02	11.8	9.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:47:56	4.8	Middle	2	1	22.31	7.92	28.37	94.4	6.96	13.5	10.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:47:18	4.8	Middle	2	2	22.39	7.92	28.39	94.4	6.95	12.8	11.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:47:11	8.6	Bottom	3	1	22.39	7.92	28.4	94.5	6.96	12.2	10.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS5	11:47:44	8.6	Bottom	3	2	22.31	7.92	28.38	94.5	6.97	13.1	10.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F6	11:56:36	1.0	Surface	1	1	22.3	7.91	28.06	97.7	7.22	11.9	9.3
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F6	11:56:18	1.0	Surface	1	2	22.28	7.91	27.98	98.2	7.26	13	9.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F6	11:56:08	2.2	Bottom	3	1	22.35	7.9	28.38	98.7	7.27	14.5	31.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS7	12:03:27	1.0	Surface	1	1	22.41	7.89	28.48	97.7	7.19	14.4	32.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS7	12:03:11	1.0	Surface	1	2	22.4	7.89	28.49	98.2	7.22	14.5	10.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS7	12:03:18	2.2	Bottom	3	1	22.4	7.89	28.6	97.9	7.2	9.7	11.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS7	12:03:03	2.2	Bottom	3	2	22.41	7.89	27.85	98.6	7.25	9.8	10.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS8	12:29:37	1.0	Surface	1	1	22.58	7.84	27.28	94.8	7	16.7	10.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS8	12:29:17	1.0	Surface	1	2	22.57	7.84	27.24	96.1	7.1	15	9.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS8	12:29:07	2.6	Bottom	3	1	22.58	7.83	27.59	96.9	7.04	17.7	11.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS8	12:29:30	2.6	Bottom	3	2	22.59	7.84	27.74	95.2	7.01	17	11.9

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F9	12:10:55	1.0	Surface	1	1	22.42	7.88	27.8	93.8	6.93	19.2	16.8
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F9	12:11:15	1.0	Surface	1	2	22.41	7.89	27.83	93.8	6.92	18.9	15.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F9	12:10:44	2.2	Bottom	3	1	22.36	7.88	28.11	93.7	6.92	20.5	16.8
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS(M)F9	12:11:04	2.2	Bottom	3	2	22.37	7.88	28.25	93.7	6.91	19.8	17.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:15:04	1.0	Surface	1	1	22.53	8.09	26.61	92.7	6.88	5.5	3.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:15:47	1.0	Surface	1	2	22.53	8.09	26.56	92.3	6.85	5.2	5.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:14:49	5.3	Middle	1	1	22.57	8.09	27.89	91.1	6.7	6.9	3.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:15:34	5.3	Middle	2	1	22.58	8.09	27.91	90.7	6.68	7	4.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:14:37	9.6	Bottom	3	1	22.68	8.07	29.86	92.4	6.71	10.3	5.7
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	IS10	13:15:22	9.6	Bottom	3	2	22.72	8.07	29.94	92	6.67	10.2	5.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR3	11:34:03	0.9	Middle	2	1	22.32	7.96	28.37	99.3	7.32	12.2	10.3
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR3	11:34:14	0.9	Middle	2	2	22.33	7.95	28.35	98.1	7.23	12.3	11.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR4	12:21:58	1.0	Surface	1	1	22.47	7.85	27.27	94	6.96	15.6	15.7
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR4	12:21:34	1.0	Surface	1	2	22.47	7.85	27.24	95.5	7.03	15.8	14.8
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR4	12:21:28	2.5	Bottom	3	1	22.46	7.85	27.25	96.3	7.13	15.6	17.3
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR4	12:21:43	2.5	Bottom	3	2	22.46	7.85	27.27	94.7	7.01	15.6	15
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR5	13:04:09	1.0	Surface	1	1	22.56	8.09	27.85	93.2	6.86	3.7	5.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR5	13:04:34	1.0	Surface	1	2	22.55	8.08	27.85	92.9	6.84	3.8	4.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR5	13:04:19	3.5	Bottom	3	1	22.56	8.08	27.97	93	6.84	4	9.5
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR5	13:03:55	3.5	Bottom	3	2	22.56	8.08	27.91	93.3	6.87	4	10.3
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:40:13	1.0	Surface	1	1	22.89	7.92	31.61	87.9	6.29	4.1	5
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:40:51	1.0	Surface	1	2	22.89	7.93	31.53	87.9	6.3	4.1	4.8
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:40:04	3.3	Middle	2	1	22.88	7.92	31.85	87.7	6.27	4.6	5.8
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:40:37	3.3	Middle	2	2	22.87	7.92	31.88	87.5	6.26	4.4	5.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:39:44	5.5	Bottom	3	1	22.87	7.92	31.97	88.7	6.3	4.8	6.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10A	13:40:26	5.5	Bottom	3	2	22.87	7.93	32	87.7	6.27	5.1	6.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10B	13:51:39	1.0	Surface	1	1	22.89	7.93	31.76	87.2	6.24	4.7	6.5
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10B	13:52:03	1.0	Surface	1	2	22.9	7.93	31.64	87.2	6.25	4.7	6.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10B	13:51:30	4.9	Bottom	3	1	22.87	7.93	31.96	87.1	6.23	5.5	6.4
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	SR10B	13:51:52	4.9	Bottom	3	2	22.87	7.93	31.95	86.9	6.22	5.4	6.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:37:01	1.0	Surface	1	1	22.55	8.16	26.56	93.1	6.91	2	4.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:37:43	1.0	Surface	1	2	22.54	8.14	26.53	92.5	6.87	2	5.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:37:27	3.9	Middle	2	1	22.55	8.15	27.28	91.2	6.74	3.1	4.7
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:36:48	3.9	Middle	2	2	22.54	8.16	27.39	92.2	6.81	3	4.7
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:37:14	6.8	Bottom	3	1	22.73	8.13	29.45	92.4	6.72	4.6	6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS2	11:36:22	6.8	Bottom	3	2	22.77	8.16	28.99	93.6	6.82	4.7	5.7
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:07:30	1.0	Surface	1	1	22.69	7.9	29.34	89.8	6.54	4.4	4.2
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:08:12	1.0	Surface	1	2	22.71	7.9	29.41	89.4	6.51	4.7	4.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:07:56	6.8	Middle	2	1	22.88	7.9	31.58	87.5	6.27	8.4	5.9
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:07:12	6.8	Middle	2	2	22.88	7.89	31.59	87.6	6.28	8.7	5.1
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:07:45	12.6	Bottom	3	1	22.87	7.89	31.61	89	6.38	7.9	4.6
HCLR	HY/2011/03	2013-11-25	Mid-Flood	Sunny	CS(M)F5	13:07:03	12.6	Bottom	3	2	22.87	7.89	31.62	88.7	6.36	8.2	5.6
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:43:07	1.0	Surface	1	1	22.27	7.91	30.15	92.5	6.76	5.8	5.8
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:43:35	1.0	Surface	1	2	22.23	7.91	29.87	92.6	6.78	5.5	7.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:43:27	4.7	Middle	2	1	22.53	7.9	30.59	92.9	6.73	6.3	5.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:43:02	4.7	Middle	2	2	22.48	7.88	30.41	92.4	6.71	6.3	6.8
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:42:54	8.3	Bottom	3	1	22.53	7.84	32.21	93	6.68	6.4	4.8
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS5	08:43:22	8.3	Bottom	3	2	22.55	7.89	32.36	93.1	6.68	6.4	5.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F6	08:35:41	1.0	Surface	1	1	21.9	7.79	29.13	95.2	7.04	10.5	8.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F6	08:35:32	1.0	Surface	1	2	21.9	7.74	29.12	95.2	7.07	10.7	9.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F6	08:35:25	2.4	Bottom	3	1	21.89	7.65	29.42	95.6	7.07	11.8	9.9
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F6	08:35:37	2.4	Bottom	3	2	21.89	7.76	29.12	95.2	7.04	11.4	10.5
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS7	08:29:21	1.0	Surface	1	1	21.94	7.79	29.13	93.9	6.94	17.1	5.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS7	08:29:54	1.0	Surface	1	2	21.94	7.85	29.13	94.1	6.95	17.3	5.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS7	08:29:43	2.4	Bottom	3	1	21.94	7.82	29.14	93.9	6.94	19.8	7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS7	08:29:14	2.4	Bottom	3	2	21.94	7.74	29.14	93.6	6.91	20	6.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS8	08:04:04	1.0	Surface	1	1	22.16	7.8	29.65	90	6.6	6.5	5.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS8	08:04:47	1.0	Surface	1	2	22.16	7.85	29.65	89.9	6.59	6.2	5.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS8	08:04:23	2.5	Bottom	3	1	22.26	7.82	29.89	90.1	6.59	9.1	4.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS8	08:03:49	2.5	Bottom	3	2	22.23	7.75	29.77	90	6.59	8.9	3.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F9	08:23:29	1.0	Surface	1	1	21.87	7.78	29.24	94.9	7.02	7.2	5.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F9	08:23:46	1.0	Surface	1	2	21.87	7.82	29.25	94.8	7.01	7.3	4.5

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F9	08:23:34	2.4	Bottom	3	1	21.86	7.79	29.24	94.9	7.02	7.5	6.9
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS(M)F9	08:23:15	2.4	Bottom	3	2	21.86	7.7	29.24	95	7.03	7.5	7.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:04:32	1.0	Surface	1	1	22.19	8.15	30.62	93.9	6.79	2.6	5.2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:05:10	1.0	Surface	1	2	22.2	8.15	30.63	92.1	6.77	2.6	4.5
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:04:23	5.2	Middle	2	1	22.27	8.15	30.77	93	6.77	2.7	6.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:05:01	5.2	Middle	2	2	22.25	8.16	30.75	92.6	6.74	2.6	4.5
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:04:14	9.4	Bottom	3	1	22.29	8.15	31.01	93	6.76	2.7	4.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	IS10	07:04:51	9.4	Bottom	3	2	22.33	8.15	31.22	92.6	6.72	2.8	4.6
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR3	08:53:59	0.6	Middle	2	1	22.08	7.9	29.9	94	6.9	4.9	5.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR3	08:54:03	0.6	Middle	2	2	22.09	7.9	29.9	94	6.9	5.1	4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR4	08:15:41	1.0	Surface	1	1	22.16	7.87	29.64	90.4	6.64	5.5	5.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR4	08:16:11	1.0	Surface	1	2	22.17	7.88	29.66	90.6	6.65	5.3	5.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR4	08:15:50	2.4	Bottom	3	1	22.17	7.87	29.7	90.6	6.65	5.8	4.6
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR4	08:15:27	2.4	Bottom	3	2	22.17	7.86	29.69	90.5	6.64	5.9	5.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR5	07:15:49	1.0	Surface	1	1	22.18	8.15	30.6	92.8	6.77	2.3	5.8
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR5	07:15:30	1.0	Surface	1	2	22.18	8.15	30.6	92.8	6.77	2.3	6.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR5	07:15:19	3.6	Bottom	3	1	22.18	8.15	30.62	92.8	6.77	2.4	4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR5	07:15:41	3.6	Bottom	3	2	22.17	8.15	30.61	92.8	6.77	2.3	5.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	07:00:57	1.0	Surface	1	1	22.49	7.94	31.87	89.8	6.46	2.1	2.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	07:00:10	1.0	Surface	1	2	22.51	7.92	31.9	89.9	6.47	1.9	2.9
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	07:00:39	3.3	Middle	2	1	22.57	7.93	32.04	89.6	6.44	2.2	4.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	07:00:00	3.3	Middle	2	2	22.58	7.92	32.04	89.6	6.44	2.1	3.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	07:00:28	5.6	Bottom	3	1	22.59	7.93	32.07	89.5	6.42	2.4	3.9
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10A	06:59:48	5.6	Bottom	3	2	22.58	7.91	32.05	89.7	6.44	2.3	4.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10B	06:50:21	1.0	Surface	1	1	22.6	7.93	31.99	89	6.39	2.3	2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10B	06:50:01	1.0	Surface	1	2	22.61	7.93	31.96	89.4	6.42	2.3	2.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10B	06:49:49	4.5	Bottom	3	1	22.59	7.92	31.95	89.6	6.44	2.4	2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	SR10B	06:50:09	4.5	Bottom	3	2	22.59	7.92	31.98	89.2	6.41	2.3	2.9
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:32:05	1.0	Surface	1	1	22.5	8.16	30.9	94.8	6.86	2.2	3.2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:31:27	1.0	Surface	1	2	22.5	8.16	30.9	94.8	6.86	2.1	5
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:31:54	3.9	Middle	2	1	22.49	8.17	31.1	94.3	6.82	2.5	4.8
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:31:17	3.9	Middle	2	2	22.49	8.17	30.98	94.3	6.83	2.4	4.7
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:31:47	6.8	Bottom	3	1	22.49	8.16	31.61	94.4	6.81	2.5	3.6
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS2	08:31:05	6.8	Bottom	3	2	22.49	8.16	31.58	94.4	6.81	2.5	4.4
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:32:49	1.0	Surface	1	1	22.19	7.81	30.67	88.2	6.43	3.2	4.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:33:34	1.0	Surface	1	2	22.2	7.86	30.72	88.3	6.43	3.3	3.1
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:33:25	6.8	Middle	2	1	22.29	7.85	30.66	86.8	6.31	3.4	4.2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:32:41	6.8	Middle	2	2	22.47	7.8	30.53	86.6	6.29	3.5	2.2
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:33:10	12.5	Bottom	3	1	22.76	7.84	31.7	86.5	6.21	3.6	4.3
HCLR	HY/2011/03	2013-11-27	Mid-Ebb	Cloudy	CS(M)F5	07:32:31	12.5	Bottom	3	2	22.71	7.76	31.52	86.8	6.24	3.7	2.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:20:30	1.0	Surface	1	1	22.28	7.9	29.51	98.7	7.23	6.6	6.4
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:19:24	1.0	Surface	1	2	22.29	7.88	29.59	98.6	7.22	6.8	6.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:20:11	4.7	Middle	2	1	22.28	7.89	29.67	97.9	7.17	6.9	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:19:13	4.7	Middle	2	2	22.31	7.88	29.78	97.5	7.13	7	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:19:57	8.4	Bottom	3	1	22.31	7.89	30.18	97.3	7.1	7.4	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS5	14:19:01	8.4	Bottom	3	2	22.31	7.86	30.33	97.3	7.09	7.5	5.9
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F6	14:26:24	1.0	Surface	1	1	22.28	7.87	29.28	99.1	7.27	10.8	19.4
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F6	14:26:07	1.0	Surface	1	2	22.26	7.81	29.29	98.5	7.23	11	19.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F6	14:26:01	2.5	Bottom	3	1	22.26	7.76	29.28	98.2	7.21	12	21
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F6	14:26:16	2.5	Bottom	3	2	22.25	7.84	29.29	99	7.27	11.7	21
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS7	14:33:55	1.0	Surface	1	1	22.33	7.89	29.23	98.7	7.23	6.3	7.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS7	14:33:25	1.0	Surface	1	2	22.22	7.82	29.28	98	7.2	6.1	7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS7	14:33:35	2.5	Bottom	3	1	22.3	7.83	29.89	98	7.16	8.9	6.8
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS7	14:33:19	2.5	Bottom	3	2	22.18	7.76	29.3	97.7	7.18	8.6	6.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS8	14:56:44	1.0	Surface	1	1	22.67	7.88	30.08	87.3	6.33	7	3.5
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS8	14:56:10	1.0	Surface	1	2	22.62	7.87	29.71	87	6.33	7	5.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS8	14:56:00	2.5	Bottom	3	1	22.76	7.83	30.58	85.8	6.2	9.3	4.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS8	14:56:30	2.5	Bottom	3	2	22.77	7.85	30.62	86.4	6.23	9	5.8
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F9	14:39:29	1.0	Surface	1	1	22.54	7.84	29.9	96.4	7.01	13.6	6.9
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F9	14:40:01	1.0	Surface	1	2	22.55	7.9	29.89	96.6	7.03	13.4	7.5
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F9	14:39:19	2.5	Bottom	3	1	22.5	7.76	30.1	96.2	7	14.6	7.8
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS(M)F9	14:39:51	2.5	Bottom	3	2	22.51	7.87	30.11	96.4	7.01	14.9	7.3

Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:48:15	1.0	Surface	1	1	22.85	8.19	29.99	96	6.94	2.4	2.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:49:06	1.0	Surface	1	2	22.85	8.19	29.99	95.4	6.9	2.4	2.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:48:04	5.1	Middle	2	1	22.6	8.19	30.53	94.6	6.86	3.1	3.4
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:48:54	5.1	Middle	2	2	22.58	8.19	30.58	93.3	6.76	3.2	3.8
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:48:42	9.2	Bottom	3	1	22.43	8.18	31	93	6.74	3.4	8.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	IS10	14:47:53	9.2	Bottom	3	2	22.57	8.18	30.65	95.3	6.9	3.3	7.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR3	14:08:05	0.7	Middle	2	1	22.29	7.75	29.56	98.6	7.22	7	7.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR3	14:08:02	0.7	Middle	2	2	22.28	7.72	29.53	98.6	7.23	7.1	5.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR4	14:50:42	1.0	Surface	1	1	22.69	7.88	30	92.9	6.74	5.8	3.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR4	14:50:53	1.0	Surface	1	2	22.69	7.89	29.98	94.4	6.84	5.7	3.2
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR4	14:50:48	2.5	Bottom	3	1	22.68	7.88	30.02	92.7	6.72	6.6	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR4	14:50:28	2.5	Bottom	3	2	22.69	7.87	30.03	92.8	6.73	6.5	4
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR5	14:39:18	1.0	Surface	1	1	22.89	8.19	29.95	97.9	7.08	2.4	3.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR5	14:38:56	1.0	Surface	1	2	22.88	8.19	29.94	98.1	7.09	2.5	2.2
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR5	14:38:46	3.5	Bottom	3	1	22.89	8.19	30	98.1	7.09	2.6	3.8
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR5	14:39:06	3.5	Bottom	3	2	22.9	8.19	30.01	97.9	7.08	2.5	2.5
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	15:59:28	1.0	Surface	1	1	22.5	7.91	31.66	91.2	6.57	2.8	3.9
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	16:00:20	1.0	Surface	1	2	22.51	7.94	31.69	91.4	6.55	2.5	3.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	15:59:15	3.3	Middle	2	1	22.6	7.9	32.13	90.4	6.49	3.2	5.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	16:00:08	3.3	Middle	2	2	22.56	7.92	31.97	91.1	6.57	2.8	4
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	15:58:52	5.6	Bottom	3	1	22.59	7.83	32.16	90.4	6.48	3.3	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10A	15:59:53	5.6	Bottom	3	2	22.62	7.93	32.25	90.4	6.48	3.2	5.3
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10B	16:11:41	1.0	Surface	1	1	22.47	7.94	31.41	91.2	6.59	2.3	4.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10B	16:11:07	1.0	Surface	1	2	22.47	7.94	31.28	91.1	6.58	2.6	2.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10B	16:11:25	4.5	Bottom	3	1	22.59	7.93	32.19	91	6.53	2.8	4.9
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	SR10B	16:10:54	4.5	Bottom	3	2	22.59	7.93	32.16	91.2	6.54	2.9	7.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:07:56	1.0	Surface	1	1	22.66	8.24	29.95	95	6.9	4.9	2
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:07:20	1.0	Surface	1	2	22.7	8.26	29.89	96.2	6.98	5	2.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:07:02	4.1	Middle	2	1	22.55	8.27	30.72	94.8	6.87	5.5	5.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:07:45	4.1	Middle	2	2	22.51	8.24	30.75	94.5	6.85	5.5	6.9
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:07:30	7.1	Bottom	3	1	22.55	8.25	31.04	95.8	6.94	5.6	5.2
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS2	13:06:36	7.1	Bottom	3	2	22.52	8.32	31.04	96.3	6.97	5.3	5.7
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:27:56	1.0	Surface	1	1	22.52	7.89	31.03	91.1	6.59	2.4	6.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:28:51	1.0	Surface	1	2	22.53	7.92	31.04	91.3	6.6	2.2	5.2
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:28:40	6.8	Middle	2	1	22.53	7.91	31.08	90.3	6.53	2.4	5.1
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:27:47	6.8	Middle	2	2	22.53	7.88	31.1	90	6.51	2.5	3.6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:28:22	12.5	Bottom	3	1	22.59	7.91	31.49	89.4	6.44	2.6	6
HCLR	HY/2011/03	2013-11-27	Mid-Flood	Cloudy	CS(M)F5	15:27:41	12.5	Bottom	3	2	22.54	7.86	31.21	89.4	6.46	2.7	5.6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:33	1.0	Surface	1	1	20.74	7.97	30.54	95.1	7.12	5.4	8.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:57	1.0	Surface	1	2	20.74	7.97	30.54	95	7.11	5.6	7.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:25	4.2	Middle	2	1	20.88	7.97	30.75	94.9	7.08	6.2	8.4
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:50	4.2	Middle	2	2	20.86	7.97	30.74	94.8	7.08	6.4	8.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:17	7.4	Bottom	3	1	20.95	7.97	31.16	95.6	7.11	6.1	7.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS5	10:52:42	7.4	Bottom	3	2	20.83	7.97	31	95.3	7.11	6.2	7.4
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F6	10:44:24	1.0	Surface	1	1	20.5	7.94	30.41	96.5	7.27	9.2	11.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F6	10:44:54	1.0	Surface	1	2	20.5	7.96	30.41	96.3	7.25	9.3	11.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F6	10:44:16	2.2	Bottom	3	1	20.51	7.94	30.42	96.6	7.27	9.4	12.3
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F6	10:44:36	2.2	Bottom	3	2	20.5	7.94	30.43	96.3	7.25	9.5	11.7
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS7	10:38:21	1.0	Surface	1	1	20.56	7.95	30.52	97.3	7.32	8.4	12.6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS7	10:38:40	1.0	Surface	1	2	20.56	7.95	30.52	96.7	7.27	8.3	12.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS7	10:38:31	2.2	Bottom	3	1	20.56	7.95	30.54	97.1	7.3	8.1	13.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS7	10:38:13	2.2	Bottom	3	2	20.56	7.94	30.53	97.8	7.35	8.4	12.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS8	10:09:56	1.0	Surface	1	1	20.51	7.95	31.05	94.6	7.1	7.3	9.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS8	10:09:38	1.0	Surface	1	2	20.48	7.95	31.09	94.6	7.1	7.2	8.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS8	10:09:47	3.0	Bottom	3	1	20.48	7.95	31.14	94.3	7.07	7.4	7.4
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS8	10:09:30	3.0	Bottom	3	2	20.46	7.95	31.16	94.4	7.08	7.1	7
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F9	10:28:02	1.0	Surface	1	1	20.64	7.93	30.68	95.1	7.13	9.3	11.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F9	10:27:47	1.0	Surface	1	2	20.64	7.93	30.68	95.1	7.13	9.4	10.7
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F9	10:27:53	2.7	Bottom	3	1	20.64	7.93	30.7	95.1	7.13	9.5	11.6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS(M)F9	10:27:37	2.7	Bottom	3	2	20.65	7.93	30.72	95.2	7.13	9.8	11.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:54:58	1.0	Surface	1	1	21.63	8.14	32.55	91.6	6.68	3.7	8.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:55:49	1.0	Surface	1	2	21.62	8.14	32.53	91.1	6.64	3.8	6.9

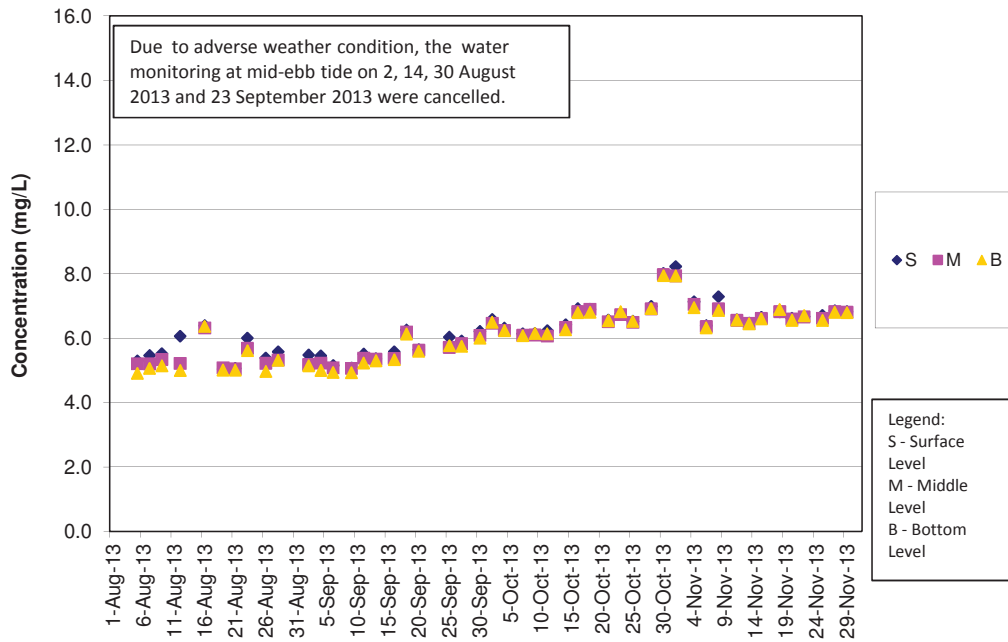
Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:54:44	5.4	Middle	2	1	21.64	8.14	32.57	91.6	6.67	3.8	7.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:55:34	5.4	Middle	2	2	21.65	8.14	32.56	90.8	6.62	4.1	9.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:54:32	9.8	Bottom	3	1	21.64	8.15	32.57	91.7	6.68	5.3	11.3
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	IS10	09:55:27	9.8	Bottom	3	2	21.64	8.15	32.57	90.9	6.62	5	11
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR3	11:02:46	0.7	Middle	2	1	20.71	7.97	30.47	96.1	7.2	5.2	7.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR3	11:02:53	0.7	Middle	2	2	20.72	7.97	30.47	96.1	7.2	5.1	6.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR4	10:15:58	1.0	Surface	1	1	19.86	7.92	29.79	92.1	7.04	3.8	5.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR4	10:15:41	1.0	Surface	1	2	20.06	7.91	29.89	92.2	7.02	3.7	5.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR4	10:15:35	2.7	Bottom	3	1	19.96	7.91	30.06	92.7	7.07	3.7	7.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR4	10:15:47	2.7	Bottom	3	2	19.91	7.91	29.89	92.1	7.03	3.7	5.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR5	10:06:15	1.0	Surface	1	1	21.6	8.15	32.5	91	6.64	3.7	8.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR5	10:05:44	1.0	Surface	1	2	21.6	8.14	32.51	90.8	6.62	4	8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR5	10:05:53	4.6	Bottom	3	1	21.6	8.14	32.51	90.7	6.61	3.9	9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR5	10:05:28	4.6	Bottom	3	2	21.63	8.14	32.54	90.7	6.61	4.3	9.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:05:37	1.0	Surface	1	1	21.93	7.98	32.92	92.1	6.66	2.9	6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:06:06	1.0	Surface	1	2	21.92	7.99	32.93	91.9	6.65	3	6.4
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:05:57	3.2	Middle	2	1	21.92	7.98	32.96	91.8	6.64	3	7
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:05:28	3.2	Middle	2	2	21.94	7.97	32.95	92	6.65	2.9	6.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:05:18	5.3	Bottom	3	1	21.93	7.97	32.97	92.1	6.66	2.9	8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10A	09:05:48	5.3	Bottom	3	2	21.93	7.98	32.97	91.8	6.64	2.9	6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10B	08:57:16	1.1	Surface	1	1	21.87	7.92	32.84	91.9	6.65	2.7	4.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10B	08:56:59	1.0	Surface	1	2	21.87	7.91	32.83	92.2	6.68	2.6	6.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10B	08:56:53	4.2	Bottom	3	1	21.87	7.91	32.84	92.3	6.68	2.7	10.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	SR10B	08:57:08	4.2	Bottom	3	2	21.87	7.92	32.86	91.9	6.66	2.7	9.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:21:05	1.0	Surface	1	1	21.22	8.16	32.35	92.9	6.82	3.5	6.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:22:04	1.0	Surface	1	2	21.22	8.16	32.35	92.9	6.83	3.3	6.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:21:46	3.5	Middle	2	1	21.22	8.16	32.36	92.6	6.81	3.4	6.5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:20:49	3.5	Middle	2	2	21.23	8.16	32.36	92.7	6.81	3.8	5.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:21:32	6.0	Bottom	3	1	21.23	8.16	32.36	92.5	6.8	3.5	7.9
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS2	11:20:37	6.0	Bottom	3	2	21.23	8.16	32.36	92.4	6.79	3.6	7.1
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:38:03	1.0	Surface	1	1	21.96	7.99	32.95	91.3	6.59	2.8	5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:38:46	1.0	Surface	1	2	21.96	8	32.93	90.9	6.57	2.8	6.2
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:38:34	6.2	Middle	2	1	21.95	7.99	33	90.6	6.55	2.8	5
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:37:50	6.2	Middle	2	2	21.95	7.99	33	90.6	6.56	2.9	4.8
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:38:23	11.4	Bottom	3	1	21.96	7.99	33.02	90.5	6.54	2.9	6
HCLR	HY/2011/03	2013-11-29	Mid-Ebb	Sunny	CS(M)F5	09:37:40	11.4	Bottom	3	2	21.96	7.98	33.02	90.5	6.56	2.9	7.4
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:53:05	1.0	Surface	1	1	20.68	7.97	30.17	97.7	7.34	10.3	12.9
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:52:36	1.0	Surface	1	2	20.68	7.97	30.18	97.8	7.35	10.3	12.8
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:52:56	4.3	Middle	2	1	20.68	7.97	30.2	97.5	7.33	10.8	16
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:52:27	4.3	Middle	2	2	20.69	7.97	30.22	97.5	7.33	10.4	16.7
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:52:45	7.5	Bottom	3	1	20.68	7.97	30.22	97.5	7.33	10.3	17.9
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS5	14:52:19	7.5	Bottom	3	2	20.7	7.97	30.26	97.6	7.33	10.6	15.7
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F6	15:00:39	1.0	Surface	1	1	20.83	7.97	30.32	100.6	7.53	11.1	12.5
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F6	15:00:55	1.0	Surface	1	2	20.83	7.97	30.32	100.6	7.52	11.1	12.3
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F6	15:00:46	2.2	Bottom	3	1	20.83	7.97	30.33	100.5	7.53	11.3	13.3
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F6	15:00:33	2.2	Bottom	3	2	20.83	7.97	30.33	100.6	7.53	11.3	14.4
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS7	15:07:35	1.0	Surface	1	1	20.65	7.94	30.25	98.4	7.39	13.4	17.2
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS7	15:07:53	1.0	Surface	1	2	20.65	7.95	30.26	98	7.36	13.3	16.1
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS7	15:07:24	2.2	Bottom	3	1	20.64	7.94	30.27	98.5	7.4	14	17.1
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS7	15:07:41	2.2	Bottom	3	2	20.65	7.95	30.26	98.1	7.37	13.4	15.8
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS8	15:32:26	1.0	Surface	1	1	20.95	7.95	31.17	97.4	7.24	12.8	10.8
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS8	15:32:44	1.0	Surface	1	2	20.95	7.96	31.14	96.8	7.2	12.6	9.4
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS8	15:32:17	3.1	Bottom	3	1	20.97	7.95	31.38	97.9	7.26	14.2	12.2
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS8	15:32:35	3.1	Bottom	3	2	20.96	7.95	31.41	97.1	7.21	14.4	11.3
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F9	15:14:22	1.0	Surface	1	1	20.96	7.94	30.66	94.6	7.05	16.7	10.6
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F9	15:14:39	1.0	Surface	1	2	20.95	7.95	30.63	95	7.08	16.3	10.4
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F9	15:14:13	2.7	Bottom	3	1	20.97	7.93	30.98	95	7.07	16.5	12
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS(M)F9	15:14:29	2.7	Bottom	3	2	20.95	7.94	30.82	95	7.08	16.4	12.6
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	15:59:27	1.0	Surface	1	1	21.48	8.17	32.27	92.4	6.76	3.7	6.5
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	16:00:08	1.0	Surface	1	2	21.46	8.17	32.24	93.1	6.82	3.4	5.1
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	15:59:17	5.5	Middle	2	1	21.53	8.17	32.38	91.7	6.7	4.3	7.5
HCLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	15:59:52	5.5	Middle	2	2	21.52	8.17	32.37	92.1	6.73	4.2	6.2

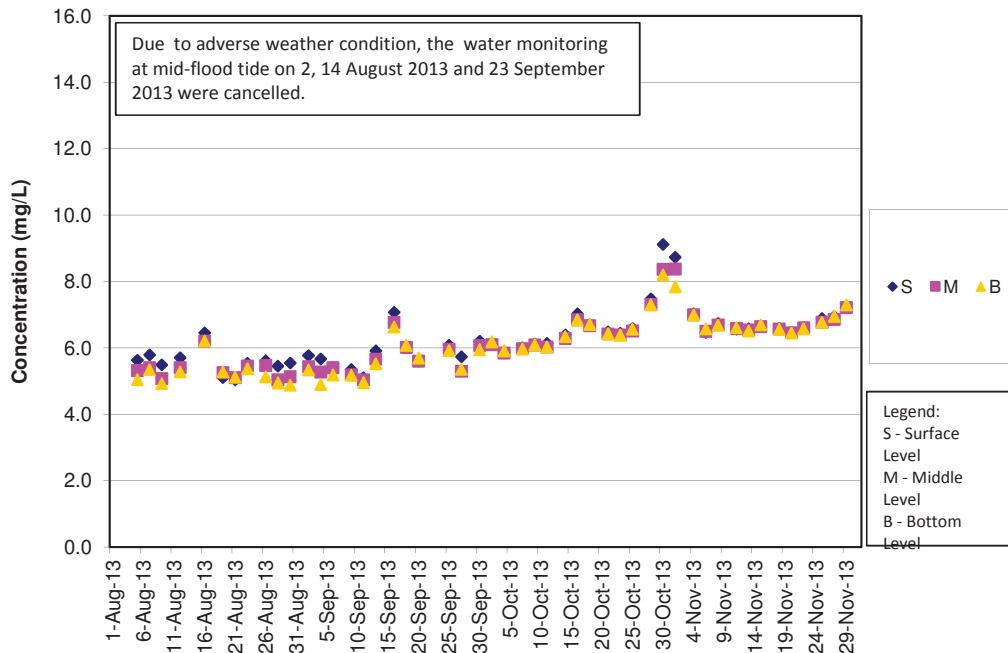
Water Quarterly Monitoring Data

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Time	Depth, m	Level	Level_Code	Replicate	Temperature, °C	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	15:59:05	9.9	Bottom	3	1	21.56	8.17	32.47	92.2	6.73	4.6	7.1
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	IS10	15:59:43	9.9	Bottom	3	2	21.53	8.17	32.41	92.3	6.74	5	6.7
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR3	14:40:17	0.7	Middle	2	1	20.71	7.97	30.24	99.9	7.5	9.6	12.4
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR3	14:40:11	0.7	Middle	2	2	20.7	7.97	30.23	100.2	7.52	9.6	12
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR4	15:26:53	1.0	Surface	1	1	20.81	7.94	30.43	100.3	7.51	5.3	8.5
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR4	15:26:37	1.0	Surface	1	2	20.76	7.93	30.45	102.6	7.69	5.2	9.6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR4	15:26:44	2.7	Bottom	3	1	20.79	7.93	30.65	101.5	7.59	5.1	8.6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR4	15:26:28	2.7	Bottom	3	2	20.69	7.92	30.53	103.2	7.74	5.5	8.7
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR5	15:47:37	1.0	Surface	1	1	21.49	8.17	32.29	94.4	6.9	3.4	6.6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR5	15:48:02	1.0	Surface	1	2	21.49	8.17	32.3	93.9	6.87	3.4	6.3
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR5	15:47:50	4.5	Bottom	3	1	21.53	8.16	32.38	94	6.87	3.5	7.1
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR5	15:47:24	4.5	Bottom	3	2	21.52	8.17	32.37	94.5	6.91	3.7	7.4
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:19	1.0	Surface	1	1	21.91	7.99	32.9	91.7	6.64	3.5	5.4
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:47	1.0	Surface	1	2	21.92	7.99	32.91	91.5	6.62	3.4	6.3
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:09	3.3	Middle	2	1	21.92	7.99	32.94	91.8	6.64	3.5	6.3
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:39	3.3	Middle	2	2	21.93	7.99	32.94	91.4	6.61	3.5	7.5
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:02	5.5	Bottom	3	1	21.91	7.99	32.95	91.8	6.64	3.6	6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10A	16:41:28	5.5	Bottom	3	2	21.92	7.99	32.94	91.4	6.61	3.6	6.4
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10B	16:51:28	1.0	Surface	1	1	21.93	8	32.89	91.1	6.59	3.6	7
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10B	16:51:07	1.0	Surface	1	2	21.92	8	32.89	91.1	6.59	3.6	6.2
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10B	16:50:57	4.4	Bottom	3	1	21.93	8	32.92	91.1	6.58	3.6	7.3
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	SR10B	16:51:16	4.4	Bottom	3	2	21.93	8	32.92	90.9	6.57	3.5	5.5
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:24:45	1.0	Surface	1	1	21.55	8.27	32.32	97.7	7.14	2.1	8
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:24:02	1.0	Surface	1	2	21.55	8.27	32.34	99.7	7.28	2.2	8.1
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:23:47	3.3	Middle	2	1	21.59	8.27	32.42	100.5	7.33	2.6	7.6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:24:32	3.3	Middle	2	2	21.6	8.27	32.38	97.3	7.1	2.3	7.6
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:23:37	5.5	Bottom	3	1	21.66	8.26	32.55	102.4	7.46	2.9	6.1
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS2	14:24:19	5.5	Bottom	3	2	21.65	8.26	32.46	98	7.14	3	5.9
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:07:03	1.0	Surface	1	1	21.89	7.98	32.78	91.5	6.62	4.4	7.9
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:07:41	1.0	Surface	1	2	21.89	7.98	32.77	91.5	6.63	4.2	7.2
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:07:29	6.5	Middle	2	1	21.89	7.98	32.85	91.2	6.6	4.4	7.5
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:06:54	6.5	Middle	2	2	21.9	7.98	32.85	91.1	6.59	4.3	6.9
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:06:44	11.9	Bottom	3	1	21.9	7.97	32.86	91.4	6.61	4.3	7.1
HKLR	HY/2011/03	2013-11-29	Mid-Flood	Sunny	CS(MF)5	16:07:18	11.9	Bottom	3	2	21.89	7.98	32.87	91	6.59	4.2	7.1

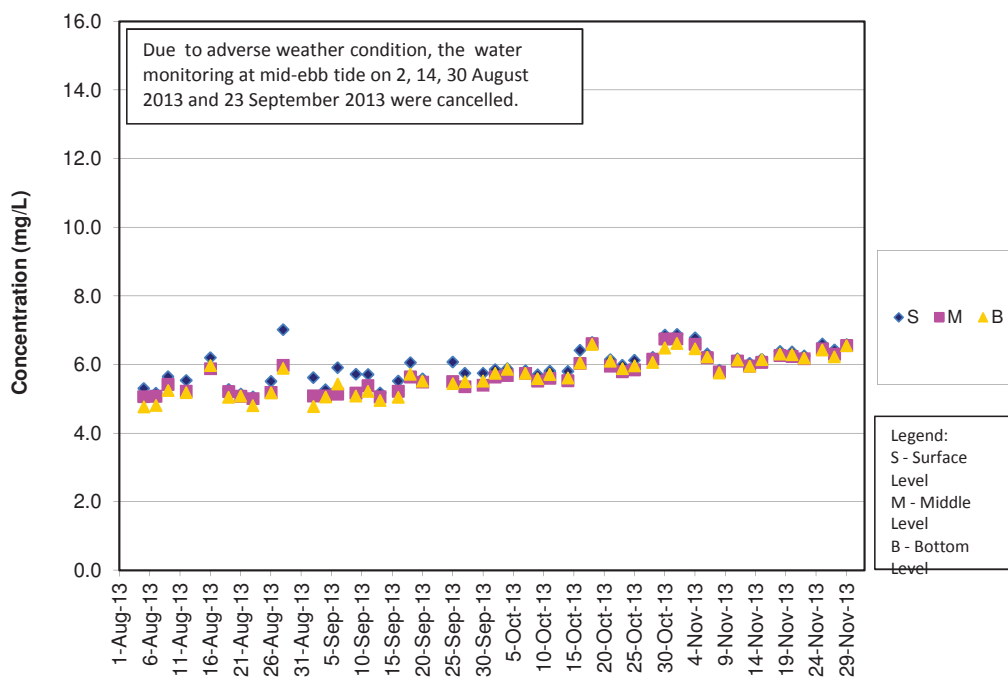
DO Concentrations at Station CS2 (Mid Ebb)



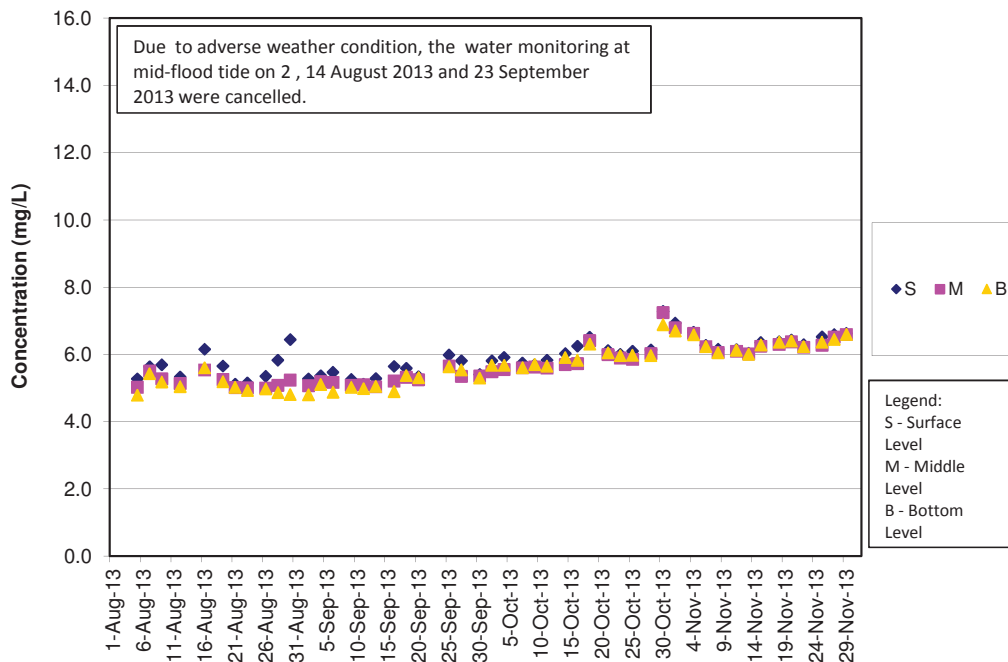
DO Concentrations at Station CS2 (Mid Flood)



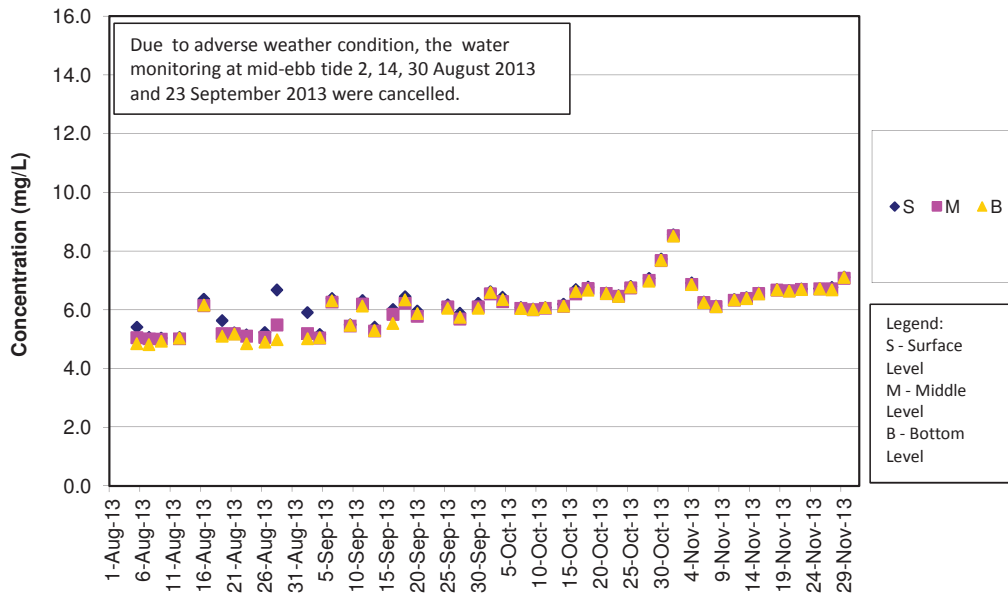
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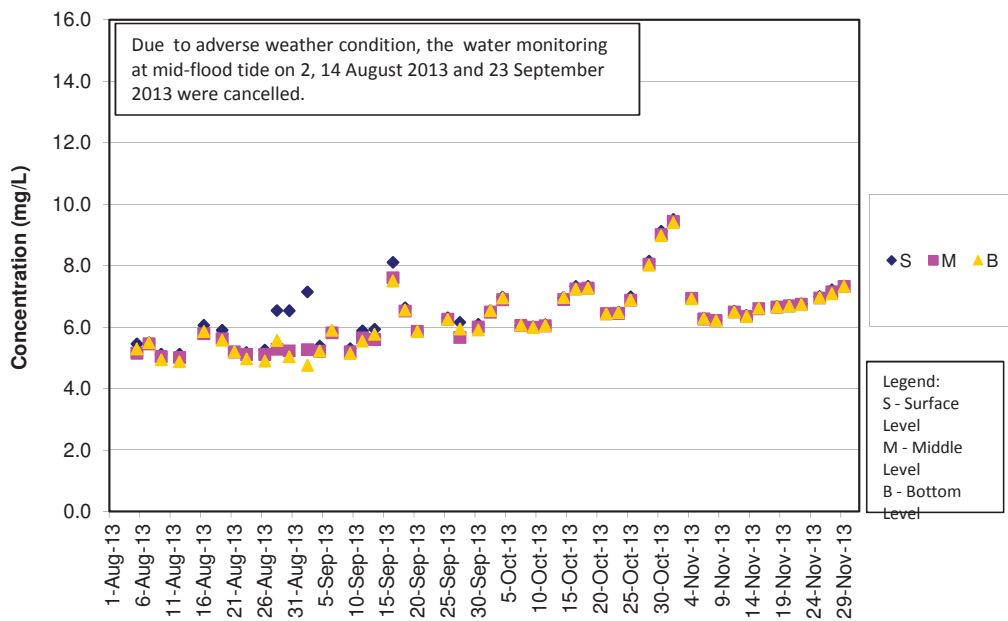
DO Concentrations at Station CS(Mf)5 (Mid Flood)



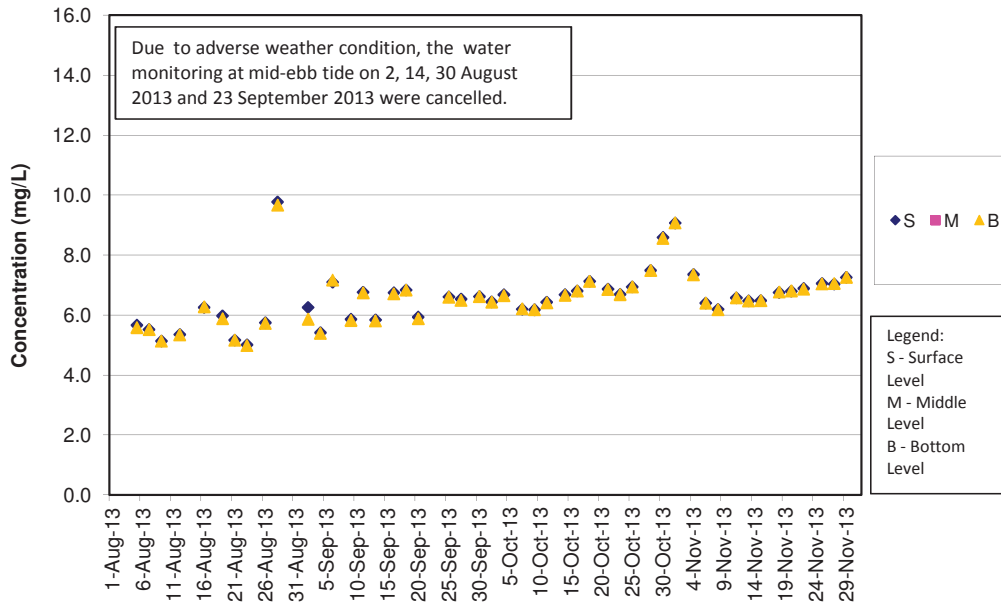
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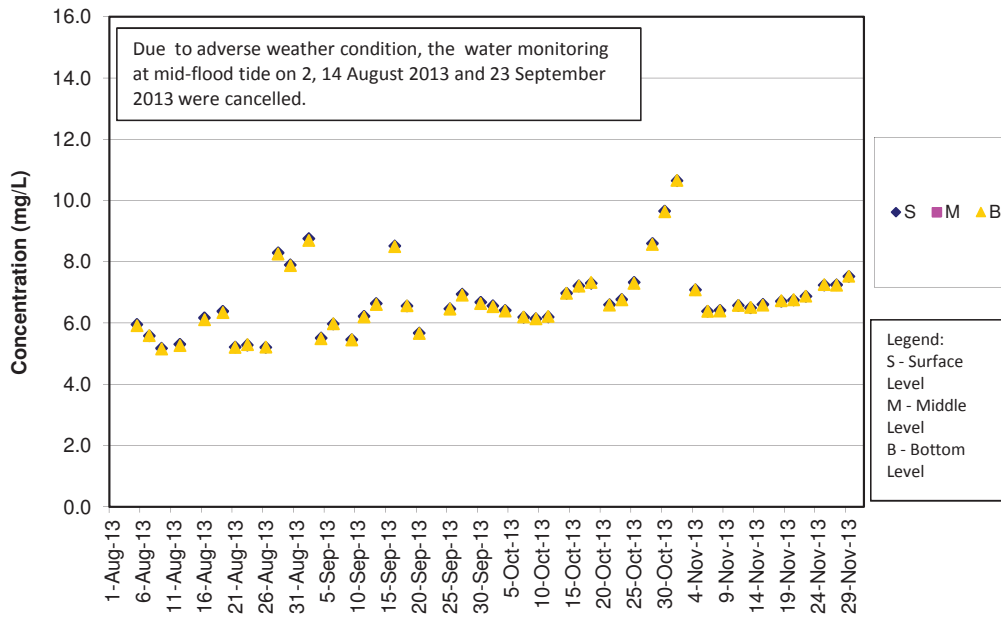
DO Concentrations at Station IS5 (Mid Flood)



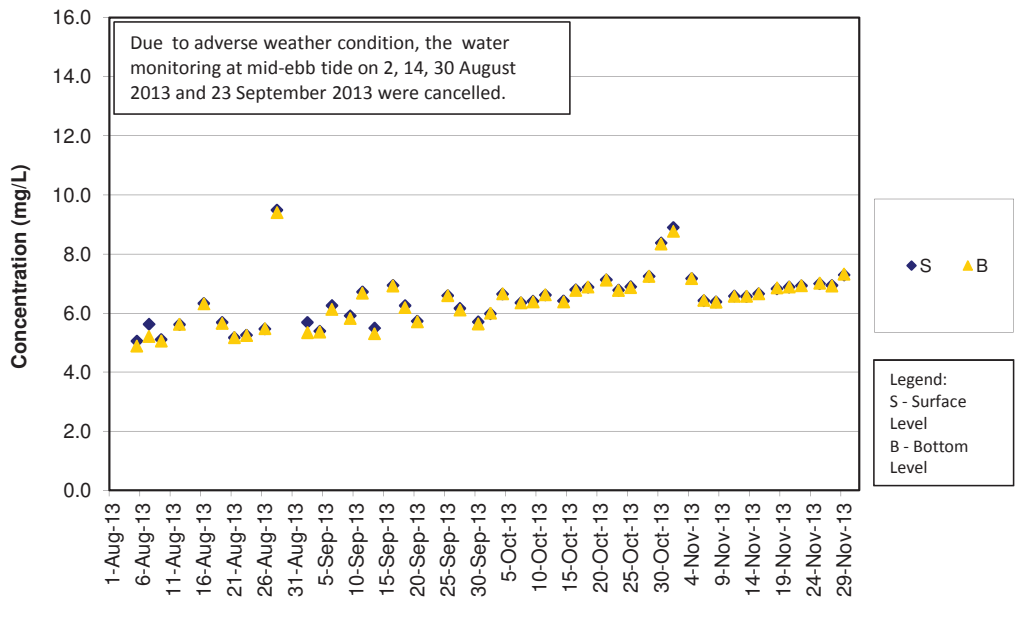
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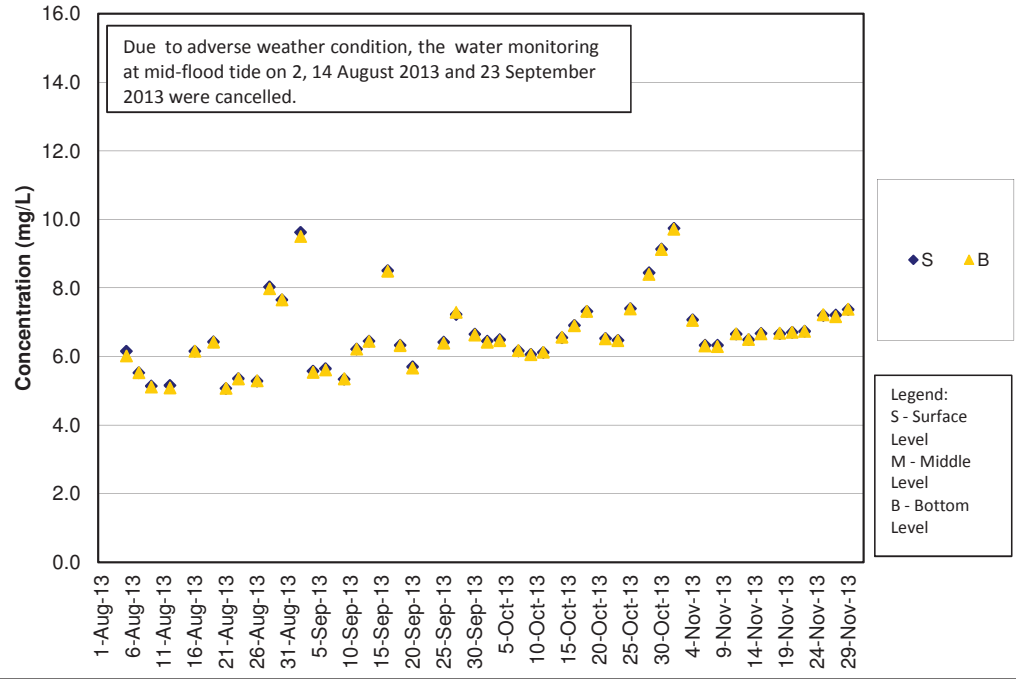
DO Concentrations at Station IS(Mf)6 (Mid Flood)



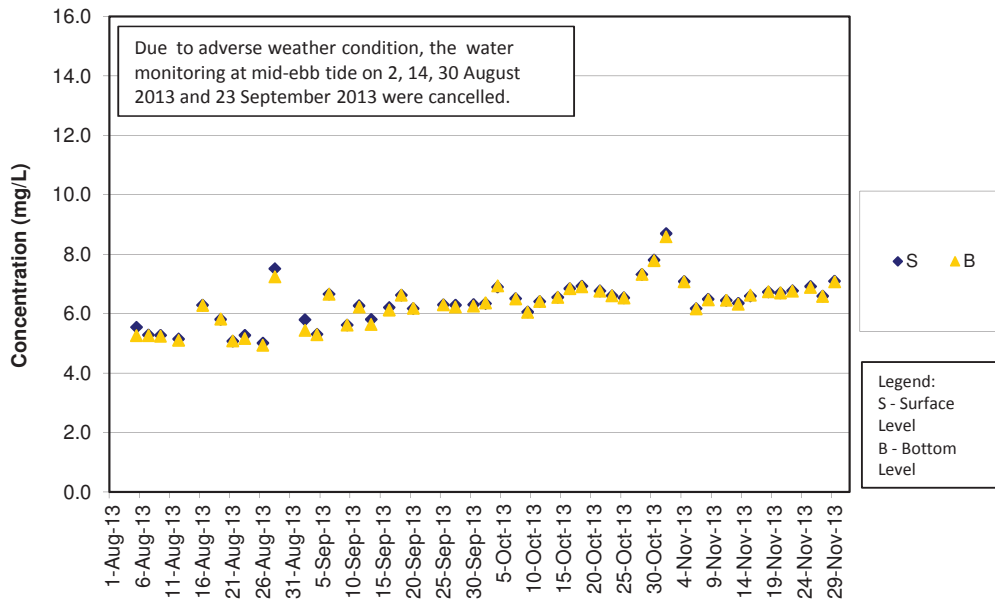
DO Concentrations at Station IS7 (Mid Ebb)



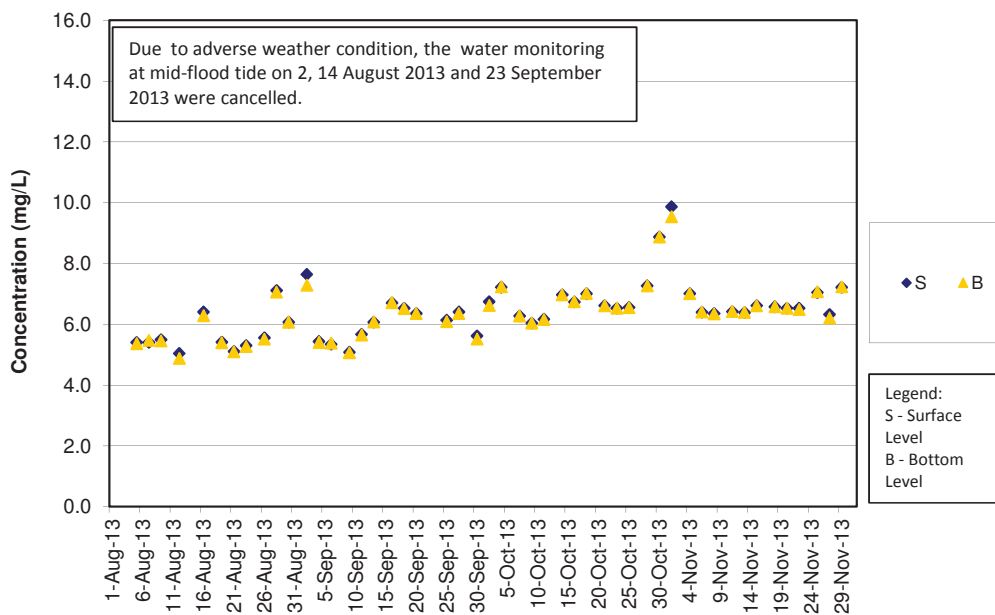
DO Concentrations at Station IS7 (Mid Flood)



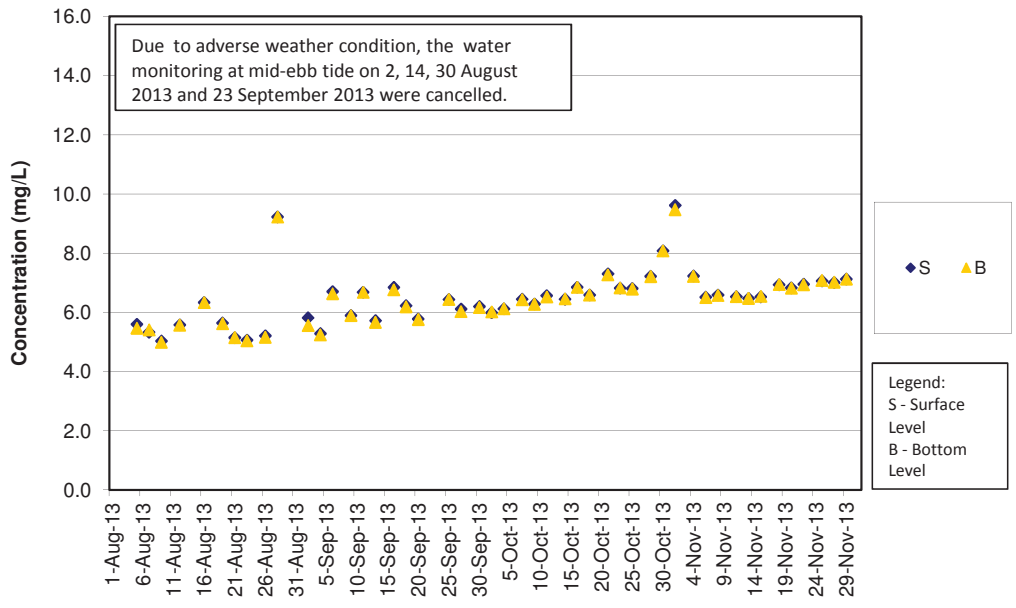
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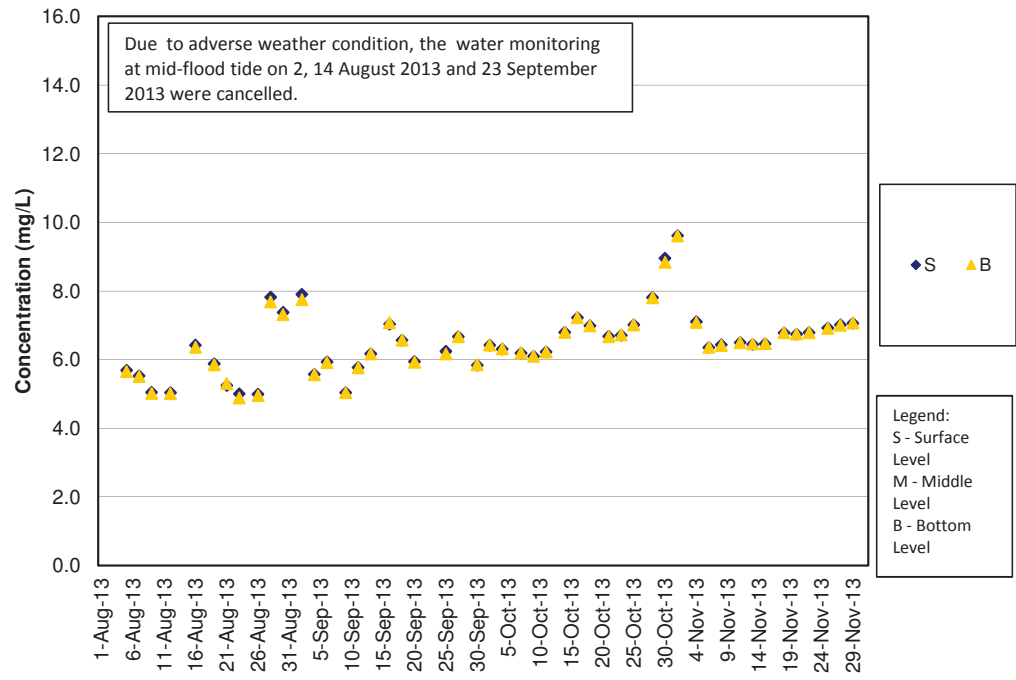
DO Concentrations at Station IS8 (Mid Flood)



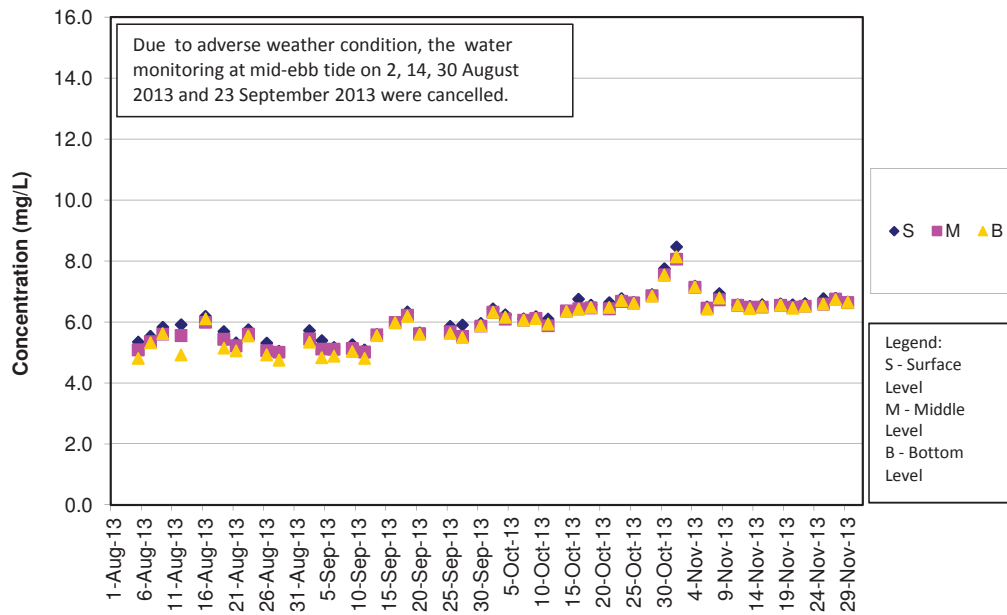
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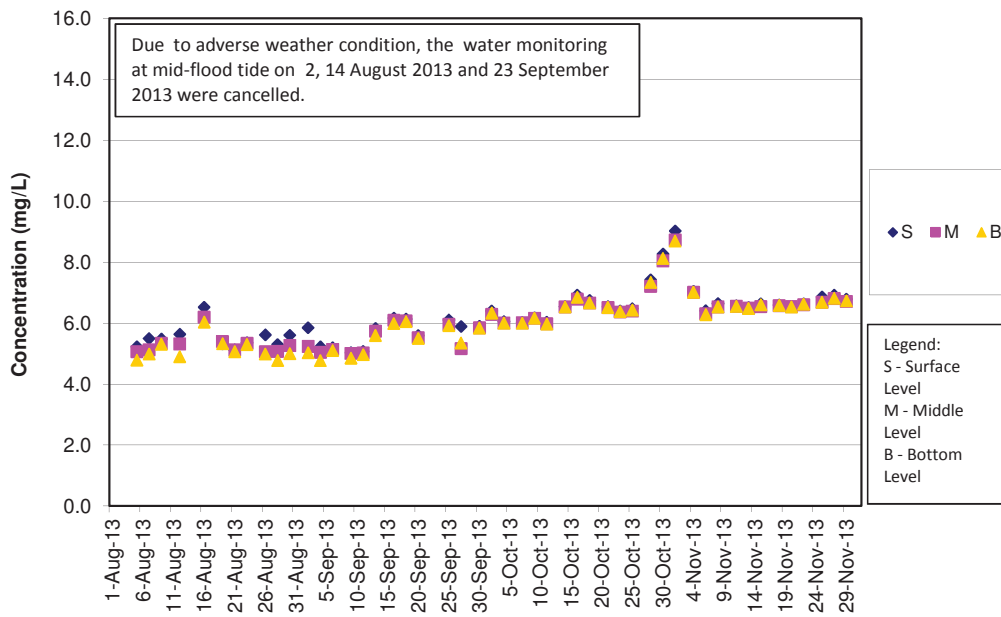
DO Concentrations at Station IS(Mf)9 (Mid Flood)



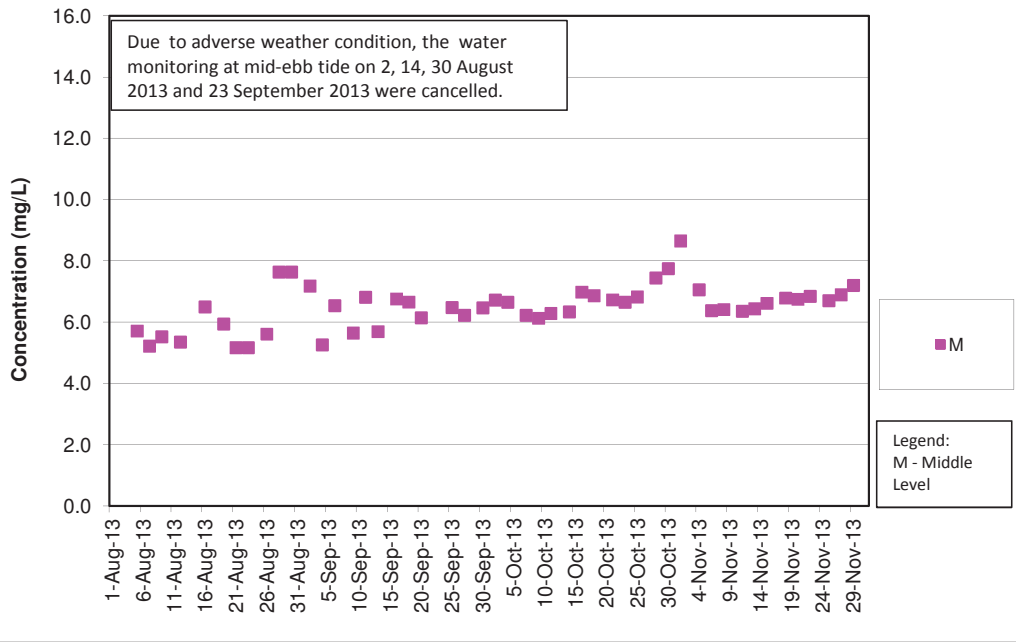
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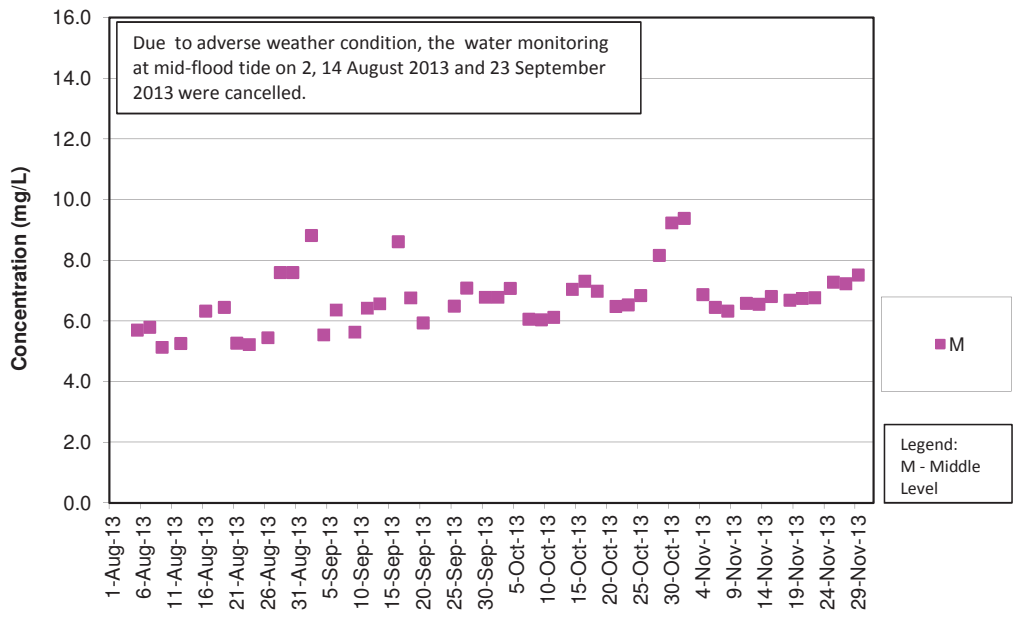
DO Concentrations at Station IS10 (Mid Flood)



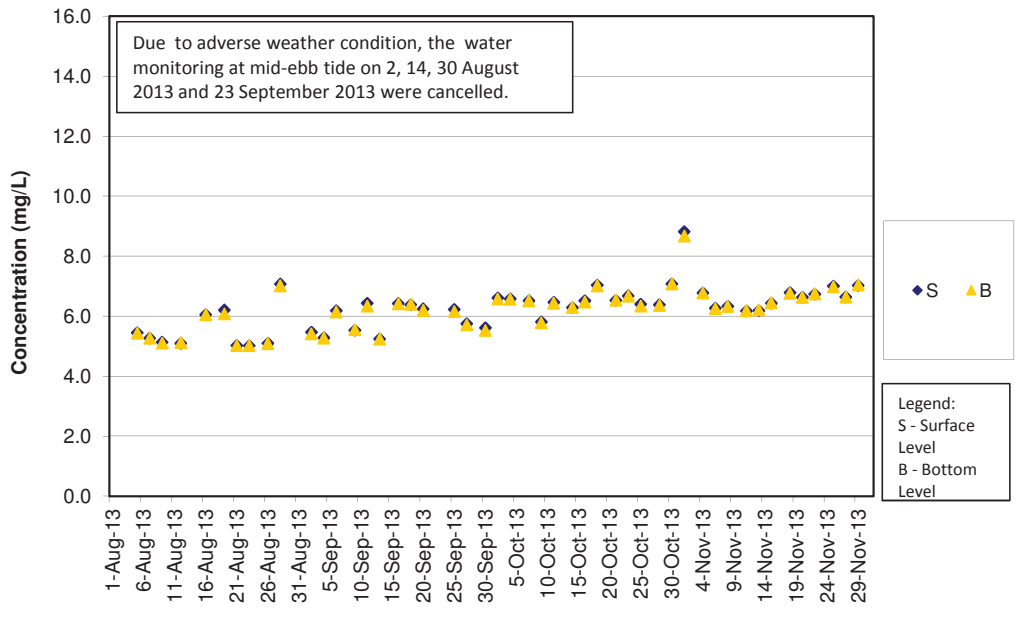
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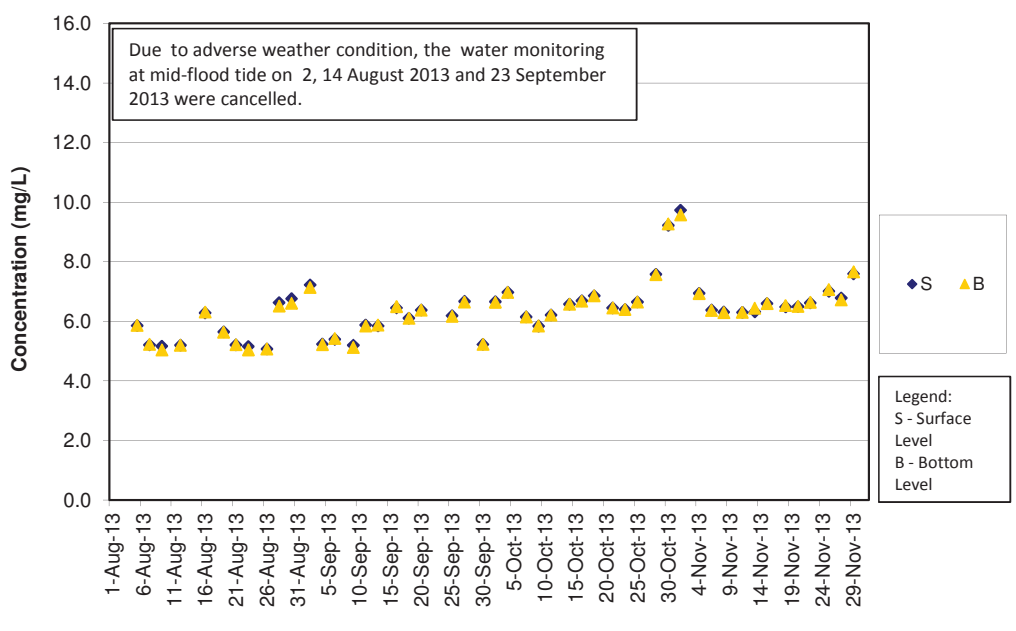
DO Concentrations at Station SR3 (Mid Flood)



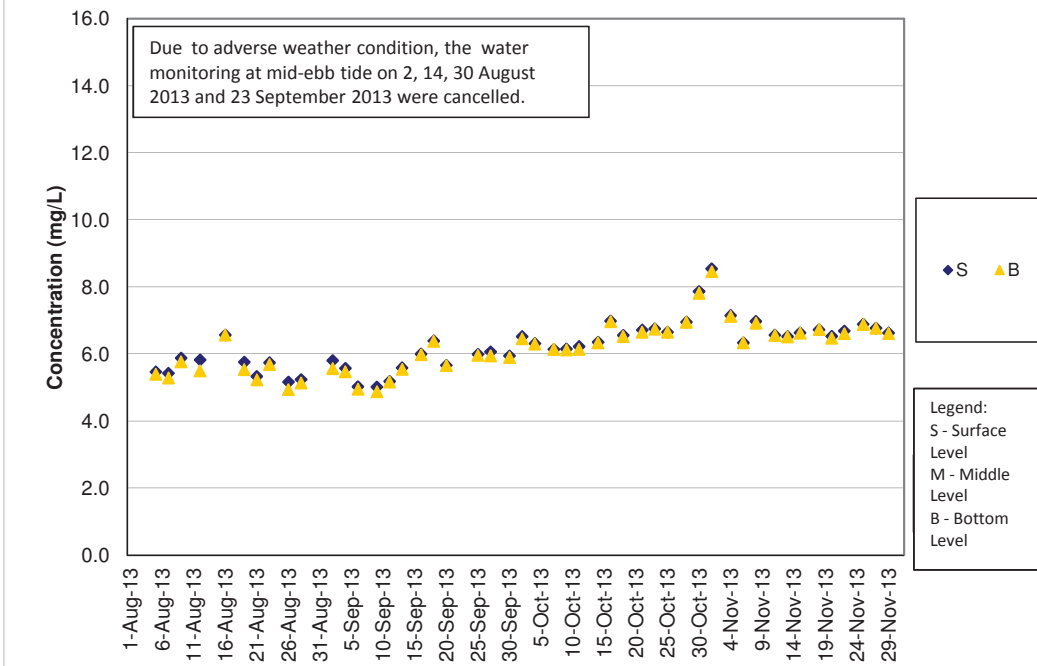
DO Concentrations at Station SR4 (Mid Ebb)



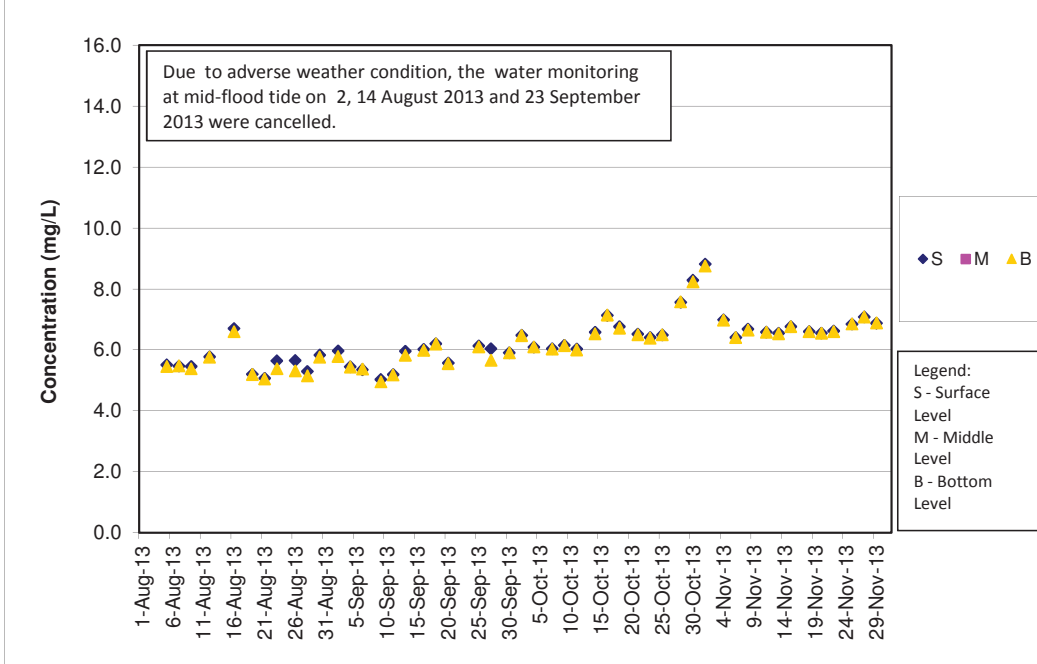
DO Concentrations at Station SR4 (Mid Flood)



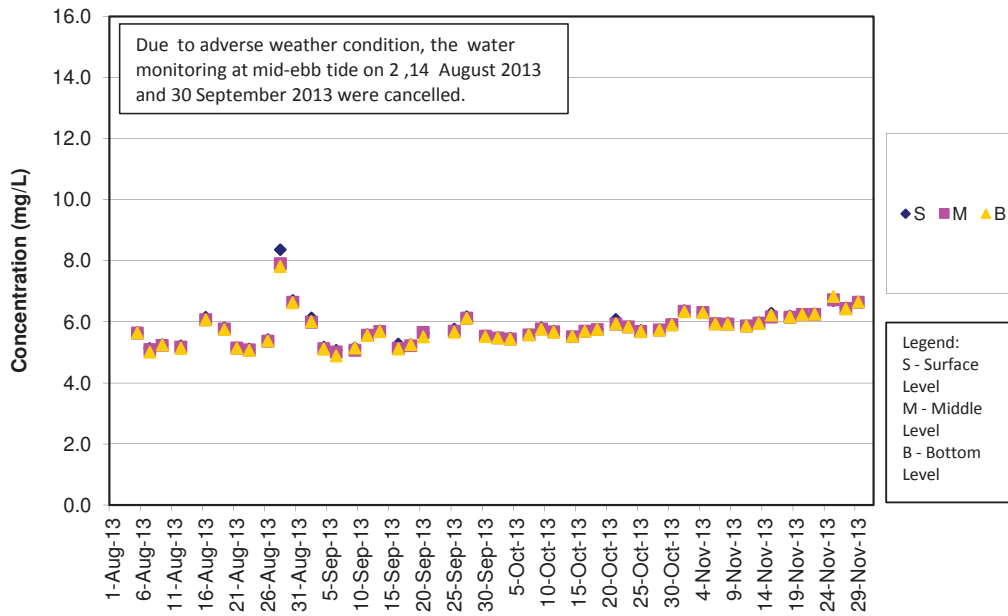
DO Concentrations at Station SR5 (Mid Ebb)



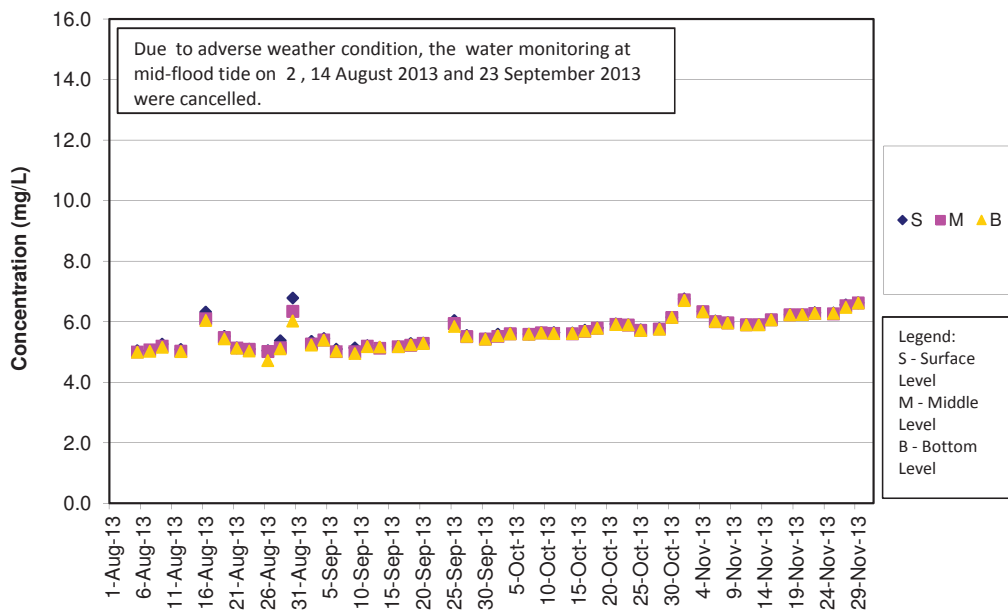
DO Concentrations at Station SR5 (Mid Flood)



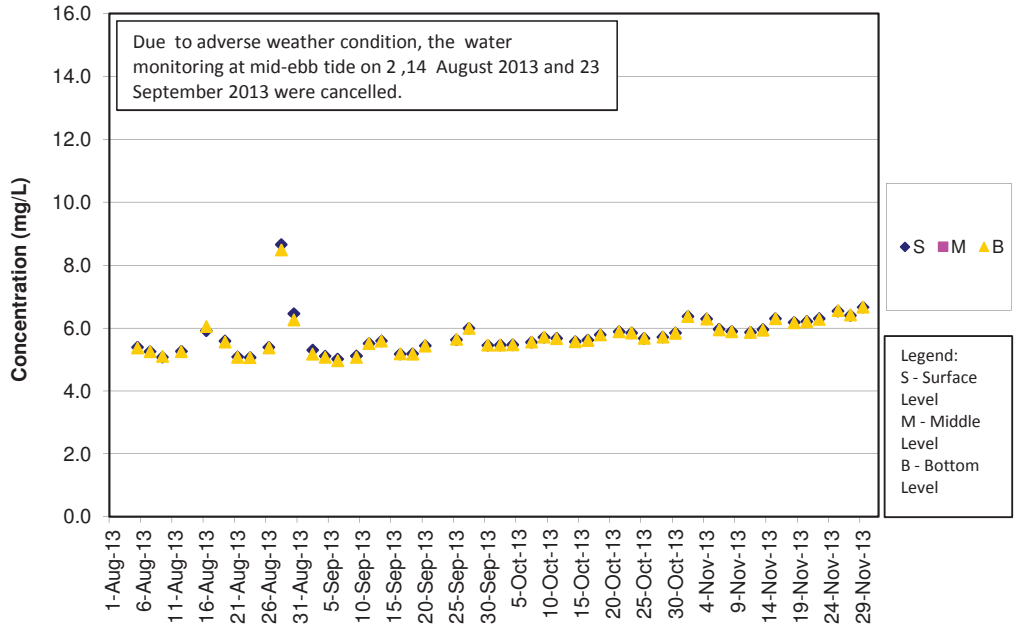
DO Concentrations at Station SR10A (Mid Ebb)



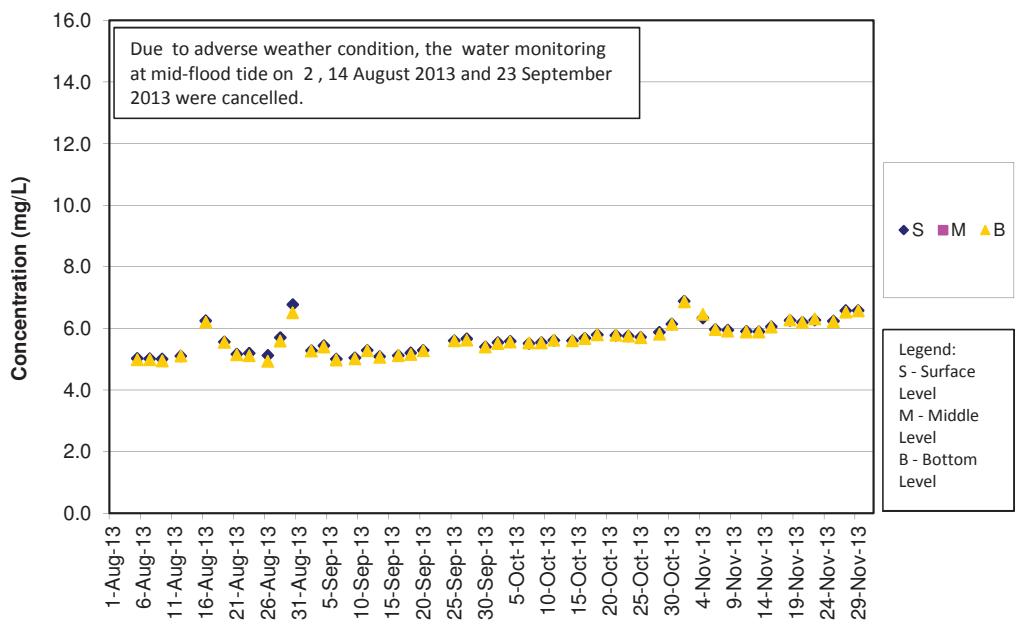
DO Concentrations at Station SR10A (Mid Flood)



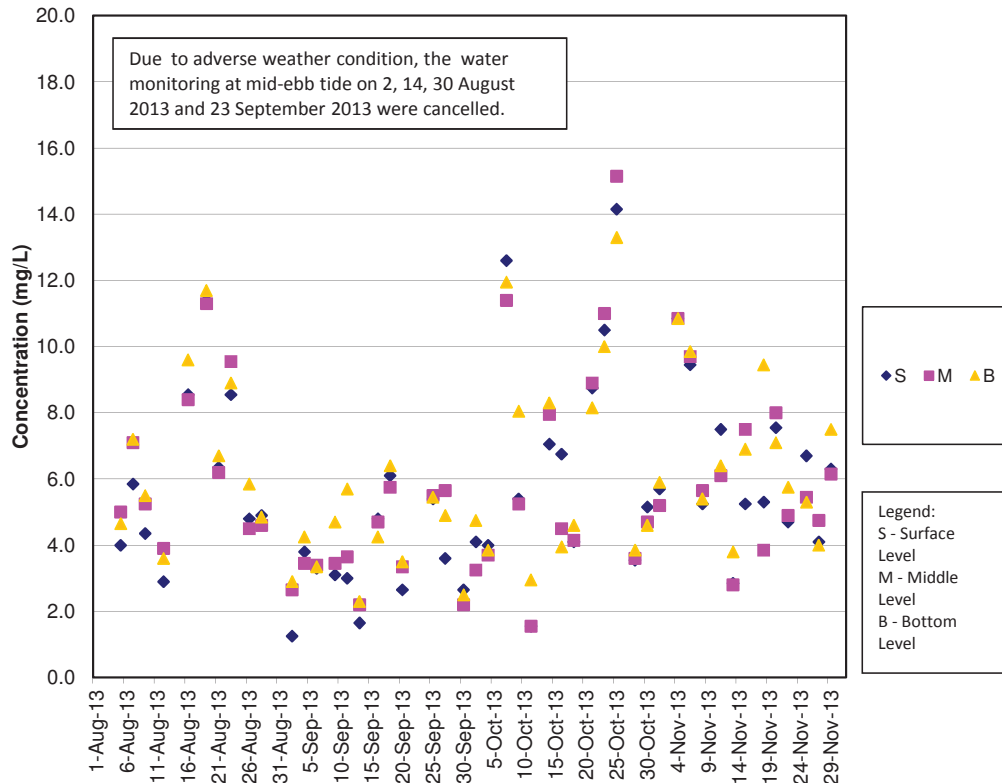
DO Concentrations at Station SR10B (Mid Ebb)



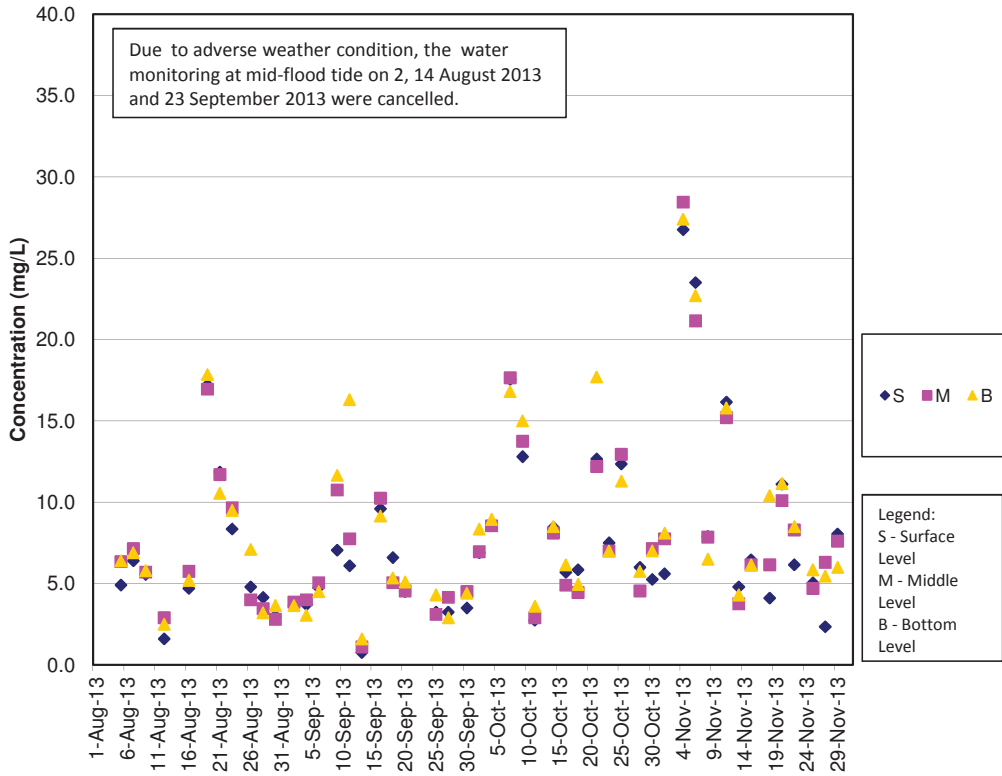
DO Concentrations at Station SR10B (Mid Flood)



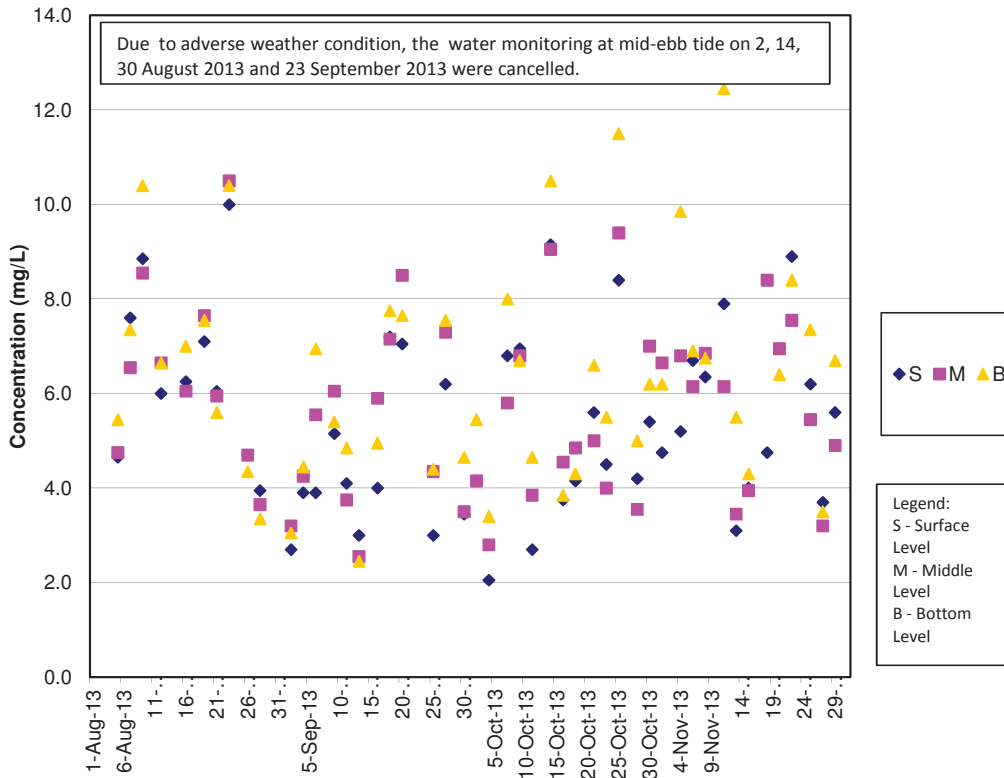
SS Concentrations at Station CS2 (Mid Ebb)



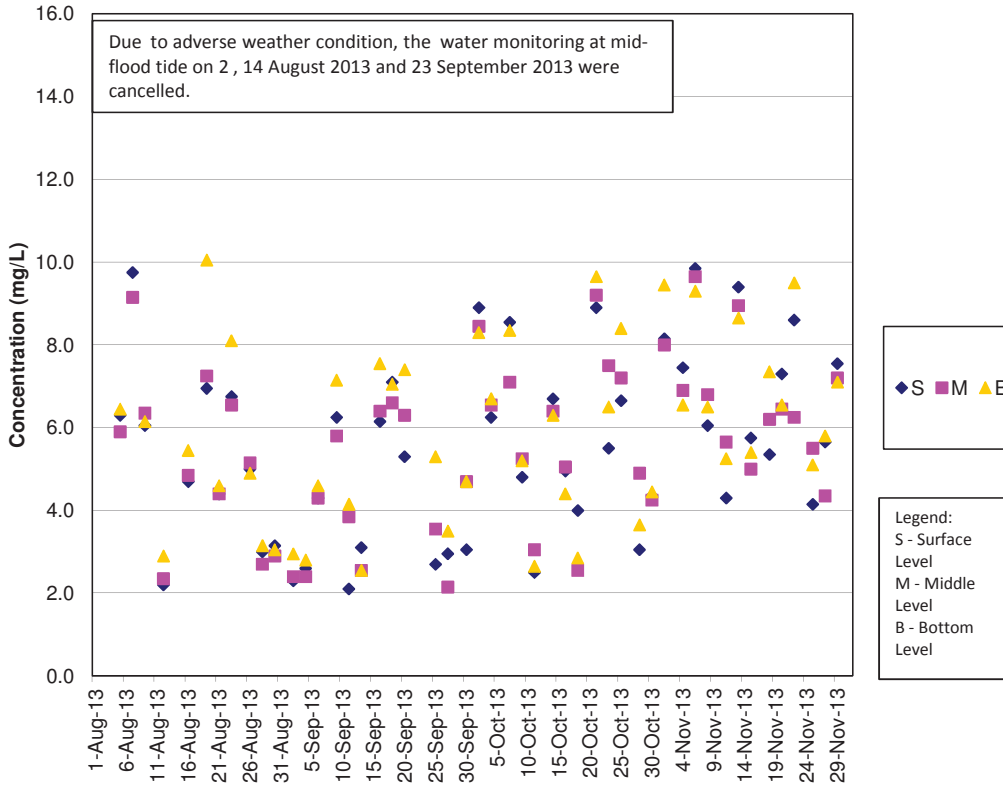
SS Concentrations at Station CS2 (Mid Flood)



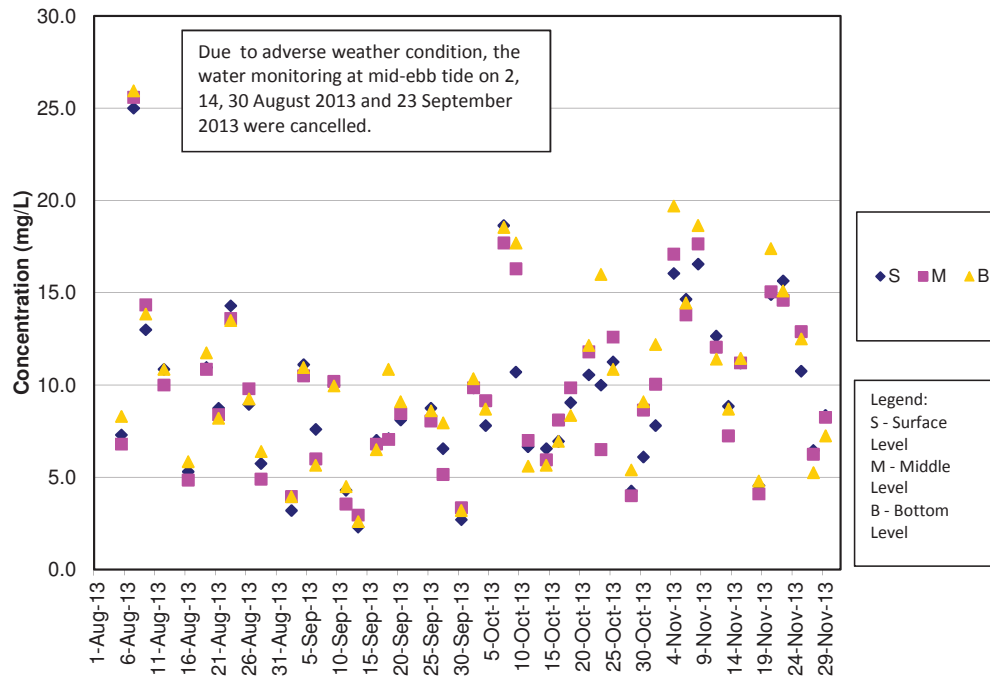
SS Concentrations at Station CS(Mf)5 (Mid Ebb)



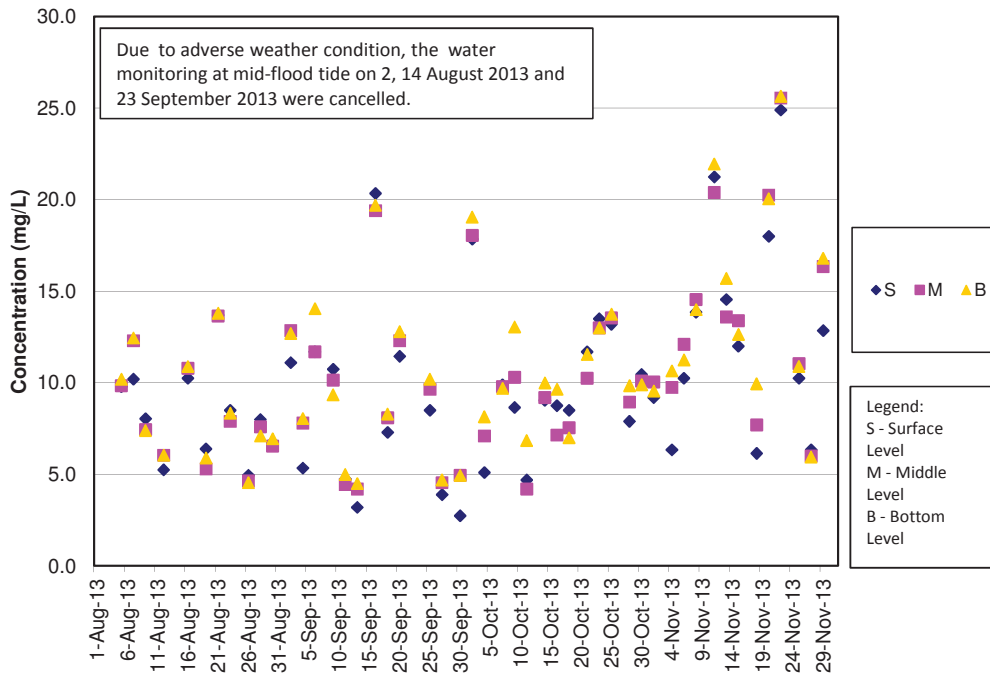
SS Concentrations at Station CS(Mf)5 (Mid Flood)



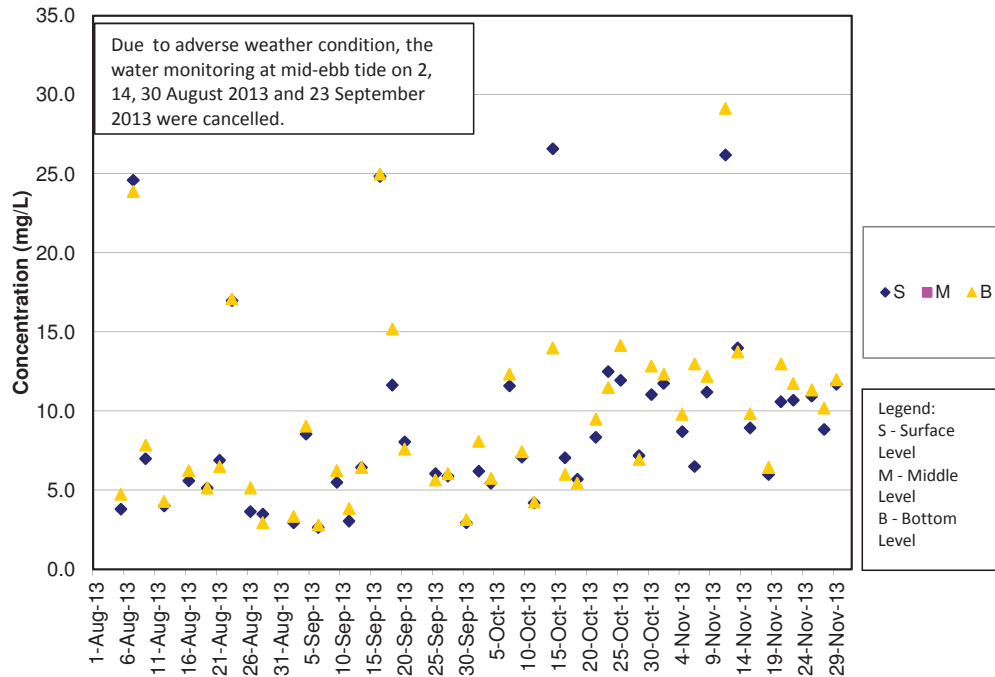
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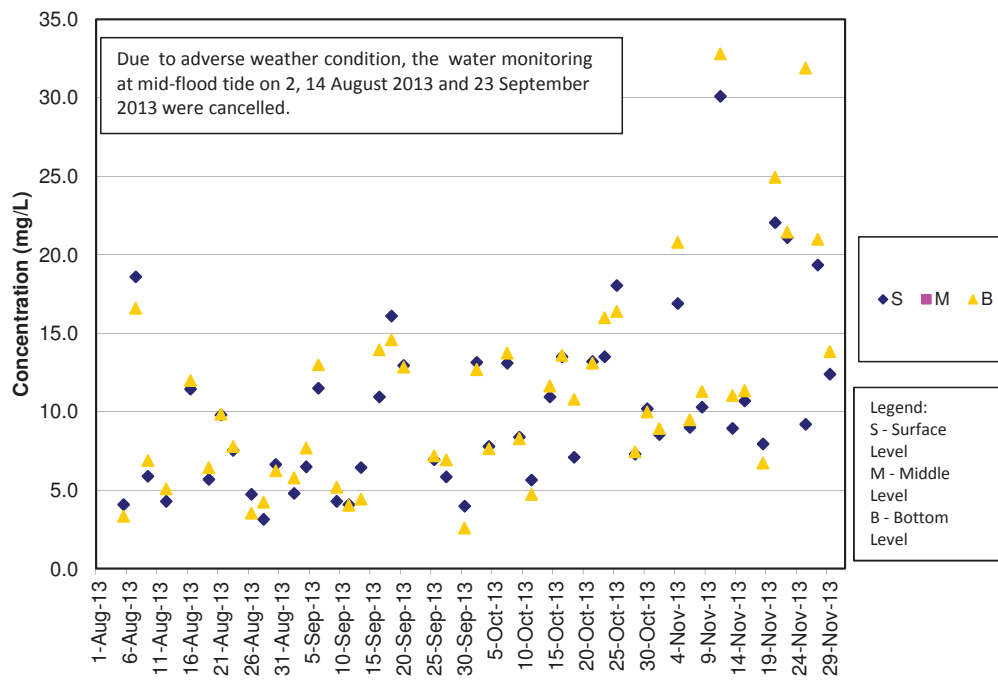
SS Concentrations at Station IS5 (Mid Flood)



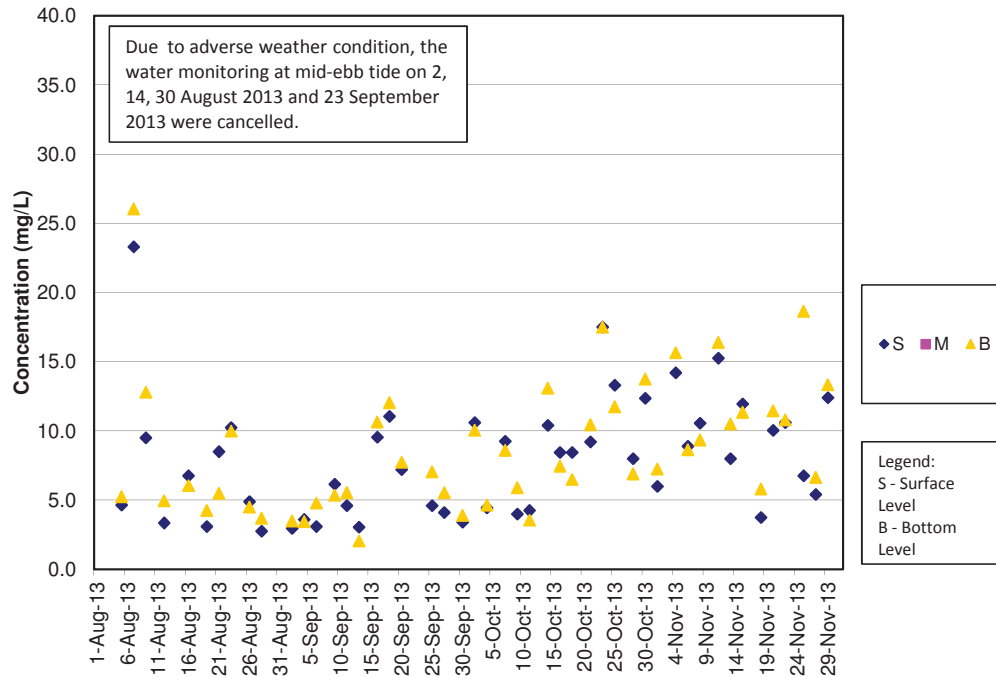
SS Concentrations at Station IS(Mf)6 (Mid Ebb)



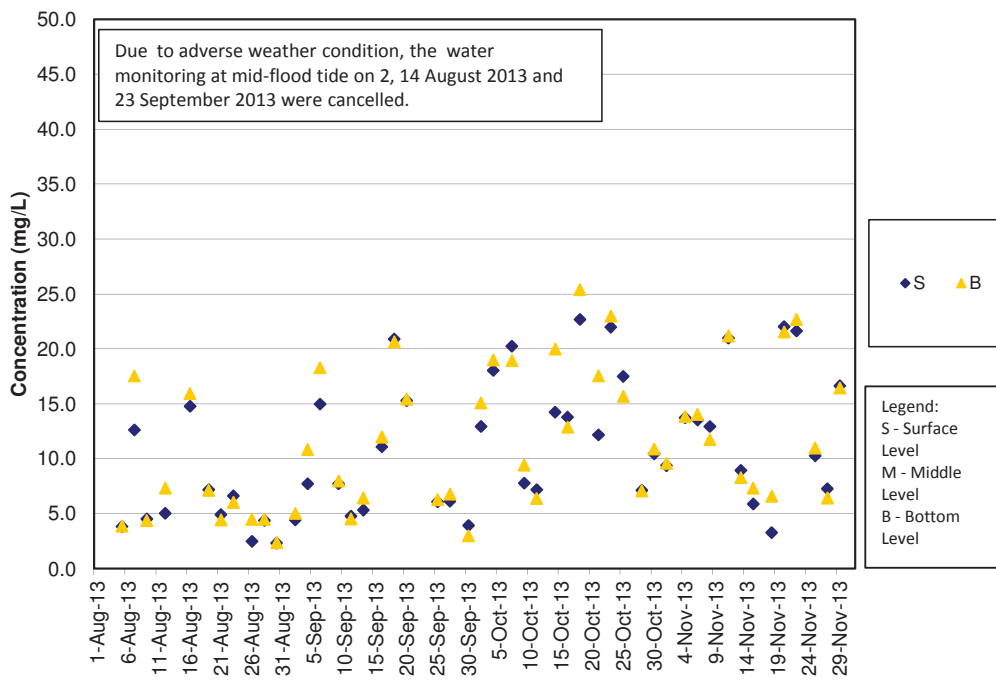
SS Concentrations at Station IS(Mf)6 (Mid Flood)



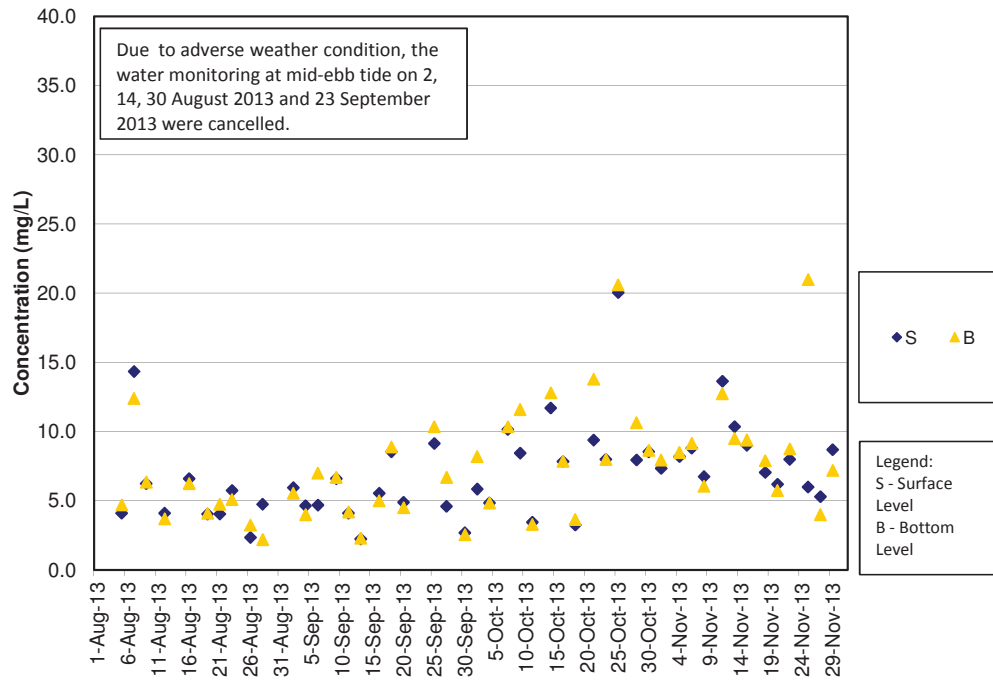
SS Concentrations at Station IS7 (Mid Ebb)



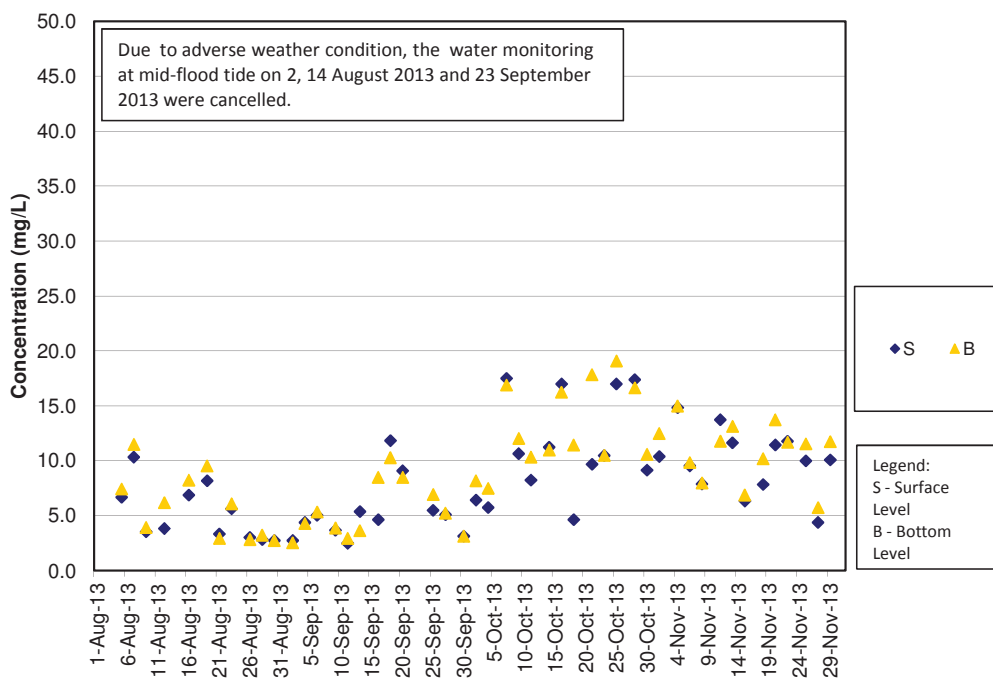
SS Concentrations at Station IS7 (Mid Flood)



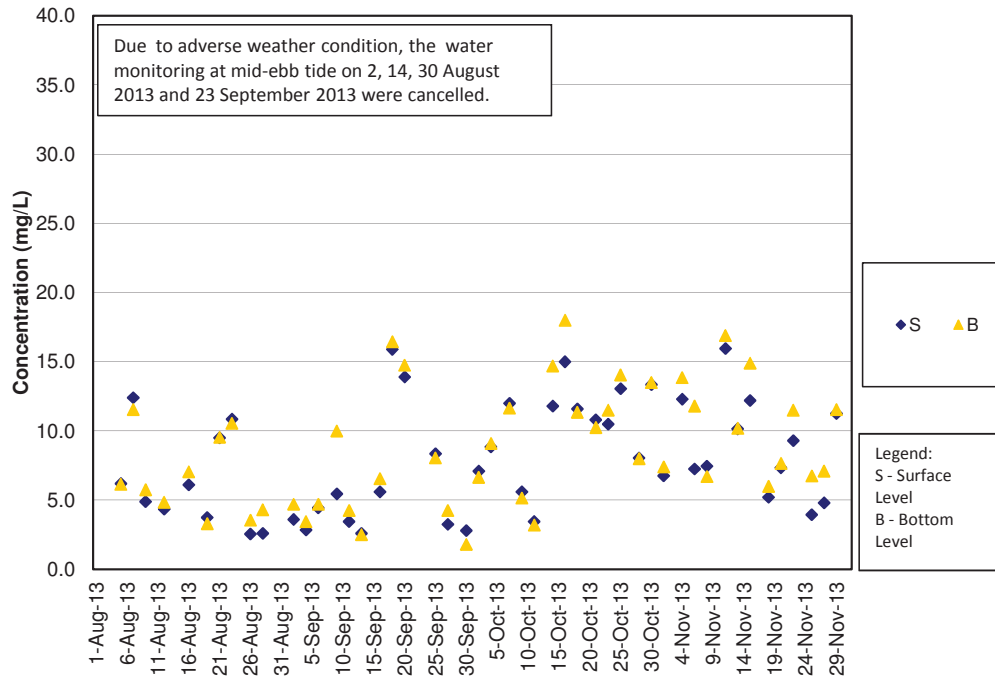
SS Concentrations at Station IS8 (Mid Ebb)



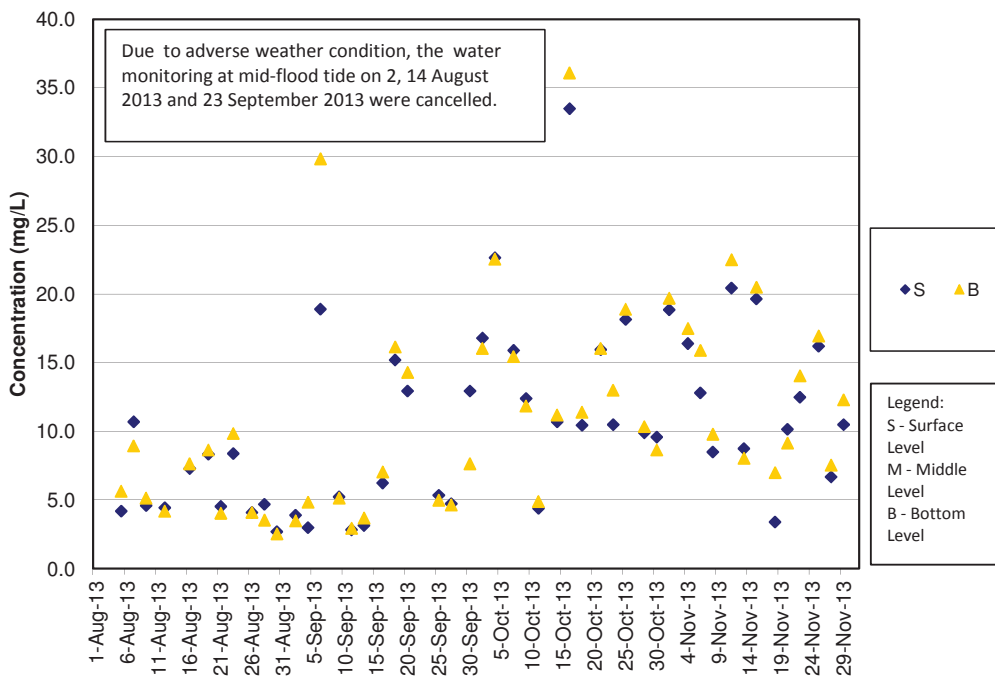
SS Concentrations at Station IS8 (Mid Flood)



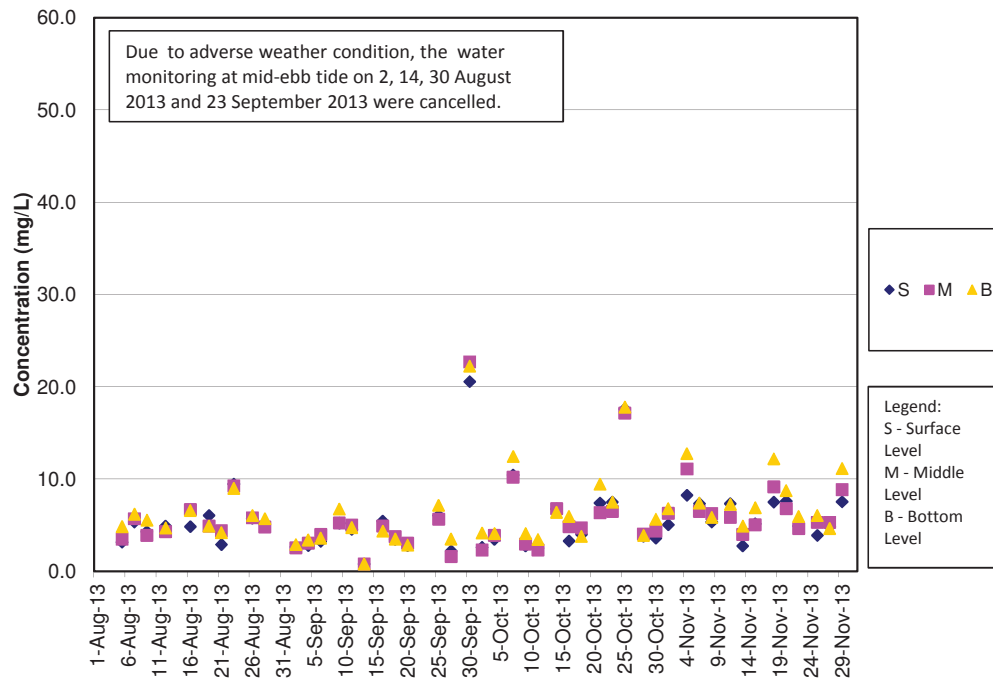
SS Concentrations at Station IS(Mf)9 (Mid Ebb)



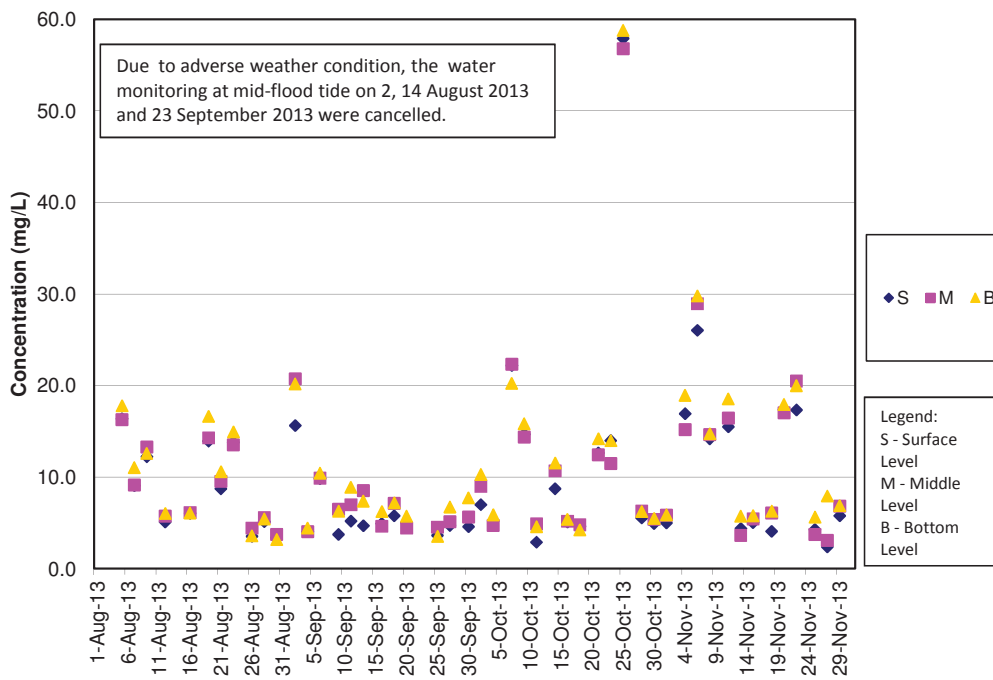
SS Concentrations at Station IS(Mf)9 (Mid Flood)



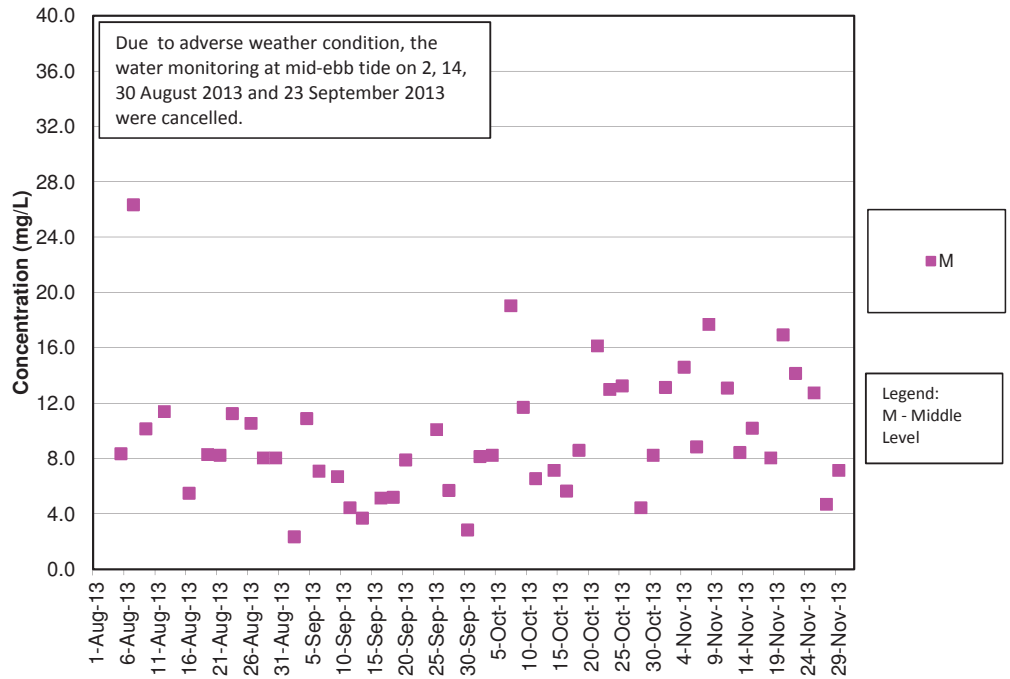
SS Concentrations at Station IS10 (Mid Ebb)



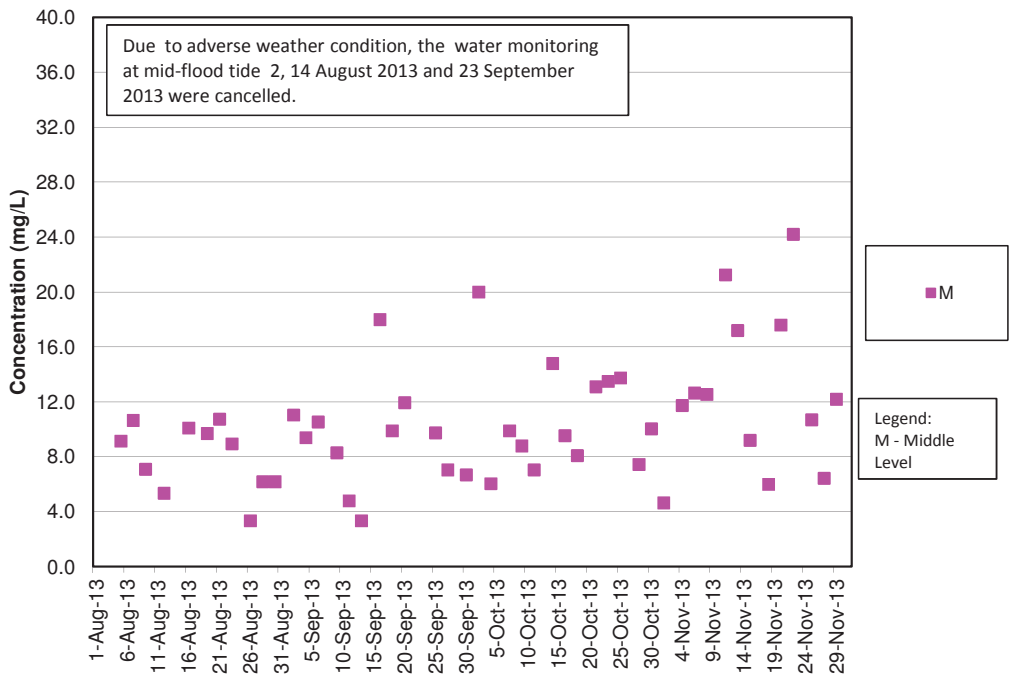
SS Concentrations at Station IS10 (Mid Flood)



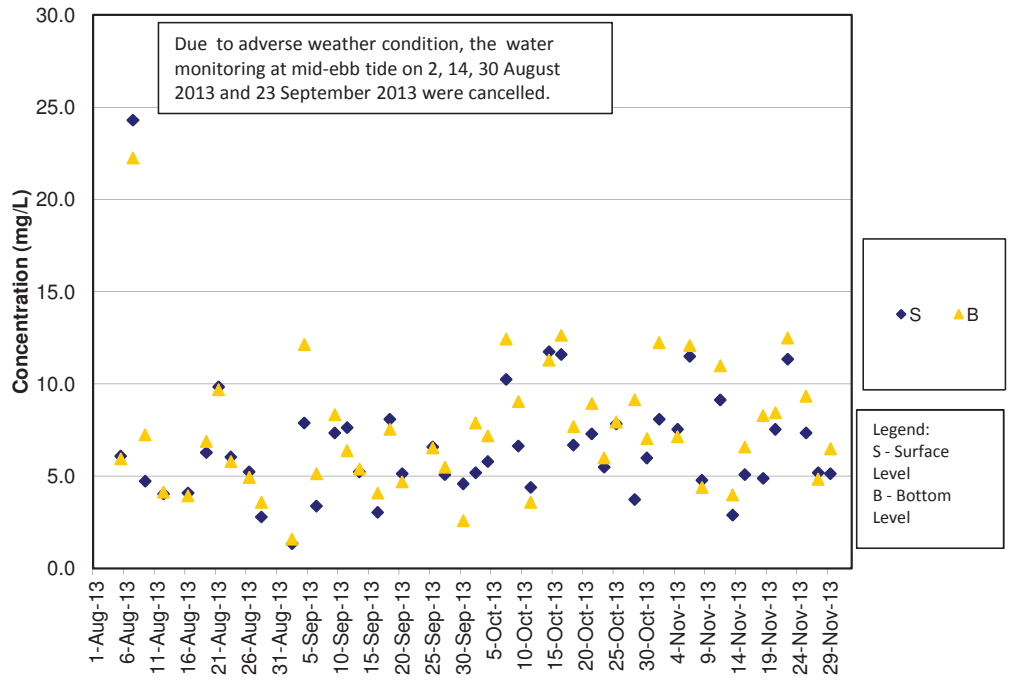
SS Concentrations at Station SR3 (Mid Ebb)



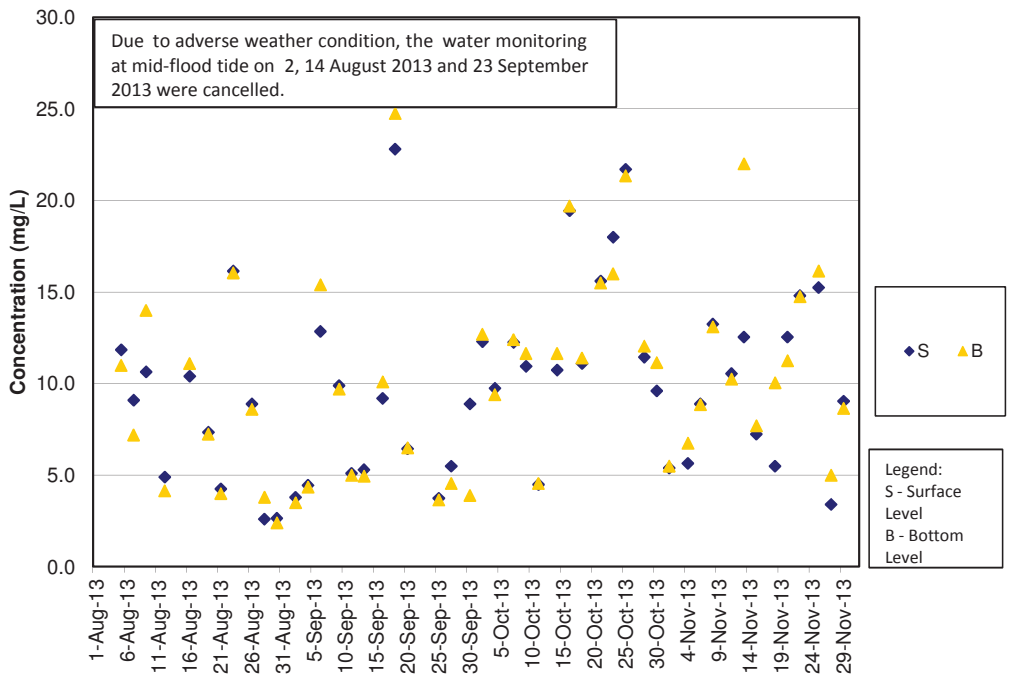
SS Concentrations at Station SR3 (Mid Flood)



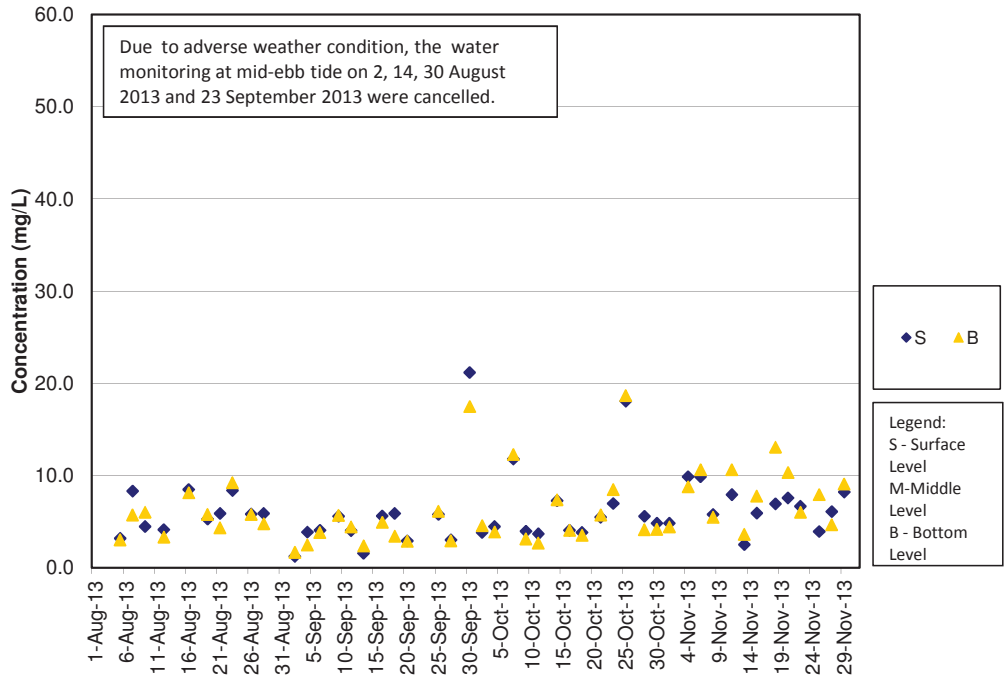
SS Concentrations at Station SR4 (Mid Ebb)



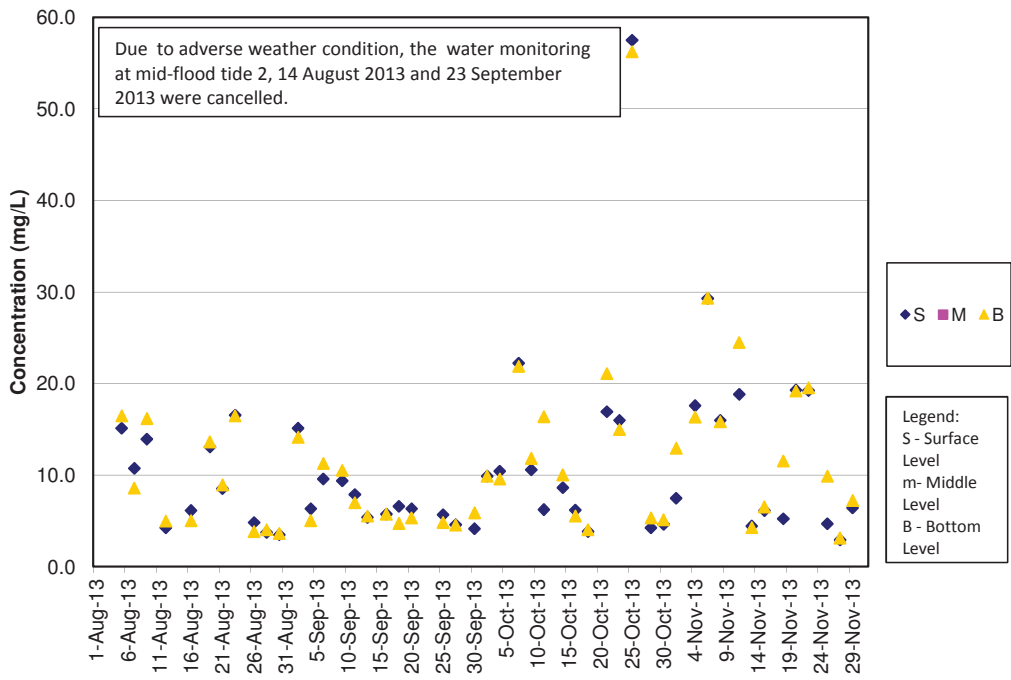
SS Concentrations at Station SR4 (Mid Flood)



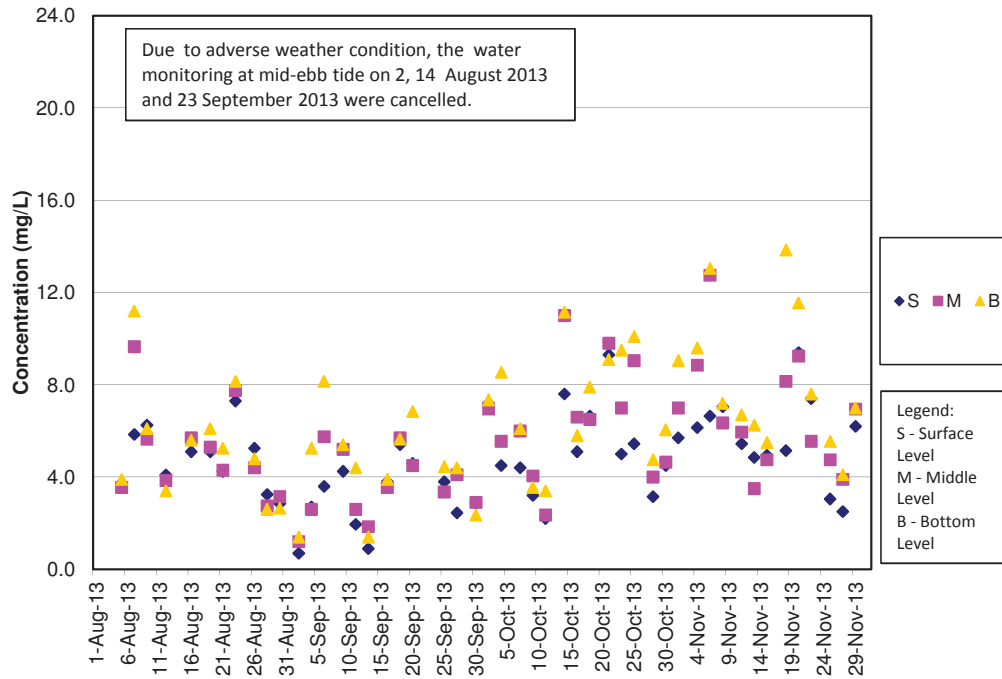
SS Concentrations at Station SR5 (Mid Ebb)



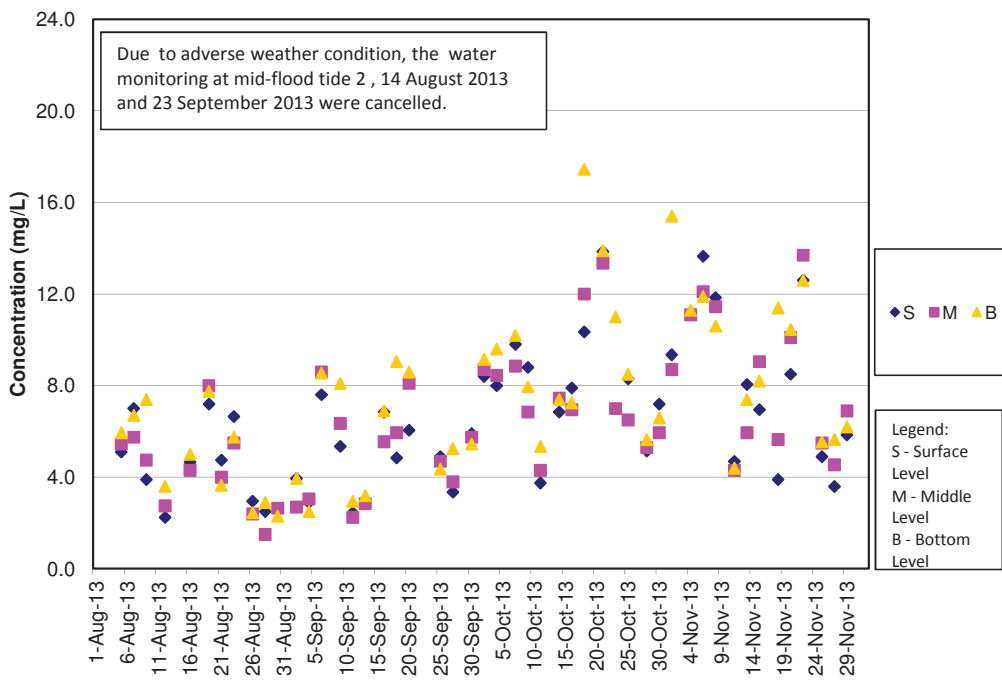
SS Concentrations at Station SR5 (Mid Flood)



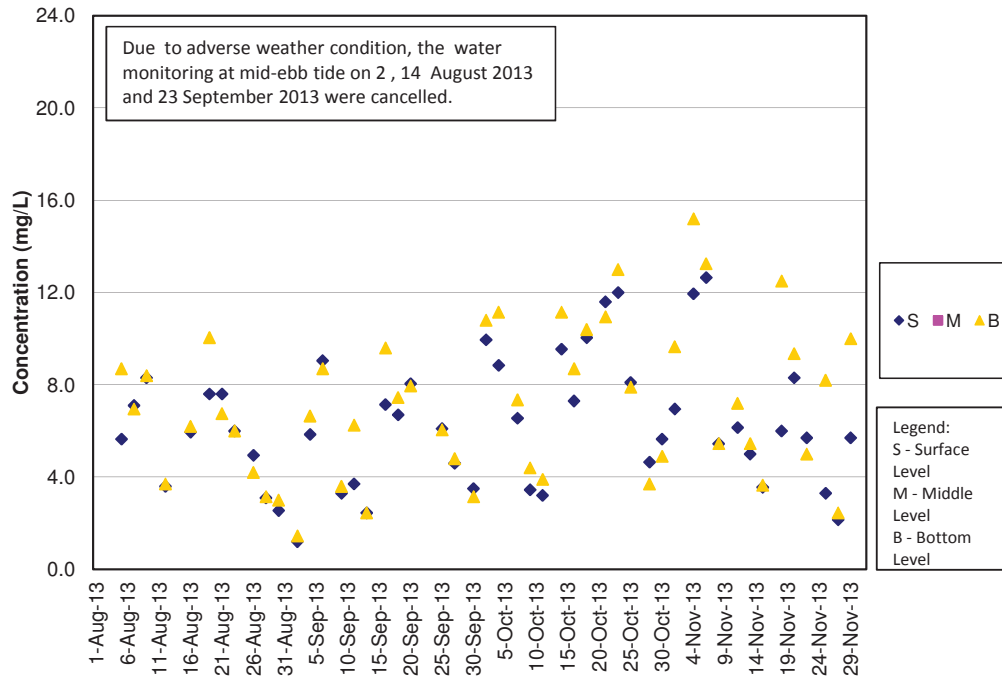
SS Concentrations at Station SR10A (Mid Ebb)



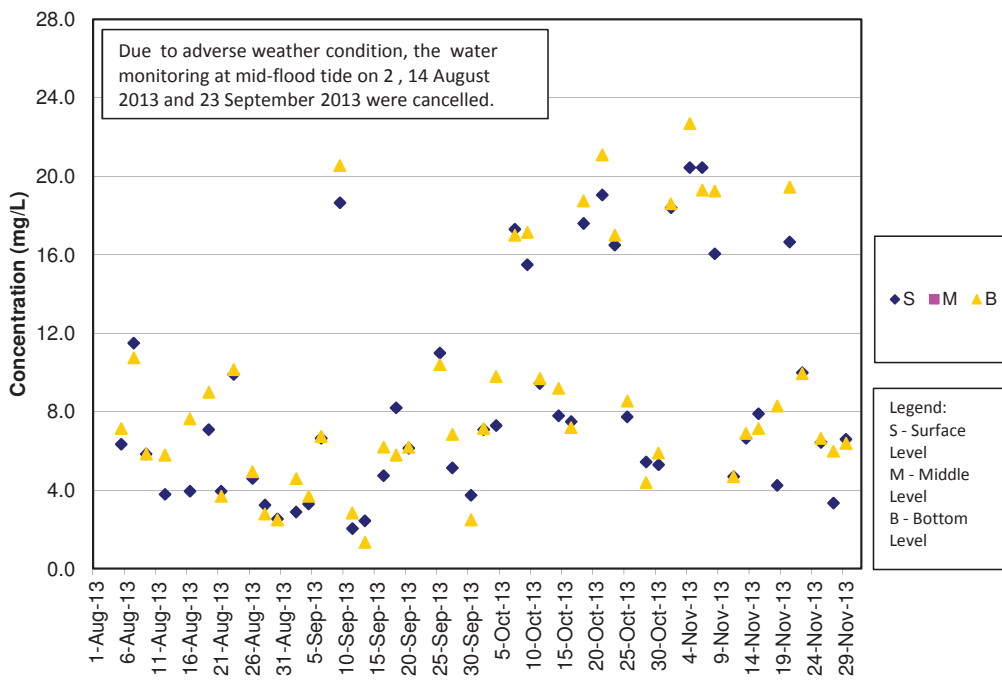
SS Concentrations at Station SR10A (Mid Flood)

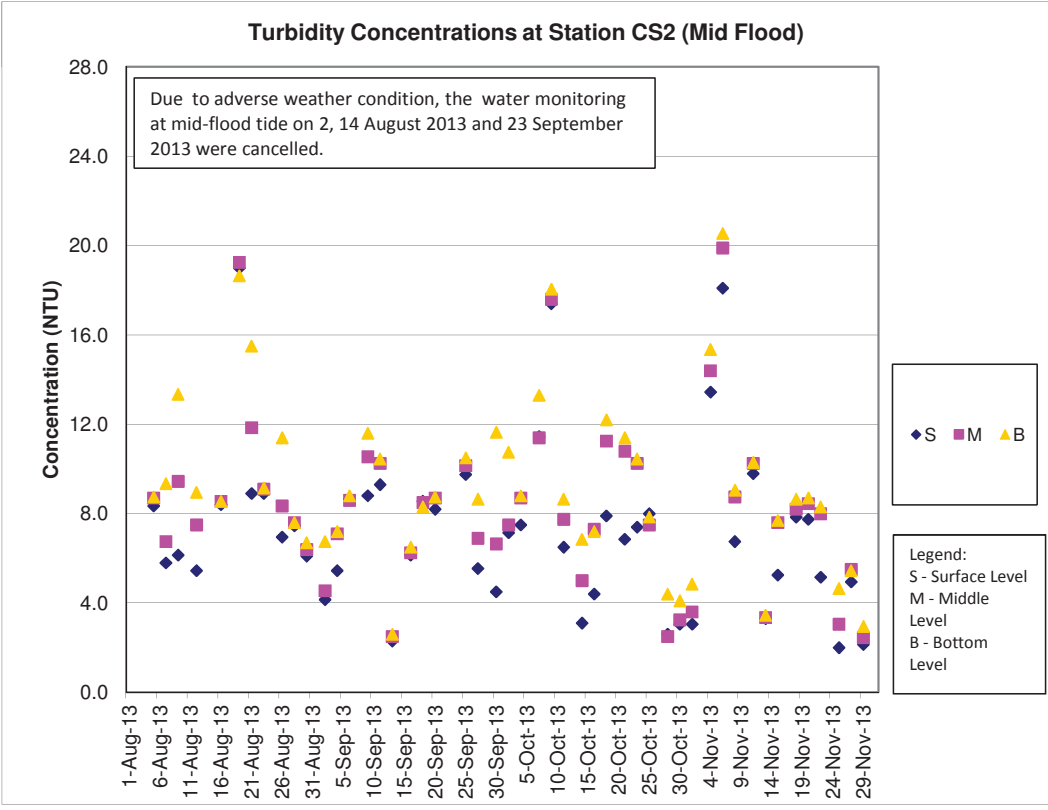
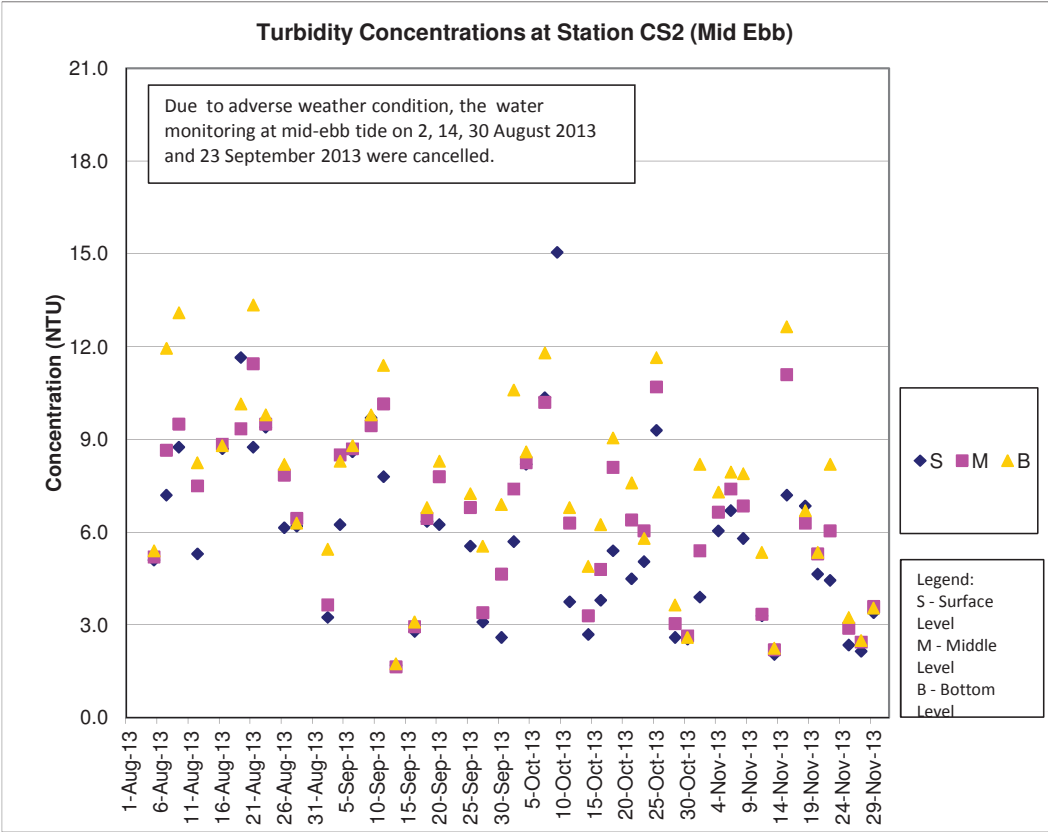


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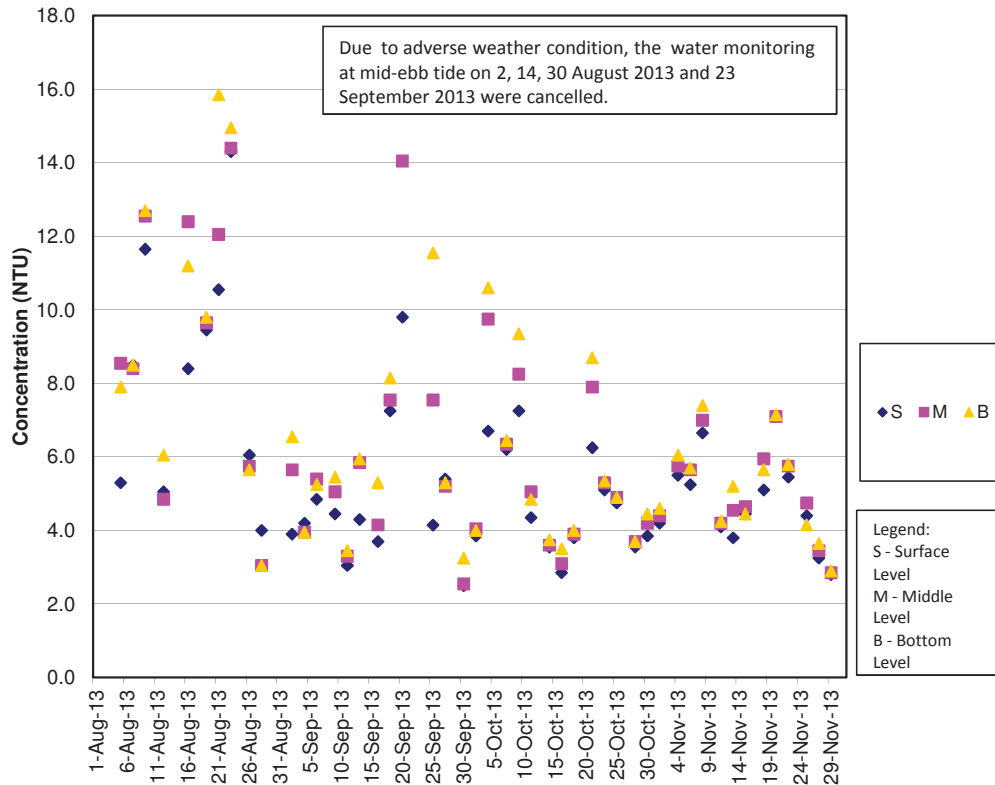


SS Concentrations at Station SR10B (Mid Flood)

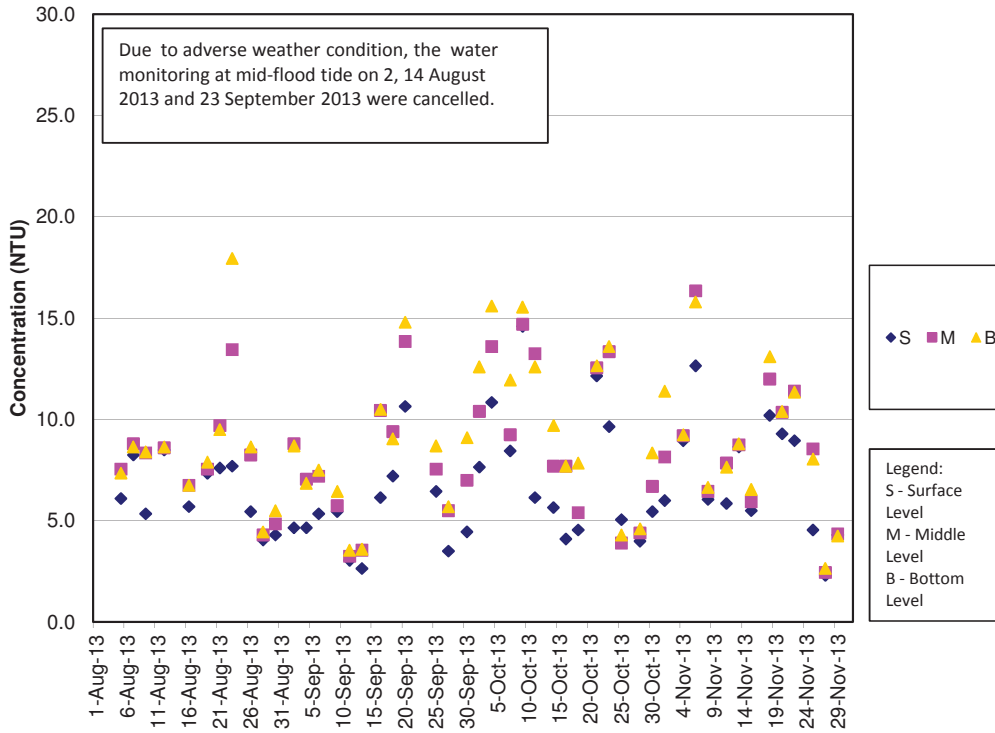


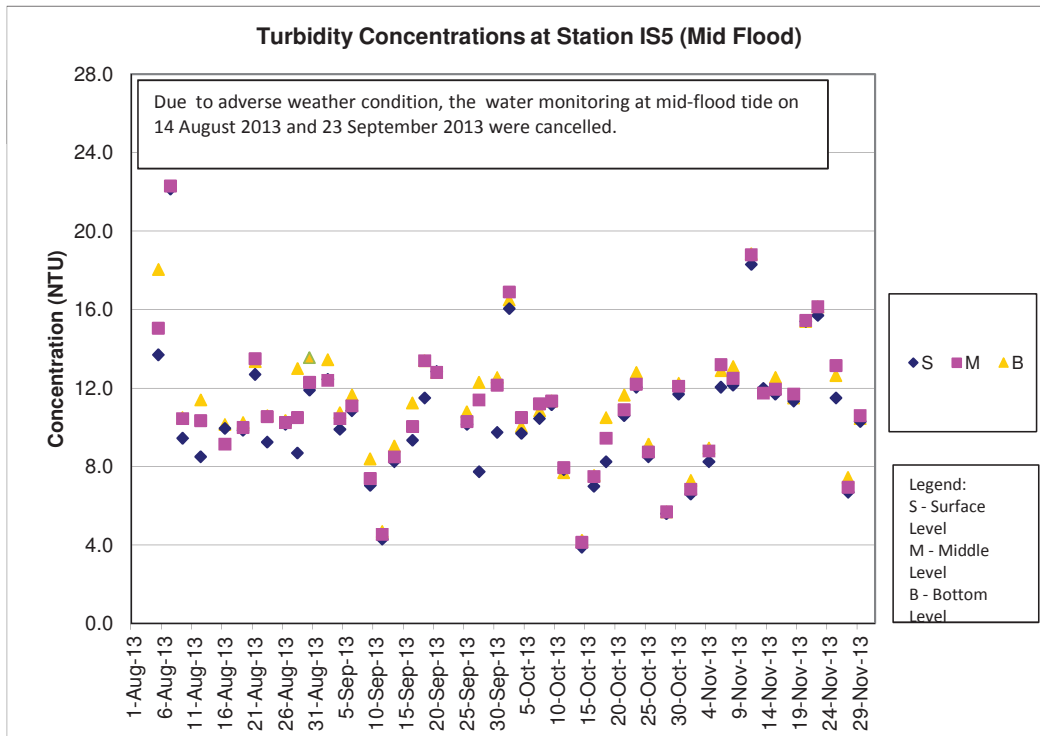
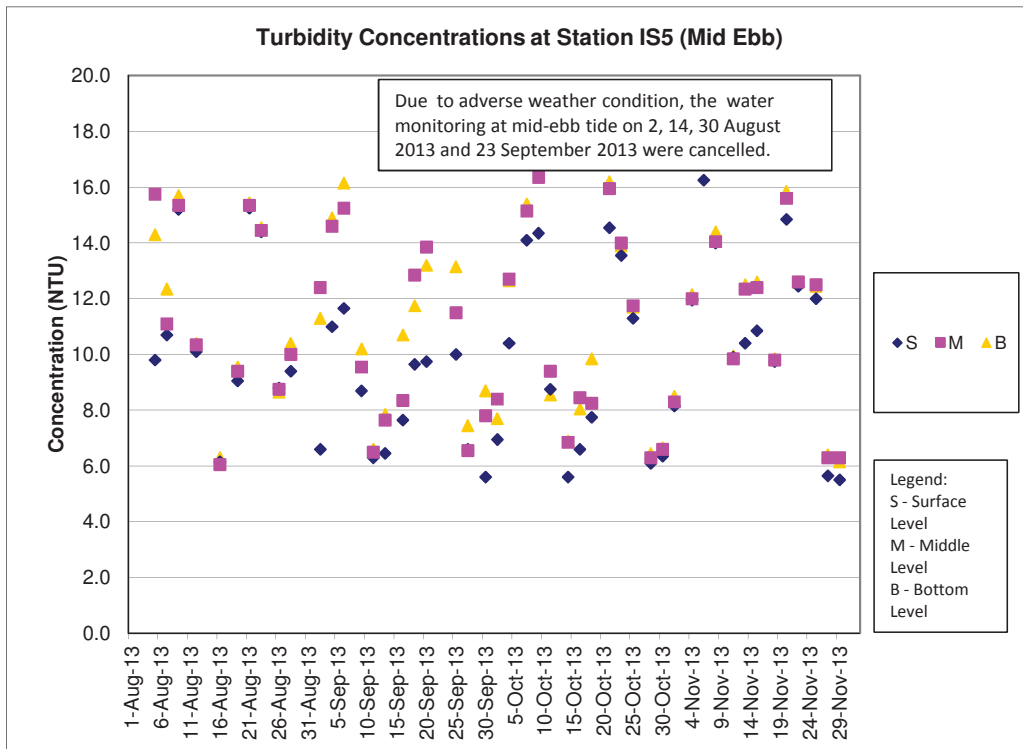


Turbidity Concentrations at Station CS(Mf)5 (Mid Ebb)

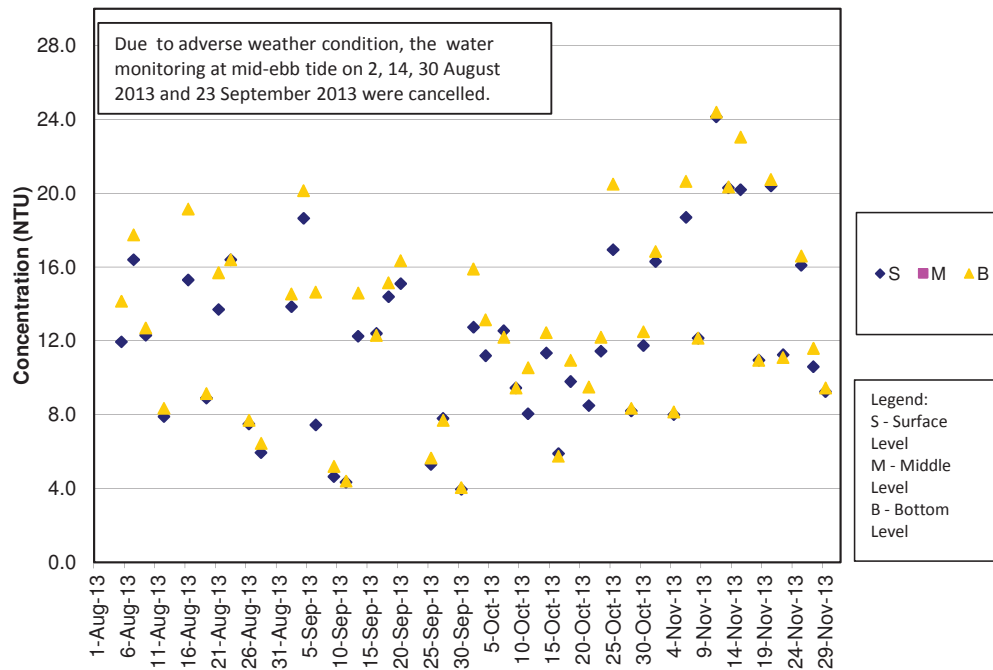


Turbidity Concentrations at Station CS(Mf)5 (Mid Flood)

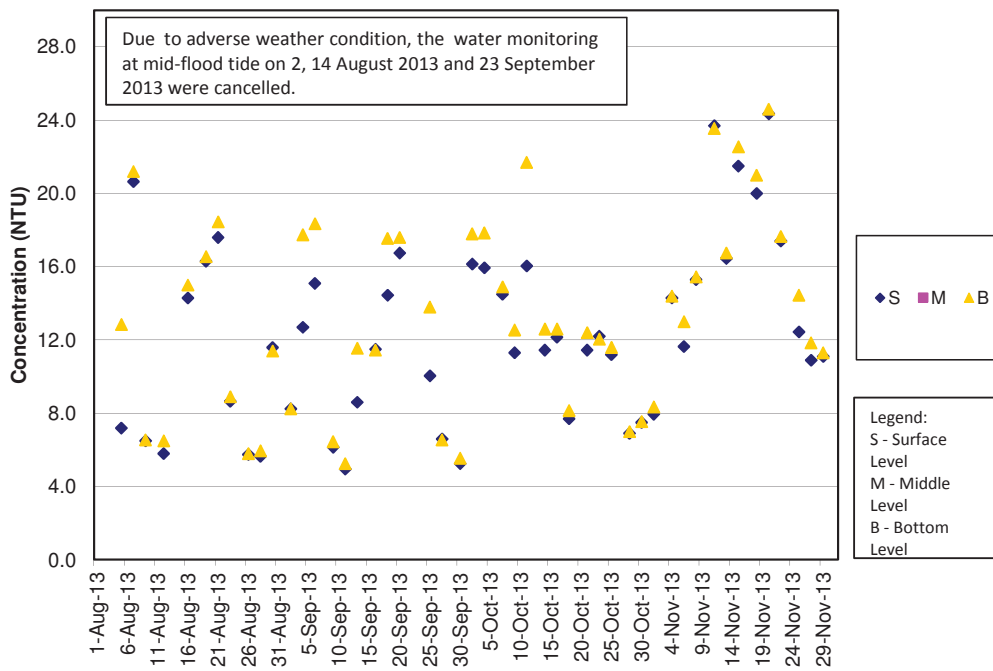




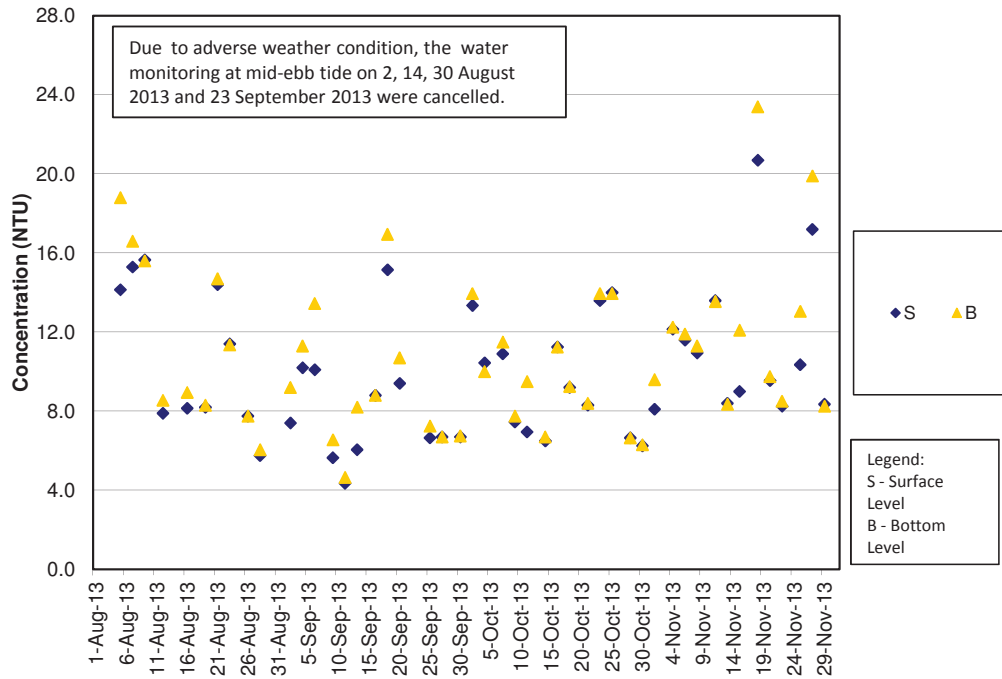
Turbidity Concentrations at Station IS(Mf)6 (Mid Ebb)



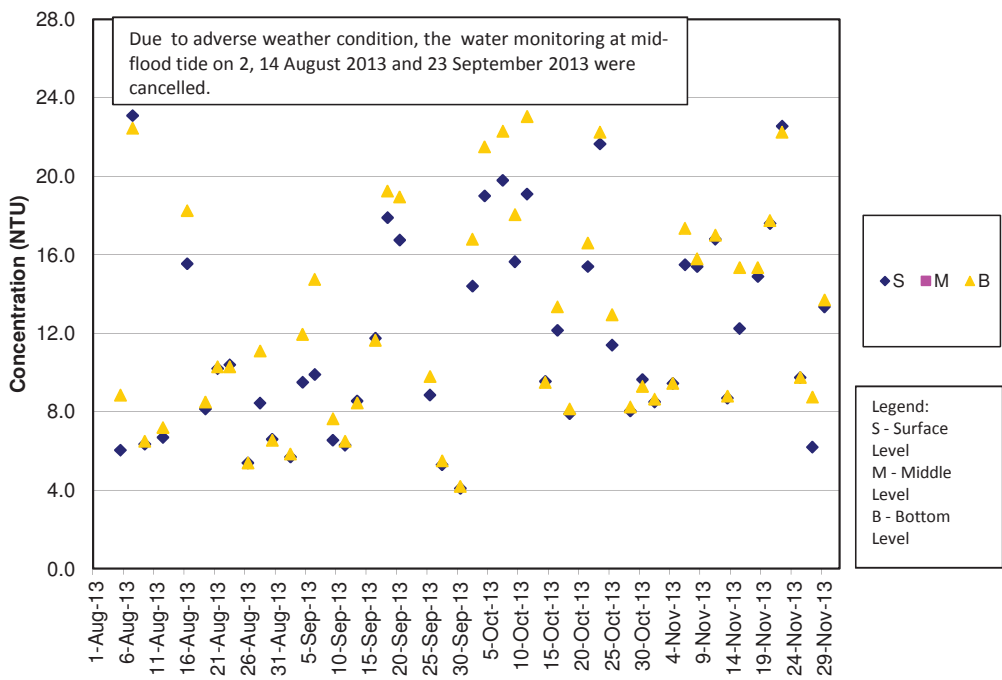
Turbidity Concentrations at Station IS(Mf)6 (Mid Flood)



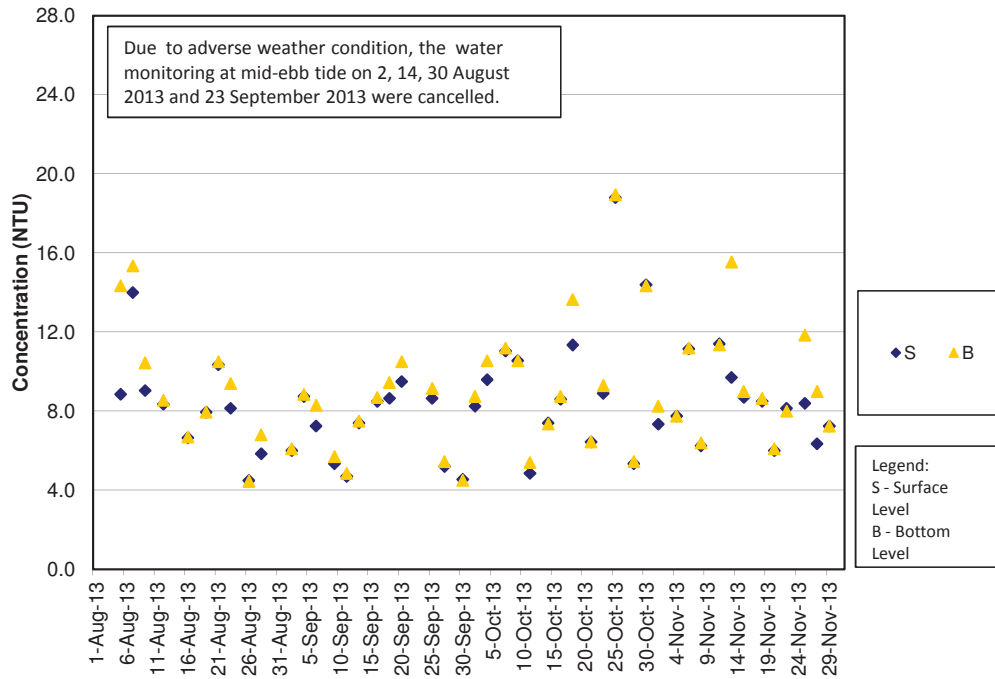
Turbidity Concentrations at Station IS7 (Mid Ebb)



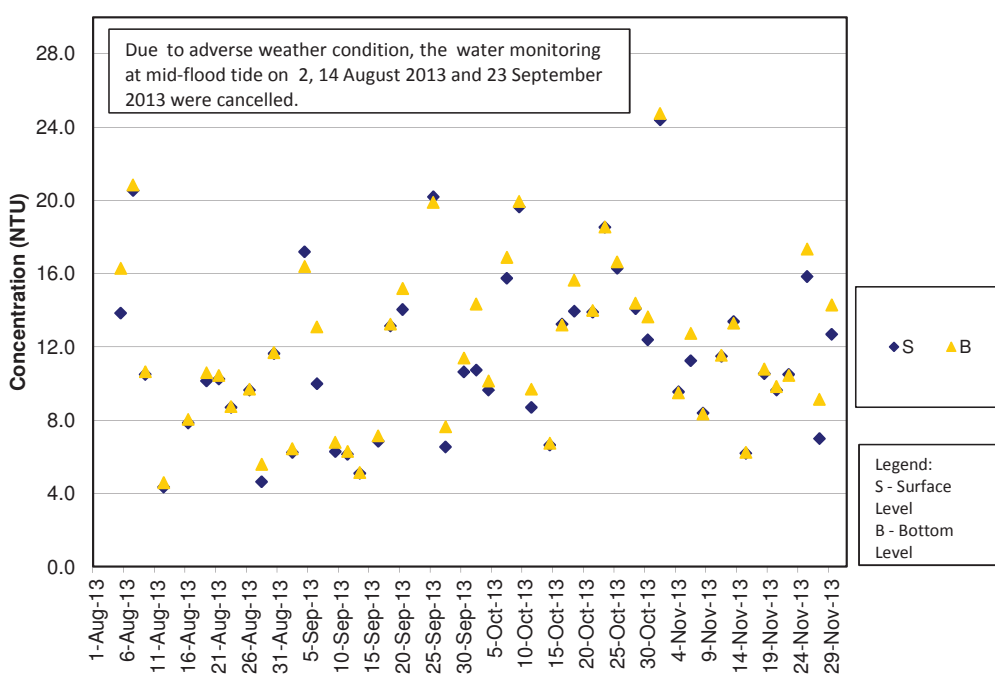
Turbidity Concentrations at Station IS7 (Mid Flood)



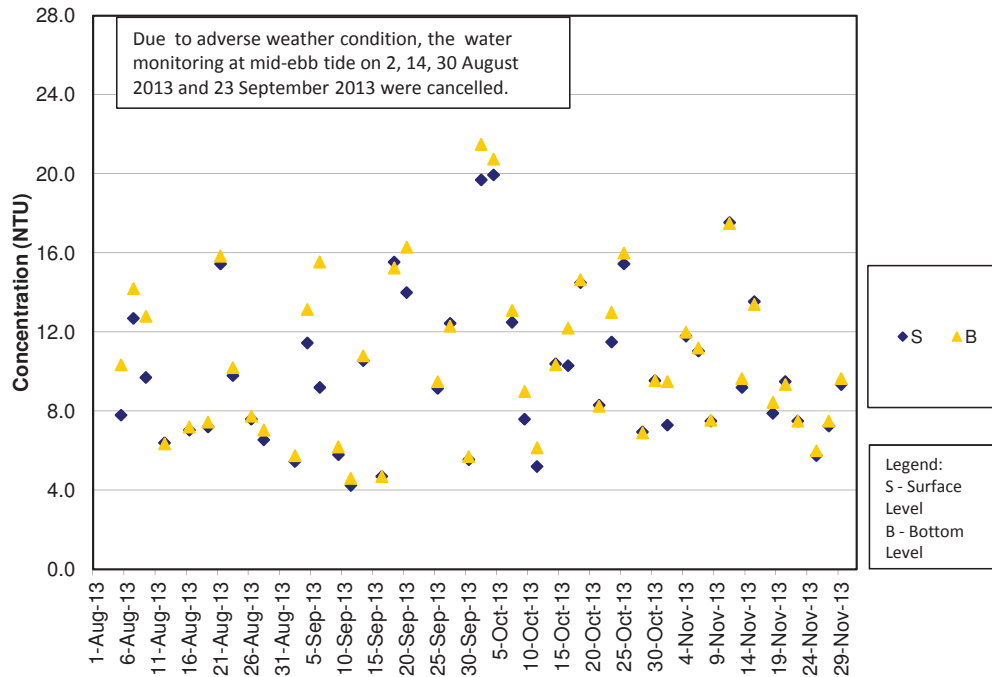
Turbidity Concentrations at Station IS8 (Mid Ebb)



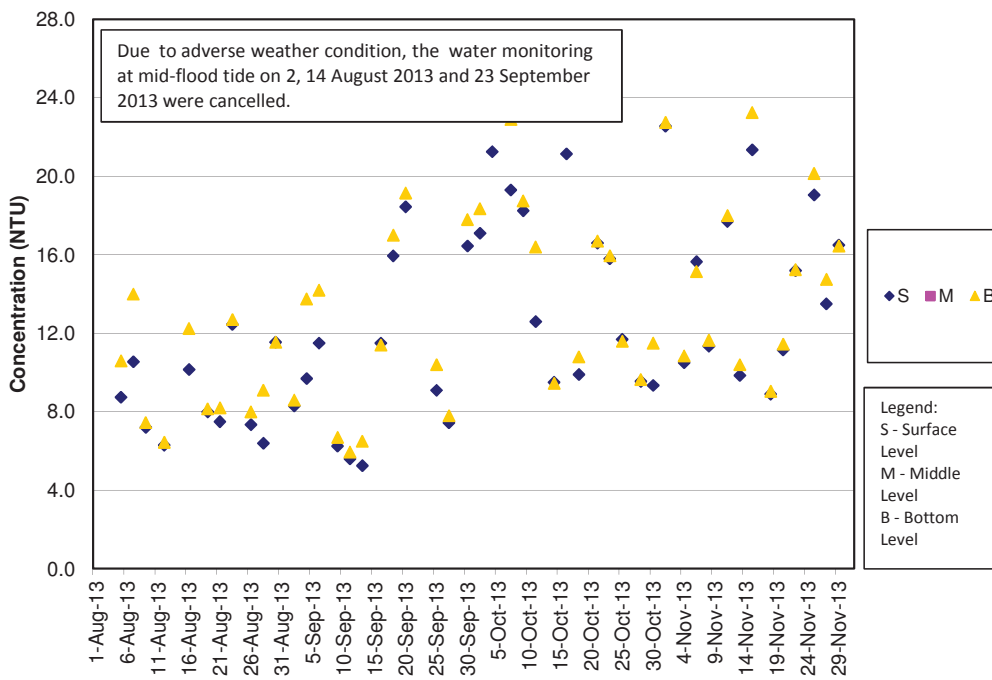
Turbidity Concentrations at Station IS8 (Mid Flood)



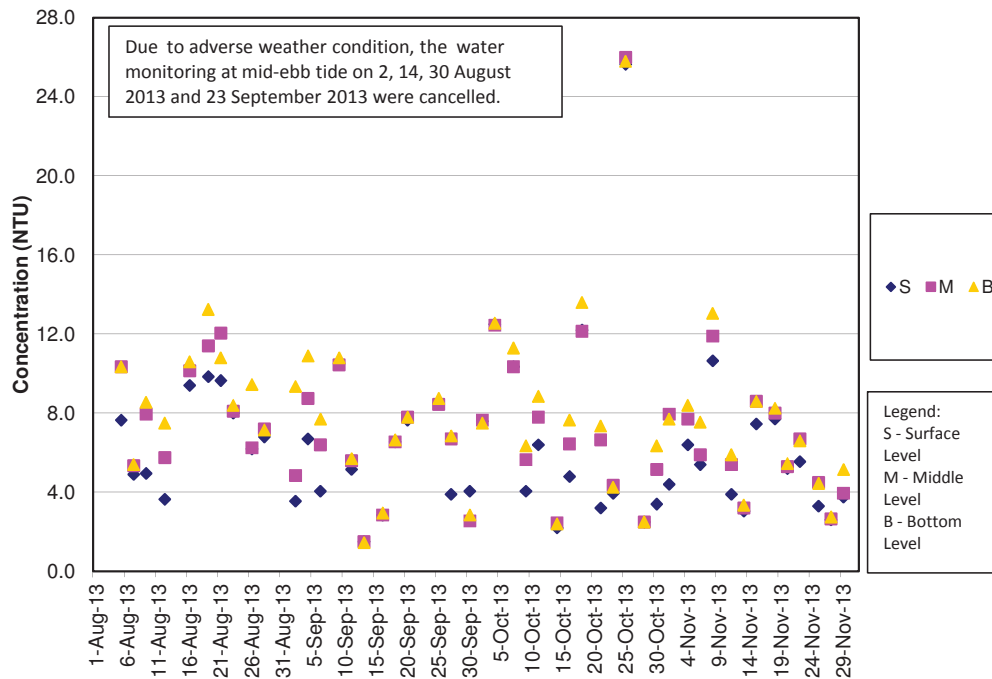
Turbidity Concentrations at Station IS(Mf)9 (Mid Ebb)



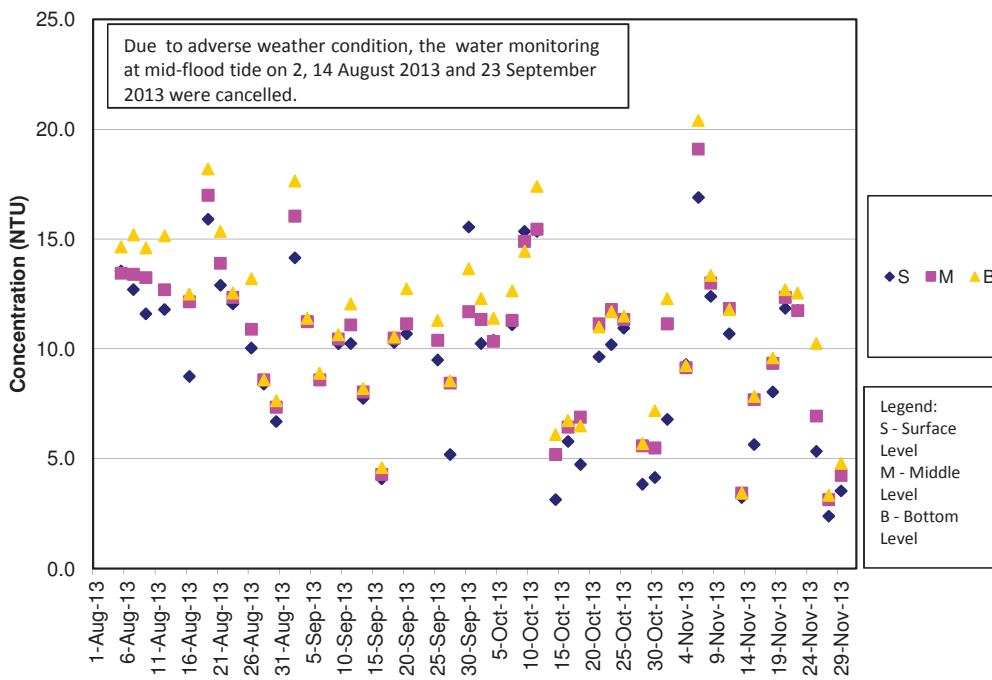
Turbidity Concentrations at Station IS(Mf)9 (Mid Flood)



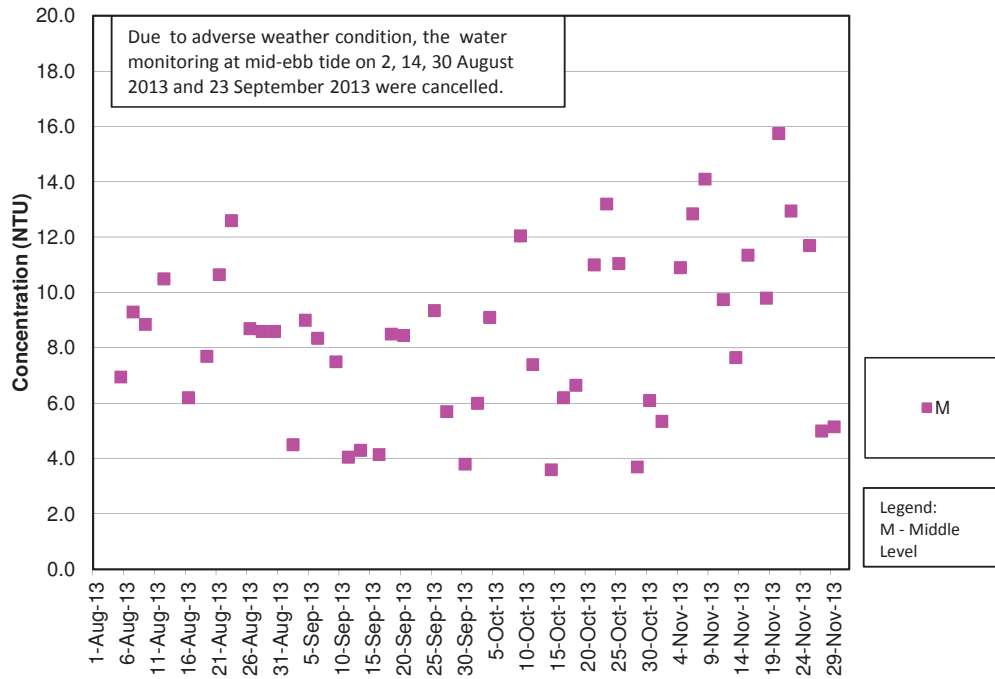
Turbidity Concentrations at Station IS10 (Mid Ebb)



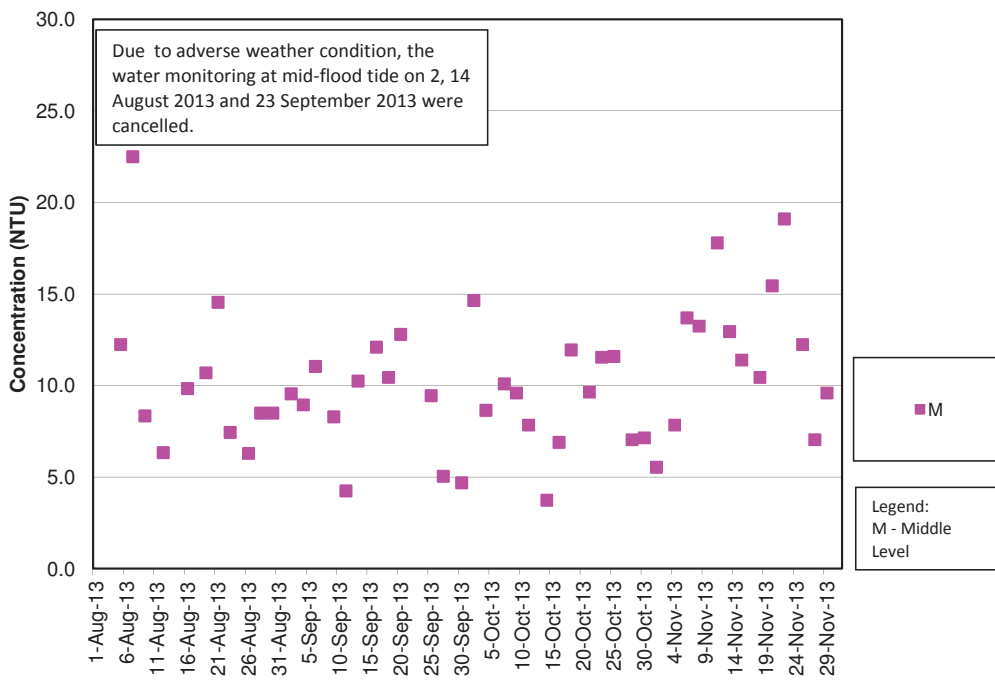
Turbidity Concentrations at Station IS10 (Mid Flood)



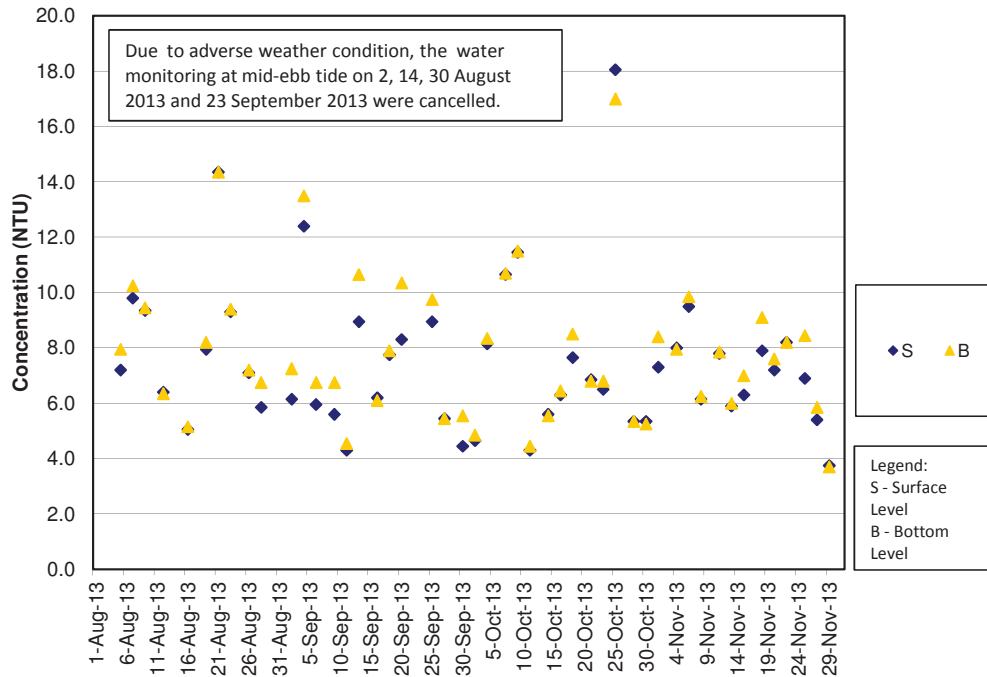
Turbidity Concentrations at Station SR3 (Mid Ebb)



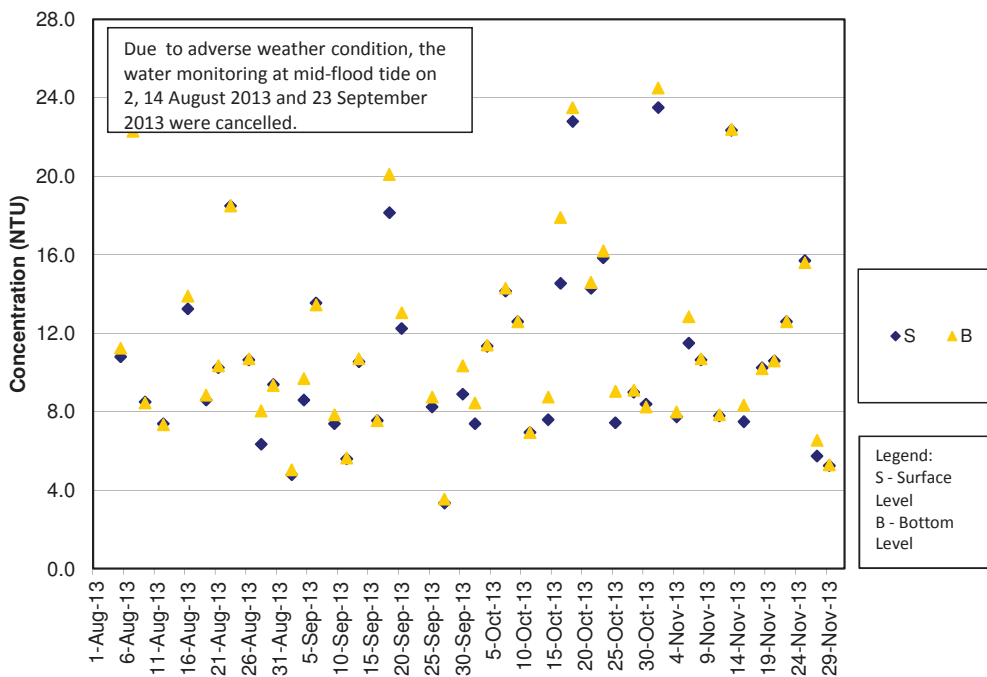
Turbidity Concentrations at Station SR3 (Mid Flood)



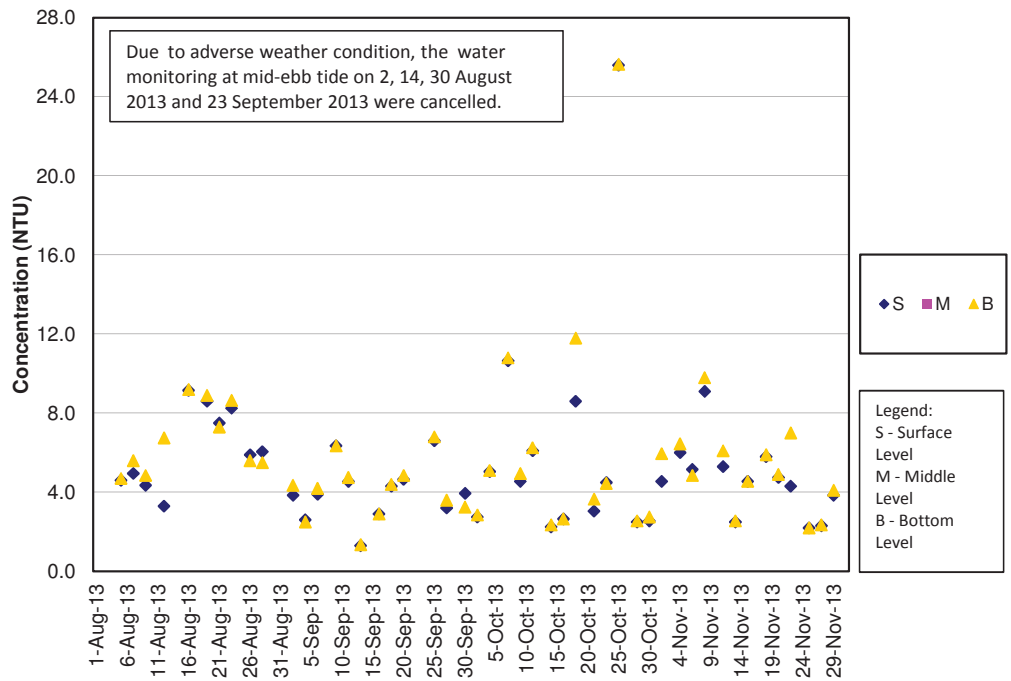
Turbidity Concentrations at Station SR4 (Mid Ebb)



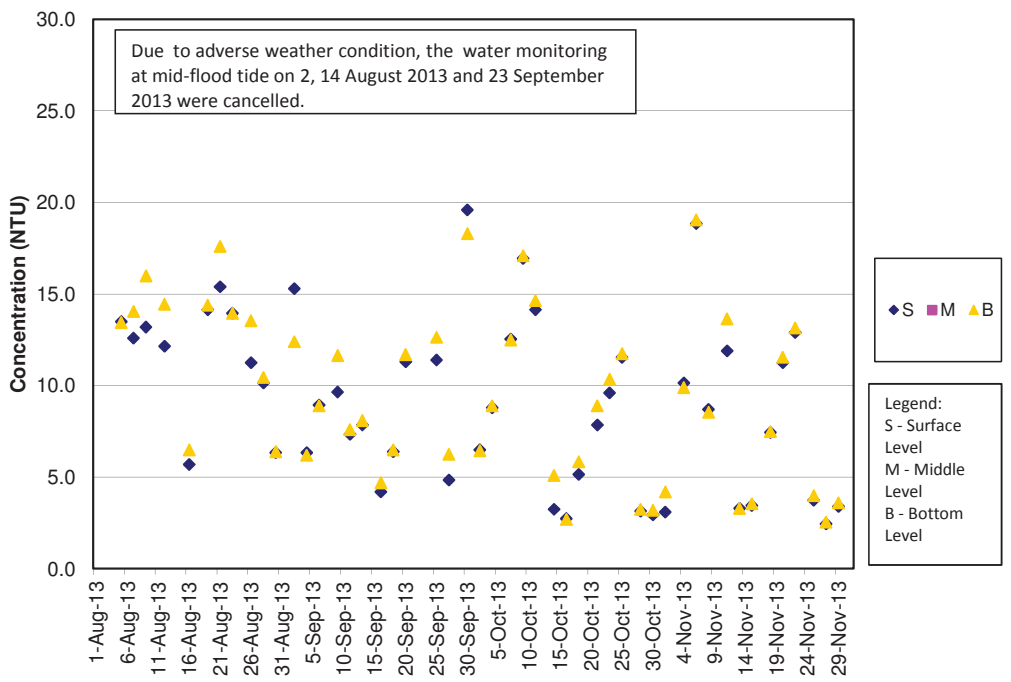
Turbidity Concentrations at Station SR4 (Mid Flood)



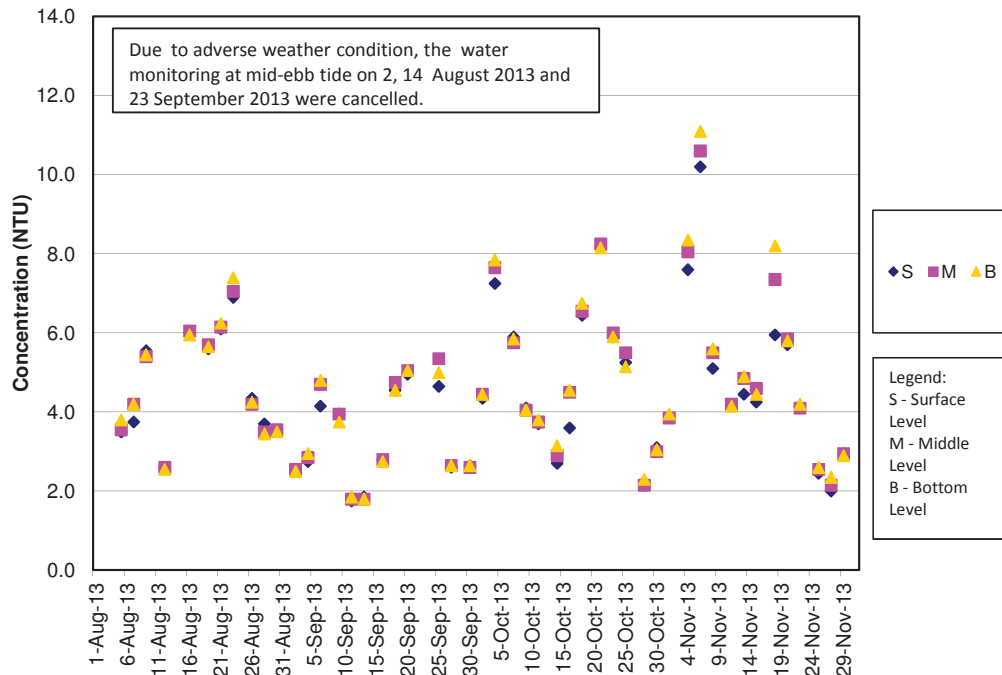
Turbidity Concentrations at Station SR5 (Mid Ebb)



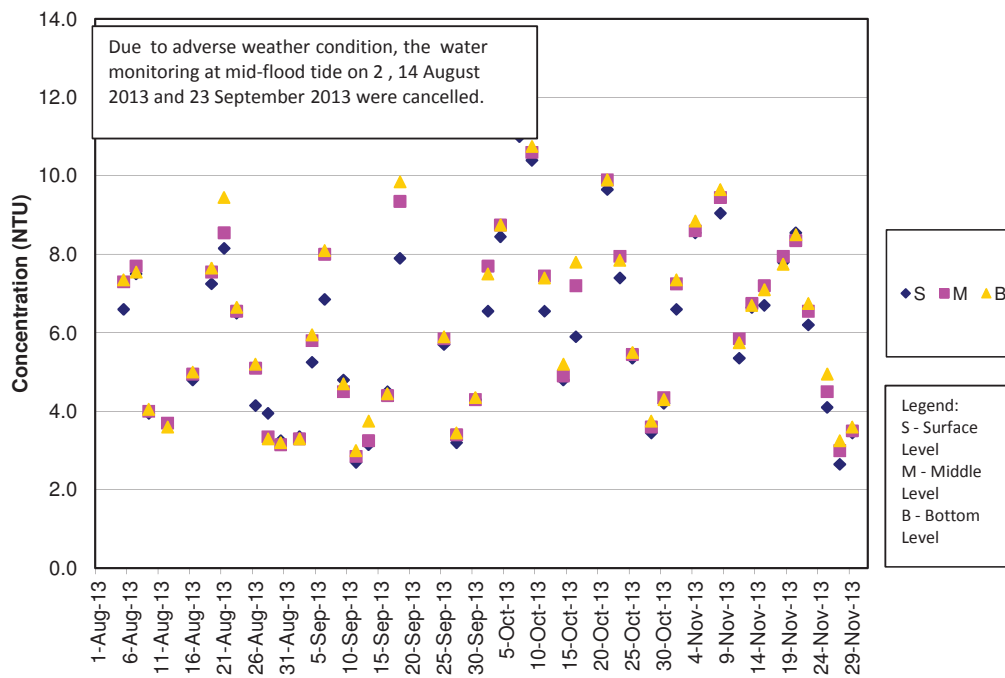
Turbidity Concentrations at Station SR5 (Mid Flood)



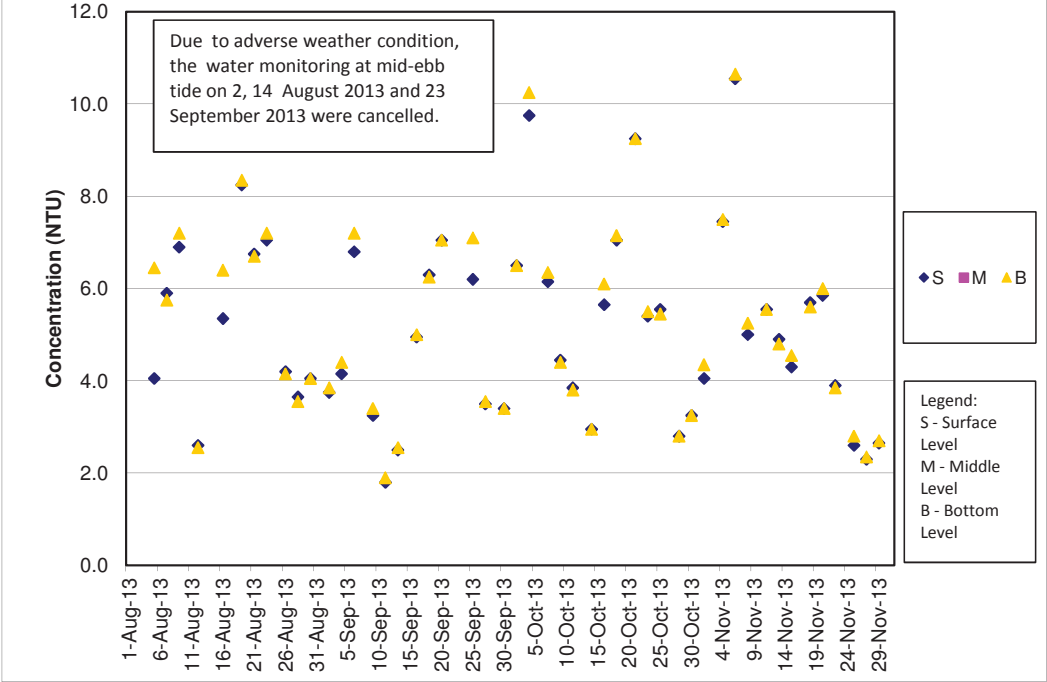
Turbidity Concentrations at Station SR10A (Mid Ebb)



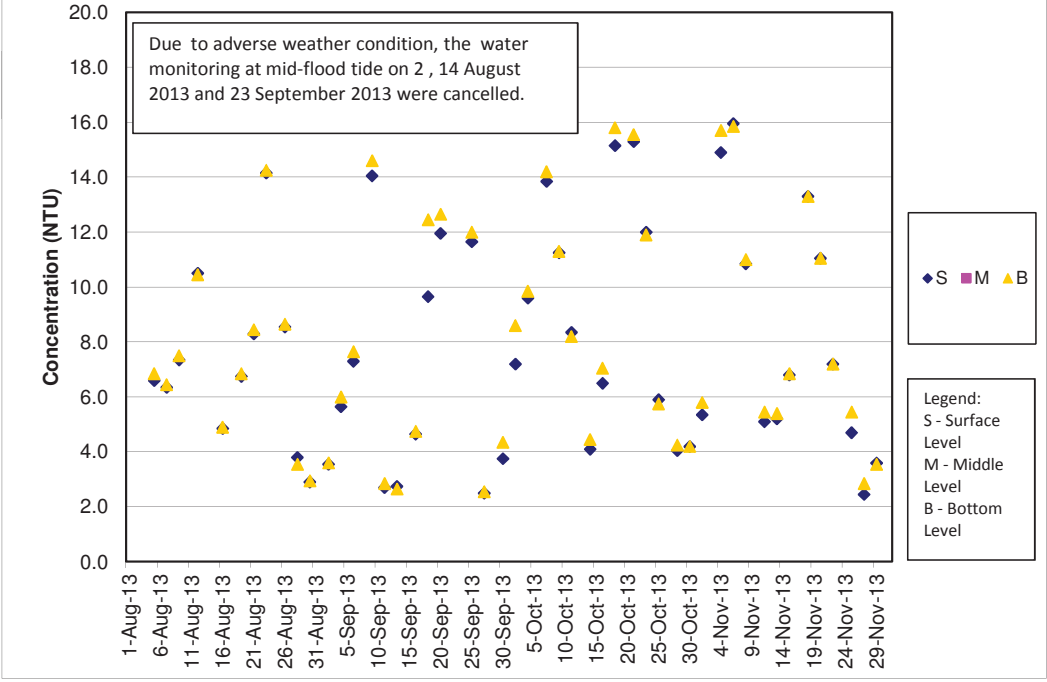
Turbidity Concentrations at Station SR10A (Mid Flood)



Turbidity Concentrations at Station SR10B (Mid Ebb)



Turbidity Concentrations at Station SR10B (Mid Flood)





路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX J

Dolphin Monitoring Results



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Contract No. HY/2011/03
Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road –
Section between Scenic Hill and Hong Kong Boundary
Crossing Facilities Dolphin Monitoring

Quarterly Progress Report (September-November 2013)
submitted to China State Construction Engineering (HK) Ltd.

Submitted by

Samuel K.Y. Hung, Ph.D., Hong Kong Cetacean Research Project

20 December 2013

1. Introduction

- 1.1. The Hong Kong Link Road (HKLR) serves to connect the Hong Kong-Zhuhai-Macao Bridge (HZMB) Main Bridge at the Hong Kong Special Administrative Region (HKSAR) Boundary and the HZMB Hong Kong Boundary Crossing Facilities (HKBCF) located at the northeastern waters of the Hong Kong International Airport. The construction of HKLR is separated into two sections, with the construction for the section between Scenic Hill and Hong Kong Boundary Crossing Facilities being commenced in October 2012.
- 1.2. According to the updated Environmental Monitoring and Audit (EM&A) Manual (for HKLR), monthly line-transect vessel surveys for Chinese White Dolphin should be conducted to cover the Northwest and Northeast Lantau survey areas as in AFCD annual marine mammal monitoring programme.
- 1.3. In October 2012, Hong Kong Cetacean Research Project (HKCRP) has been commissioned to conduct this 54-month dolphin monitoring study in order to collect data on Chinese White Dolphins during the construction phase (i.e. impact period) of the HKLR03 project in Northwest Lantau (NWL) and Northeast Lantau (NEL) survey areas, and to analyze the collected survey data to monitor distribution, encounter rate, activities and occurrence of dolphin calves. Photo-identification will also be collected from individual Chinese White Dolphins to examine their individual range patterns.

- 1.4. From the monitoring results, any changes in dolphin occurrence within the study area will be examined for possible causes, and appropriate actions and additional mitigation measures will be recommended as necessary.
- 1.5. This report is the fifth quarterly progress report under the HKLR03 construction phase dolphin monitoring programme submitted to the China State Construction Engineering (HK) Limited, summarizing the results of the surveys findings during the period of September to November 2013.

2. Monitoring Methodology

2.1. Vessel-based Line-transect Survey

- 2.1.1. According to the requirement of the updated EM&A manual, dolphin monitoring programme should cover all transect lines in NEL and NWL survey areas twice per month throughout the entire construction period. The co-ordinates of all transect lines are shown in Table 1.

Table 1. Co-ordinates of transect lines

Line No.		Easting	Northing		Line No.		Easting	Northing
1	Start Point	804671	814577		13	Start Point	816506	819480
1	End Point	804671	831404		13	End Point	816506	824859
2	Start Point	805475	815457		14	Start Point	817537	820220
2	End Point	805477	826654		14	End Point	817537	824613
3	Start Point	806464	819435		15	Start Point	818568	820735
3	End Point	806464	822911		15	End Point	818568	824433
4	Start Point	807518	819771		16	Start Point	819532	821420
4	End Point	807518	829230		16	End Point	819532	824209
5	Start Point	808504	820220		17	Start Point	820451	822125
5	End Point	808504	828602		17	End Point	820451	823671
6	Start Point	809490	820466		18	Start Point	821504	822371
6	End Point	809490	825352		18	End Point	821504	823761
7	Start Point	810499	820690		19	Start Point	822513	823268
7	End Point	810499	824613		19	End Point	822513	824321
8	Start Point	811508	820847		20	Start Point	823477	823402
8	End Point	811508	824254		20	End Point	823477	824613

9	Start Point	812516	820892		21	Start Point	805476	827081
9	End Point	812516	824254		21	End Point	805476	830562
10	Start Point	813525	820872		22	Start Point	806464	824033
10	End Point	813525	824657		22	End Point	806464	829598
11	Start Point	814556	818449		23	Start Point	814559	821739
11	End Point	814556	820992		23	End Point	814559	824768
12	Start Point	815542	818807					
12	End Point	815542	824882					

- 2.1.2. The survey team used standard line-transect methods (Buckland et al. 2001) to conduct the systematic vessel surveys, and followed the same technique of data collection that has been adopted over the last 16 years of marine mammal monitoring surveys in Hong Kong developed by HKCRP (see Hung 2012). For each monitoring vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) was used to make observations from the flying bridge area.
- 2.1.3. Two experienced observers (a data recorder and a primary observer) made up the on-effort survey team, and the survey vessel transited different transect lines at a constant speed of 13-15 km per hour. The data recorder searched with unaided eyes and filled out the datasheets, while the primary observer searched for dolphins and porpoises continuously through 7 x 50 *Steiner* marine binoculars. Both observers searched the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). One to two additional experienced observers were available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers were experienced in small cetacean survey techniques and identifying local cetacean species.
- 2.1.4. During on-effort survey periods, the survey team recorded effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance traveled in each series (a continuous period of search effort) with the assistance of a handheld GPS (*Garmin eTrex Legend*).
- 2.1.5. Data including time, position and vessel speed were also automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.

2.1.6. When dolphins were sighted, the survey team would end the survey effort, and immediately record the initial sighting distance and angle of the dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel was diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, and behavioural observations. The perpendicular distance (PSD) of the dolphin group to the transect line was later calculated from the initial sighting distance and angle.

2.1.7. Survey effort being conducted along the parallel transect lines that were perpendicular to the coastlines (as indicated in Figure1) was labeled as “primary” survey effort, while the survey effort conducted along the connecting lines between parallel lines was labeled as “secondary” survey effort. According to HKCRP long-term dolphin monitoring data, encounter rates of Chinese white dolphins deduced from effort and sighting data collected along primary and secondary lines were similar in NEL and NWL survey areas (Hung 2013). Therefore, both primary and secondary survey effort were presented as on-effort survey effort in this report.

2.2. *Photo-identification Work*

2.2.1. When a group of Chinese White Dolphins were sighted during the line-transect survey, the survey team would end effort and approach the group slowly from the side and behind to take photographs of them. Every attempt was made to photograph every dolphin in the group, and even photograph both sides of the dolphins, since the colouration and markings on both sides may not be symmetrical.

2.2.2. Two professional digital cameras (*Canon EOS 7D* and *60D* models), each equipped with long telephoto lenses (100-400 mm zoom), were available on board for researchers to take sharp, close-up photographs of dolphins as they surfaced. The images were shot at the highest available resolution and stored on Compact Flash memory cards for downloading onto a computer.

2.2.3. All digital images taken in the field were first examined, and those containing potentially identifiable individuals were sorted out. These photographs would then be examined in greater detail, and were carefully compared to the existing Chinese White Dolphin photo-identification catalogue maintained by HKCRP since 1995.

- 2.2.4. Chinese White Dolphins can be identified by their natural markings, such as nicks, cuts, scars and deformities on their dorsal fin and body, and their unique spotting patterns were also used as secondary identifying features (Jefferson 2000).
- 2.2.5. All photographs of each individual were then compiled and arranged in chronological order, with data including the date and location first identified (initial sighting), re-sightings, associated dolphins, distinctive features, and age classes entered into a computer database.

2.3. *Data analysis*

- 2.3.1. Distribution Analysis – The line-transect survey data was integrated with the Geographic Information System (GIS) in order to visualize and interpret different spatial and temporal patterns of dolphin distribution using sighting positions. Location data of dolphin groups were plotted on map layers of Hong Kong using a desktop GIS (ArcView[®] 3.1) to examine their distribution patterns in details. The dataset was also stratified into different subsets to examine distribution patterns of dolphin groups with different categories of group sizes, young calves and activities.
- 2.3.2. Encounter rate analysis – Encounter rates of Chinese white dolphins (number of on-effort sightings per 100 km of survey effort, and total number of dolphins sighted on-effort per 100 km of survey effort) were calculated in NEL and NWL survey areas in relation to the amount of survey effort conducted during each month of monitoring survey. Dolphin encounter rates were calculated in two ways for comparisons with the HZMB baseline monitoring results as well as to AFCD long-term marine mammal monitoring results.

Firstly, for the comparison with the HZMB baseline monitoring results, the encounter rates were calculated using primary survey effort alone, and only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. The average encounter rate of sightings (STG) and average encounter rate of dolphins (ANI) were deduced based on the encounter rates from six events during the present quarter (i.e. six sets of line-transect surveys in North Lantau), which was also compared with the one deduced from the six events during the baseline period (i.e. six sets of line-transect surveys in North Lantau).

Secondly, the encounter rates were calculated using both primary and secondary survey effort collected under Beaufort 3 or below condition as in AFCD long-term monitoring study. The encounter rate of sightings and dolphins were deduced by dividing the total number of on-effort sightings (STG) and total number of dolphins (ANI) by the amount of survey effort for the entire quarterly period (September-November 2013).

2.3.3. Quantitative grid analysis on habitat use – To conduct quantitative grid analysis of habitat use, positions of on-effort sightings of Chinese White Dolphins collected during the quarterly impact phase monitoring period were plotted onto 1-km² grids among NWL and NEL survey areas on GIS. Sighting densities (number of on-effort sightings per km²) and dolphin densities (total number of dolphins from on-effort sightings per km²) were then calculated for each 1 km by 1 km grid with the aid of GIS. Sighting density grids and dolphin density grids were then further normalized with the amount of survey effort conducted within each grid. The total amount of survey effort spent on each grid was calculated by examining the survey coverage on each line-transect survey to determine how many times the grid was surveyed during the study period. For example, when the survey boat traversed through a specific grid 50 times, 50 units of survey effort were counted for that grid. With the amount of survey effort calculated for each grid, the sighting density and dolphin density of each grid were then normalized (i.e. divided by the unit of survey effort).

The newly-derived unit for sighting density was termed SPSE, representing the number of on-effort sightings per 100 units of survey effort. In addition, the derived unit for actual dolphin density was termed DPSE, representing the number of dolphins per 100 units of survey effort. Among the 1-km² grids that were partially covered by land, the percentage of sea area was calculated using GIS tools, and their SPSE and DPSE values were adjusted accordingly. The following formulae were used to estimate SPSE and DPSE in each 1-km² grid within the study area:

$$\text{SPSE} = ((S / E) \times 100) / \text{SA}\%$$

$$\text{DPSE} = ((D / E) \times 100) / \text{SA}\%$$

where S = total number of on-effort sightings
D = total number of dolphins from on-effort sightings
E = total number of units of survey effort
SA% = percentage of sea area

2.3.4. Behavioural analysis – When dolphins were sighted during vessel surveys, their

behaviour was observed. Different activities were categorized (i.e. feeding, milling/resting, traveling, socializing) and recorded on sighting datasheets. This data was then input into a separate database with sighting information, which can be used to determine the distribution of behavioural data with a desktop GIS. Distribution of sightings of dolphins engaged in different activities and behaviours would then be plotted on GIS and carefully examined to identify important areas for different activities of the dolphins.

- 2.3.5. Ranging pattern analysis – Location data of individual dolphins that occurred during the 3-month baseline monitoring period were obtained from the dolphin sighting database and photo-identification catalogue. To deduce home ranges for individual dolphins using the fixed kernel methods, the program Animal Movement Analyst Extension, was loaded as an extension with ArcView[®] 3.1 along with another extension Spatial Analyst 2.0. Using the fixed kernel method, the program calculated kernel density estimates based on all sighting positions, and provided an active interface to display kernel density plots. The kernel estimator then calculated and displayed the overall ranging area at 95% UD level.

3. Monitoring Results

3.1. Summary of survey effort and dolphin sightings

- 3.1.1. During the period of September to November 2013, six sets of systematic line-transect vessel surveys were conducted to cover all transect lines in NWL and NEL survey areas twice per month.
- 3.1.2. From these surveys, a total of 862.46 km of survey effort was collected, with 94.3% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility). Among the two areas, 331.22 km and 531.24 km of survey effort were conducted in NEL and NWL survey areas respectively. In addition, the total survey effort conducted on primary lines was 644.87 km, while the effort on secondary lines was 217.59 km. Survey effort conducted on primary and secondary lines were both considered as on-effort survey data. Summary table of the survey effort is shown in Appendix I.
- 3.1.3. During the six sets of monitoring surveys in September to November 2013, a total of 45 groups of 187 Chinese White Dolphins were sighted. All except two sightings were made during on-effort search. Thirty-four on-effort sightings were made on primary lines, while another nine on-effort sightings

were made on secondary lines. In this quarterly period, only two groups of eight dolphins were sighted in NEL, while the other 43 groups of 179 dolphins were sighted in NWL. Summary table of the dolphin sightings is shown in Appendix II.

3.2. *Distribution*

- 3.2.1. Distribution of dolphin sightings made during monitoring surveys in September to November 2013 is shown in Figure 1. Almost all sightings were made in the northwestern portion of the North Lantau region, similar to the dolphin distribution pattern in the previous quarter. In particular, dolphin groups were mainly sighted around Lung Kwu Chau, Shau Chau, Black Point, and along the Urmston Road section between Black Point and Lung Kwu Chau (Figure 1). Moreover, a few sightings were also made to the west and northeast of Chek Lap Kok airport platform, and two sightings were made near Tai Mo To (Figure 1).
- 3.2.2. A few dolphin groups were sighted in the vicinity of the HKBCF reclamation site, but none was sighted near HKLR03 reclamation site (Figure 1). In contrary to the previous quarter, no sighting was made along or near the HKLR09 alignment.
- 3.2.3. Sighting distribution between the impact phase monitoring period (September to November 2013) was compared to the one in the baseline monitoring period (September to November 2011). During the present monitoring period, dolphins rarely occurred in NEL region, which was in stark contrast to their frequent occurrence around the Brothers Islands and HKBCF reclamation site during the baseline period (Figure 1).
- 3.2.4. The low occurrence of dolphins in NEL region (particularly around the Brothers Islands and Shum Shui Kok) has been documented repeatedly in previous quarters. This should be a serious concern for the HZMB-related construction activities (including the upcoming TM-CLKL bored piling works) in this area, especially when considered that the present period (September to November) in 2013 was exactly the same three-month period as the baseline monitoring period, and any speculation of seasonal fluctuation in dolphin occurrence can be ruled out. To ensure the continuous usage of NEL waters by the dolphins, every possible measure should be implemented by the contractors and relevant authorities to minimize all disturbances to the dolphins, as a future marine park around the Brothers Islands will be established in this important dolphin habitat as a compensation measure for the habitat loss resulted from the HKBCF and HKLR reclamation works.

3.2.5. On the other hand, dolphin occurrence in the western portion of North Lantau region was largely similar between the two periods, except that fewer dolphins were sighted to the west of the airport and near Pillar Point (Figure 1).

3.3. *Encounter rate*

3.3.1. During the present three-month study period, the encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data from the primary transect lines under favourable conditions (Beaufort 3 or below) from each of the survey areas are shown in Table 2. The average encounter rates deduced from the six sets of surveys were also compared with the ones deduced from the baseline monitoring period (September – November 2011) (Table 3).

Table 2. Dolphin encounter rates (sightings per 100 km of survey effort) during September – November 2013

SURVEY AREA	DOLPHIN MONITORING DATES	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
		Primary Lines Only	Primary Lines Only
Northeast Lantau	Set 1 (3 & 5 Sep 2013)	0.00	0.00
	Set 2 (10 & 18 Sep 2013)	3.44	6.87
	Set 3 (8 & 15 Oct 2013)	0.00	0.00
	Set 4 (17 & 22 Oct 2013)	2.63	15.78
	Set 5 (1 & 5 Nov 2013)	0.00	0.00
	Set 6 (8 & 13 Nov 2013)	0.00	0.00
Northwest Lantau	Set 1 (3 & 5 Sep 2013)	1.48	8.88
	Set 2 (10 & 18 Sep 2013)	4.19	12.57
	Set 3 (8 & 15 Oct 2013)	3.91	13.69
	Set 4 (17 & 22 Oct 2013)	12.24	33.67
	Set 5 (1 & 5 Nov 2013)	10.30	50.02
	Set 6 (8 & 13 Nov 2013)	16.09	76.06

Table 3. Comparison of average dolphin encounter rates from impact monitoring period (September-November 2013) and baseline monitoring period (September-November 2011)

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	September - November 2013	September - November 2011	September - November 2013	September - November 2011
Northeast Lantau	1.01 ± 1.59	6.00 ± 5.05	3.77 ± 6.49	22.19 ± 26.81
Northwest Lantau	8.04 ± 5.70	9.85 ± 5.85	32.48 ± 26.51	44.66 ± 29.85

Note: Encounter rates deduced from the baseline monitoring period have been recalculated based only on survey effort and on-effort sighting data made along the primary transect lines under favourable conditions.

Table 4. Comparison of average dolphin encounter rates in Northeast Lantau survey area from all quarters of impact monitoring period and baseline monitoring period (September-November 2011)

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
September-November 2011 (Baseline)	6.00 ± 5.05	22.19 ± 26.81
December 2012-February 2013 (Impact)	3.14 ± 3.21	6.33 ± 8.64
March-May 2013 (Impact)	0.42 ± 1.03	0.42 ± 1.03
June-August 2013 (Impact)	0.88 ± 1.36	0.88 ± 1.36
September-November 2013 (Impact)	1.01 ± 1.59	3.77 ± 6.49

Note: Encounter rates deduced from the baseline monitoring period have been recalculated based only on survey effort and on-effort sighting data made along the primary transect lines under favourable conditions.

3.3.2. In NEL, the average dolphin encounter rates (both STG and ANI) in the present three-month study period were much lower (reductions of 83.2% and 83.0% respectively) than the ones recorded in the 3-month baseline period (Table 3). In fact, dolphin occurrence in NEL in the past three quarters have been exceptionally low when compared to the baseline period (Table 4), which has prompted the triggering of the Event and Action Plan (in fact, the present quarter was the fourth consecutive quarter being accessed that have triggered the Action Level under the Event and Action Plan).

3.3.3. On the other hand, the average dolphin encounter rates (STG and ANI) in NWL during the present impact phase monitoring period were also lower (reductions of 18.3% and 27.3% respectively) than the ones recorded in the 3-month

baseline period, indicating a reduced dolphin usage of this survey area.

- 3.3.4. A two-way ANOVA with repeated measures and unequal sample size was conducted to examine whether there were any significant differences in the average encounter rates between the baseline and impact monitoring periods. The two variables that were examined included the two periods (baseline and impact phases) and two locations (NEL and NWL).
- 3.3.5. For the comparison between the baseline period and the present quarter (fourth quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.1424 and 0.2339 respectively. If the alpha value is set at 0.1, no significant difference was detected between the baseline and present quarters in both the encounter rates of STG and ANI.
- 3.3.6. For the comparison between the baseline period and the cumulative quarters in impact phase (i.e. first four quarters of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0366 and 0.0179 respectively. If the alpha value is set at 0.1, significant differences were detected in both the average dolphin encounter rates of STG and ANI (i.e. between the two periods and the locations).
- 3.3.7. To facilitate the comparison with the AFCD long-term monitoring results, the encounter rates were also calculated for the present quarter using both primary and secondary survey effort. The encounter rates of sightings (STG) and dolphins (ANI) in NWL were 8.33 sightings and 33.93 dolphins per 100 km of survey effort respectively, while the encounter rates of sightings (STG) and dolphins (ANI) in NEL were 0.62 sightings and 2.50 dolphins per 100 km of survey effort respectively.

3.4. *Group size*

- 3.4.1. Group size of Chinese White Dolphins ranged from 1-11 individuals per group in North Lantau region during September to November 2013. The average dolphin group sizes from these three months were compared with the ones deduced from the baseline period in September to November 2011, as shown in Table 5.

Table 5. Comparison of average dolphin group sizes from impact monitoring period (September-November 2013) and baseline monitoring period (September-November 2011)

	Average Dolphin Group Size	
	September to November 2013	September-November 2011
Overall	4.16 ± 2.46 (n = 45)	3.72 ± 3.13 (n = 66)
Northeast Lantau	4.00 ± 2.83 (n = 2)	3.18 ± 2.16 (n = 17)
Northwest Lantau	4.16 ± 2.48 (n = 43)	3.92 ± 3.40 (n = 49)

3.4.2. The average dolphin group sizes in the entire North Lantau region as well as in NWL during September to November 2013 were slightly higher than the ones recorded in the 3-month baseline period (Table 5). Although the average group size in NEL was quite high during the present monitoring period when compared to the baseline period, the sample size of the two dolphin groups in 2013 was very small for such comparison.

3.4.3. Distribution of dolphins with larger group sizes during September to November 2013 is shown in Figure 2, and was compared with the one in baseline period. In 2013, most larger dolphin groups mainly clustered around Lung Kwu Chau and off Lung Kwu Tan, while these larger groups were more scattered in the Northwest Lantau region without any apparent concentration during the baseline monitoring period in 2011 (Figure 2). Notably, none of the larger dolphin groups were sighted near the HKBCF or HKLR03 reclamation sites in 2011.

3.5. *Habitat use*

3.5.1. From September-November 2013, the most heavily utilized habitats by Chinese White Dolphins mainly concentrated around Lung Kwu Chau, near Pak Chau, and the Urmston Road section between Lung Kwu Chau and Lung Kwu Tan (Figures 3a and 3b). Only two grids in NEL recorded the presence of dolphins, with one of the grids overlap with the HKBCF work site. None of the grids near HKLR03 reclamation site or HKLR09 bridge alignment recorded the presence of dolphins

3.5.2. It should be noted that the amount of survey effort collected in each grid during the three-month period was fairly low (6-12 units of survey effort for most grids), and therefore the habitat use pattern derived from the three-month dataset should be treated with caution. A more complete picture of dolphin habitat use pattern will be presented when more survey effort for each grid will

be collected throughout the impact phase monitoring programme.

- 3.5.3. When compared with the habitat use patterns during the baseline period, dolphin usage in NEL was noticeably much lower in the present impact monitoring period (Figure 4). During the baseline period, dolphin densities were particularly higher along the coastline between Shum Shui Kok and Siu Ho Wan, while this area was vacated by dolphins during the present impact phase period. On the other hand, the density patterns between the baseline and impact phase monitoring periods were similar in the Northwest Lantau region.
 - 3.5.4. The absence of dolphins in the identified important habitats around the Brothers Islands and Shum Shui Kok in consecutive quarters in 2013 is of serious concern. The future Brothers Islands Marine Park will be established in this area upon the completion of HKBCF reclamation works, as an important compensation measure for the habitat loss in relation to HZMB projects. It should be further examined whether the very low usage of dolphins would continue in this important dolphin habitat, and the potential measures should be implemented soon that may enhance the dolphin usage of this area.
- 3.6. *Mother-calf pairs*
- 3.6.1. During the three-month study period, a total of four unspotted calves (UC) and 14 unspotted juveniles (UJ) were sighted in NEL and NWL survey areas. These young calves comprised 9.6% of all animals sighted, which was higher than the percentage recorded during the baseline monitoring period (6.8%).
 - 3.6.2. The occurrence of these young calves mainly concentrated around Lung Kwu Chau and off Lung Kwu Tan, and most of them were involved in larger dolphin groups (Figure 5). None of these calves were sighted in the vicinity of the HKBCF or HKLR03 reclamation site during the present quarter.
- 3.7. *Activities and associations with fishing boats*
- 3.7.1. A total of five dolphin sightings were associated with feeding and socializing activities during the three-month study period. The percentage of feeding activities comprised of 4.4% of the total number of dolphin sightings, which was much lower than the one recorded during the baseline period (11.6%). On the contrary, the percentage of socializing activities were 6.6% during the present impact phase monitoring period, which was slightly higher than the one recorded during the baseline period (5.4%). Only one group of dolphins was engaged in traveling activity, and the rarity of this observed activity was similar to the baseline monitoring period and previous impact phase monitoring periods.

- 3.7.2. Distribution of dolphins engaged in different activities during the three-month study period is shown in Figure 6. No apparent concentration of sightings was found for all three types of observed activities.
- 3.7.3. During the three-month period, only one of the 45 dolphin groups was found to be associated with an operating gill-netter. The extremely low level of fishing boat association in the present and previous quarters was consistently found, and was likely related to the recent trawl ban being implemented in 2013 in Hong Kong waters.
- 3.8. *Summary of photo-identification works*
- 3.8.1. From September to November 2013, over 3,000 digital photographs of Chinese White Dolphins were taken during the impact phase monitoring surveys for the photo-identification work.
- 3.8.2. In total, 56 individuals sighted 110 times altogether were identified (see summary table in Appendix III and photographs of identified individuals in Appendix IV). Only eight of these 110 re-sightings were made in NEL, which involved eight different individuals. Notably, these were the same individuals that were repeatedly sighted before in NEL throughout the HKLR03 impact phase monitoring surveys as well as in the baseline monitoring period.
- 3.8.3. Most identified individuals were sighted only once or twice during the three-month period, with the exception of 11 individuals being sighted thrice, and four individuals being sighted four times (CH34, NL33, NL98 and WL05). One individual, NL220 were sighted five times, but three of those sightings were made on the same survey day.
- 3.8.4. Notably, nine of these 56 individuals were also sighted in West Lantau waters during the HKLR09 monitoring surveys in the same 3-month period, showing their extensive movement between North and West Lantau regions.
- 3.8.5. Twelve well-recognized females were accompanied with their calves during their re-sightings. Besides NL80, NL182 and WL 124, the other mothers (NL33, NL93, NL98, NL123, NL145, NL188, NL220, NL221 and NL264) were frequently sighted with their calves throughout the HKLR03 impact phase monitoring period.

3.9. *Individual range use*

- 3.9.1. Ranging patterns of the 56 individuals identified during the three-month study period were determined by fixed kernel method, and are shown in Appendix V.
- 3.9.2. Only a few individuals had their range extended to NEL survey area, while other individuals mostly focused their range use in NWL survey area during the present quarter. In contrast to the extensive movements between NEL and NWL survey areas in the first two impact monitoring quarters (October 2012 - February 2013) and the baseline period (September-November 2011), many of these identified individuals appeared to abandon their usage in NEL waters during the present and previous quarters, even though they were regularly sighted there before and their core areas were centered around the Brothers Islands (e.g. NL24, NL33, NL139, NL261) (Appendix V).
- 3.9.6. It is apparent that the majority of individual dolphins that utilized NEL waters in the past has either diminished or avoided this area for their recent range use. This coincided well with the noticeable decline in dolphin occurrence in NEL as discussed in Section 3.3. This is of serious concern, as the Brothers Islands in NEL was once identified an important habitat for many year-round residents that focused their core area use there (Hung 2008). Therefore, the ranging pattern of individual dolphins should be continuously monitored around Lantau waters, and measures should be taken to ensure that dolphins will continue to move between NWL and NEL without any hindrance as a result of the HZMB-related construction works.

4. Conclusion

- 4.1. During this quarter of dolphin monitoring, no adverse impact from the activities of this construction project on Chinese White Dolphins was noticeable from general observations.
- 4.2. Although the dolphins rarely occurred in the area of HKLR03 construction in the past, during the baseline monitoring period and throughout the five quarters of impact monitoring period, it is apparent that dolphin usage has been significantly reduced in NEL, and many individuals have shifted away from the important habitat around the Brothers Islands.
- 4.3. It is critical to monitor the dolphin usage in North Lantau region in the

upcoming months, to determine whether the dolphins are continuously affected by the various construction activities in relation to the HZMB works, and whether suitable mitigation measure can be applied to revert the situation.

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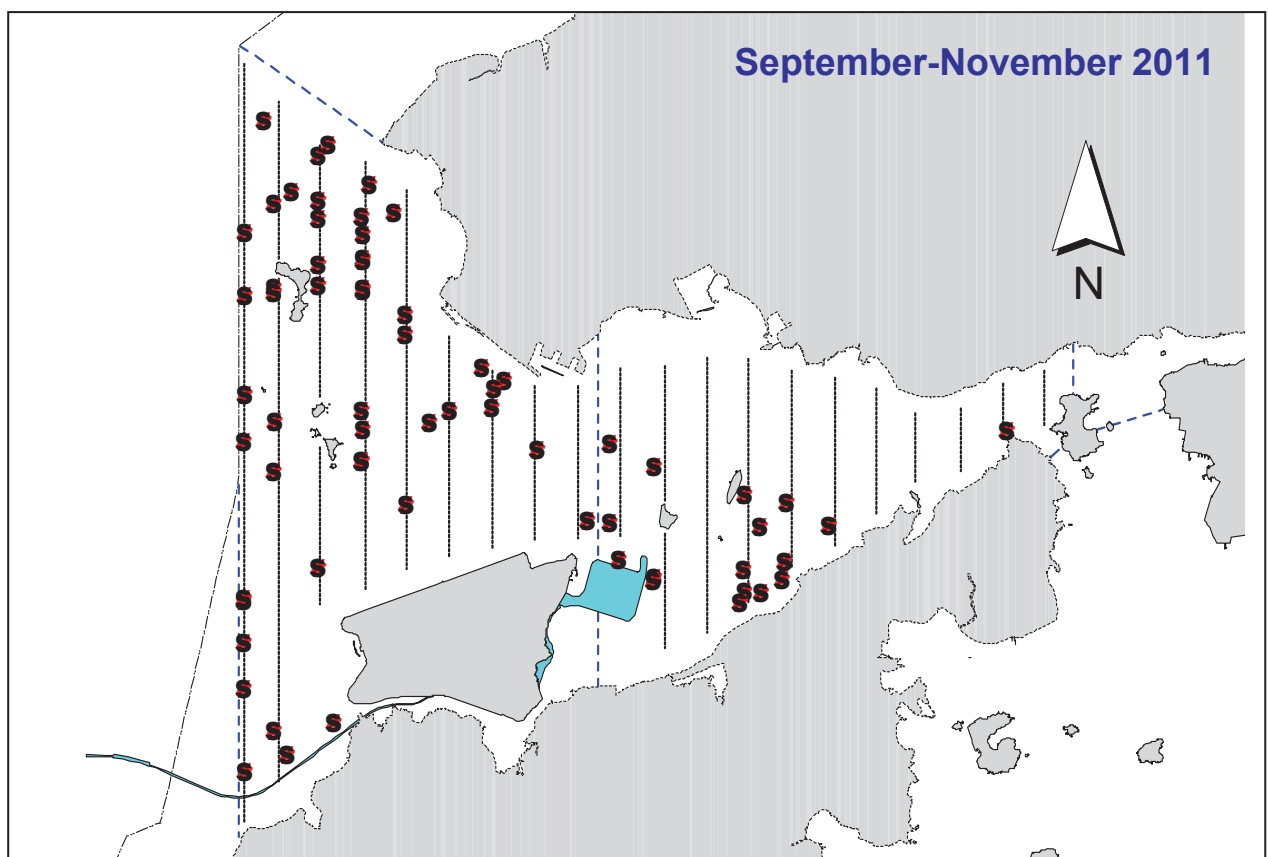
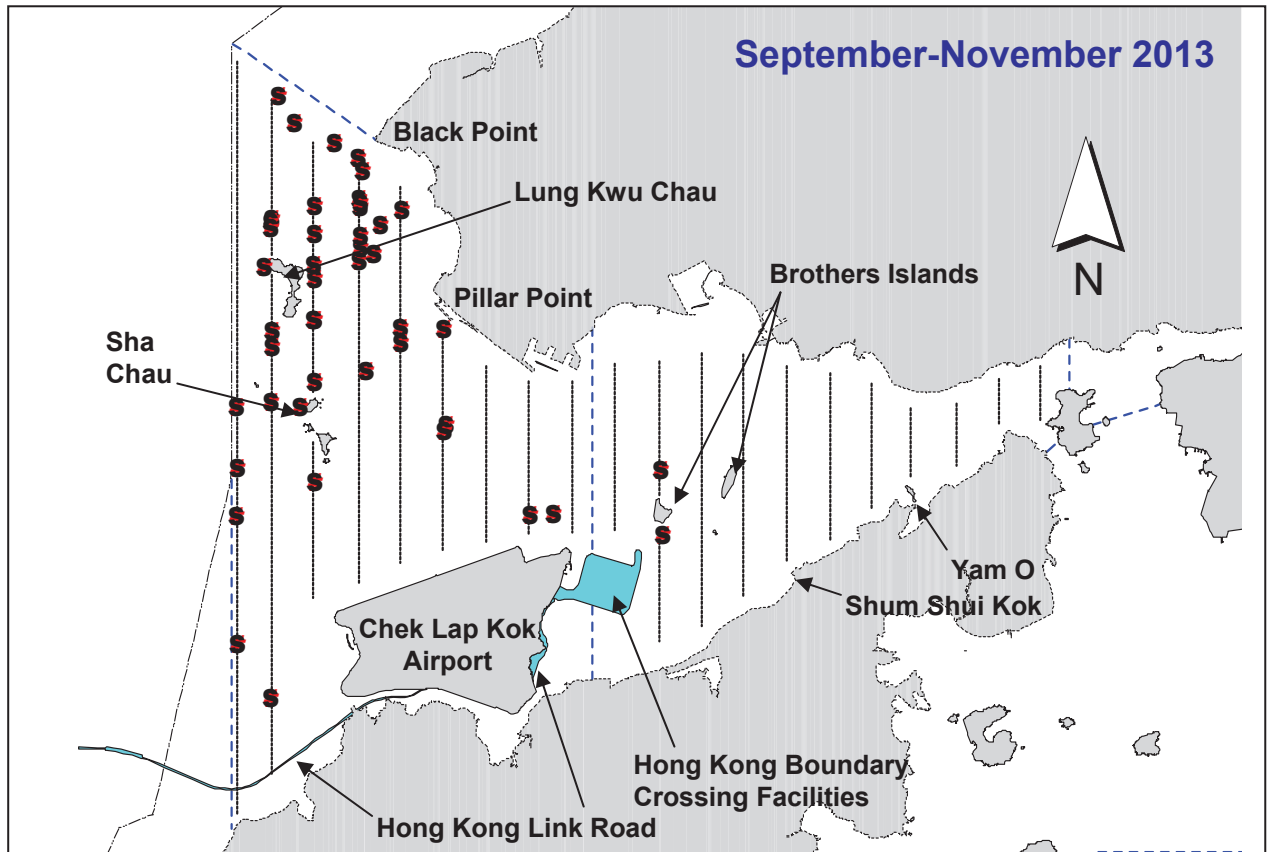


Figure 1. Distribution of Chinese white dolphin sighting in Northwest and Northeast Lantau during HKLR03 impact phase (top) and baseline monitoring surveys (bottom)

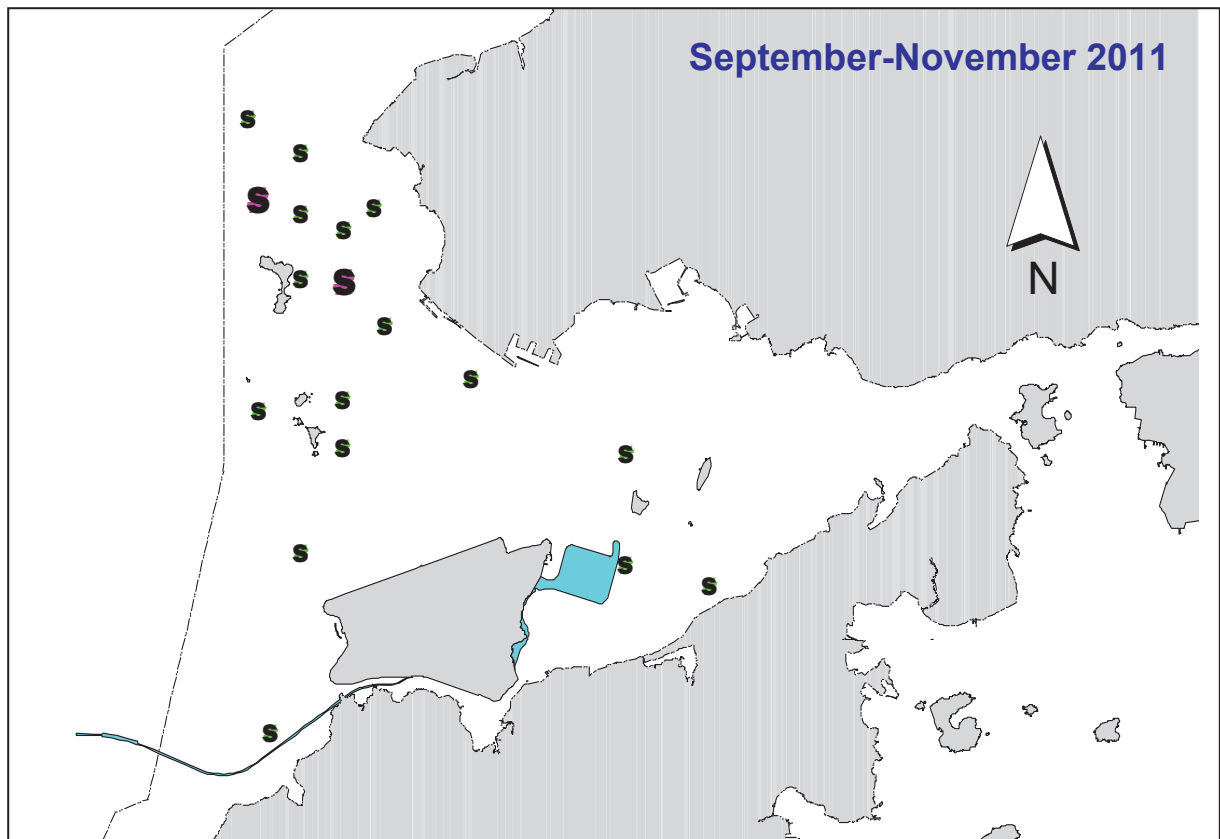
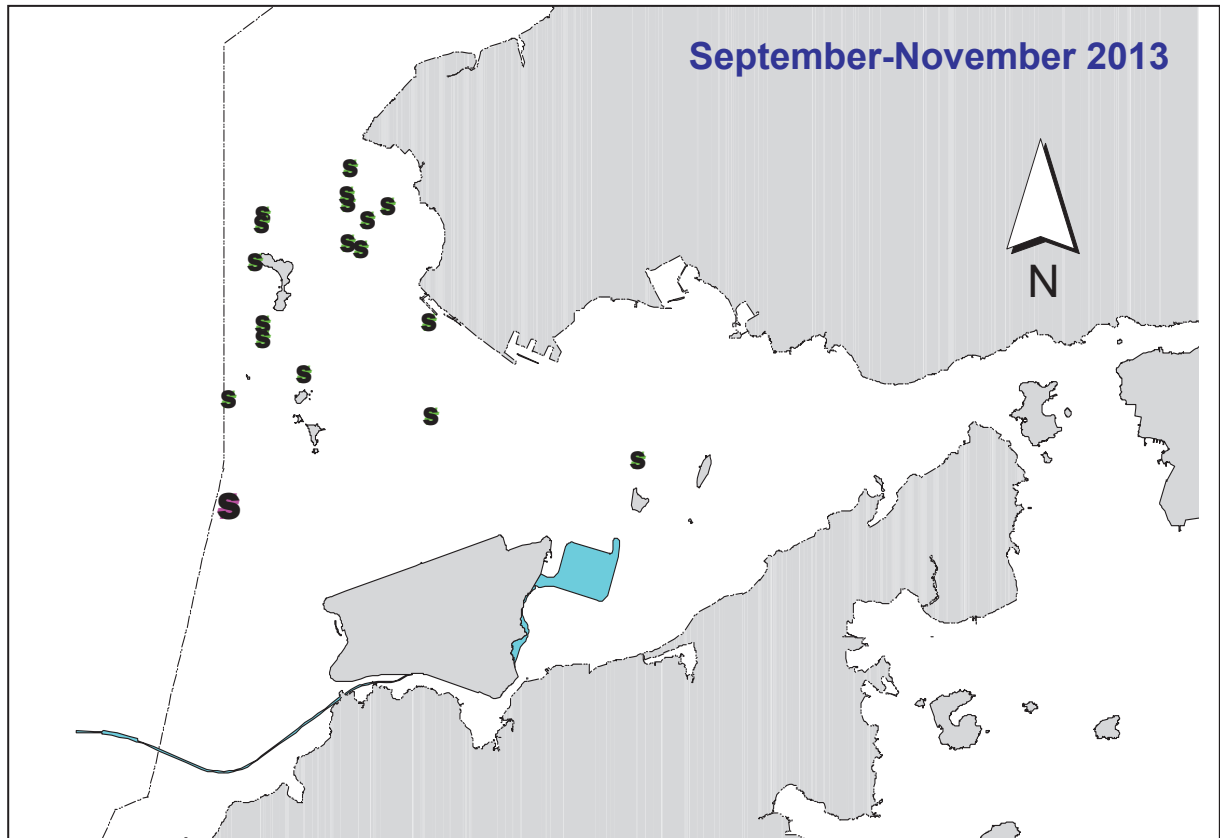


Figure 2. Distribution of Chinese white dolphins with larger group sizes during HKLR03 impact phase (top) and baseline monitoring surveys (bottom) (green dots: group sizes of 5 or more; purple dots: group sizes of 10 or more)

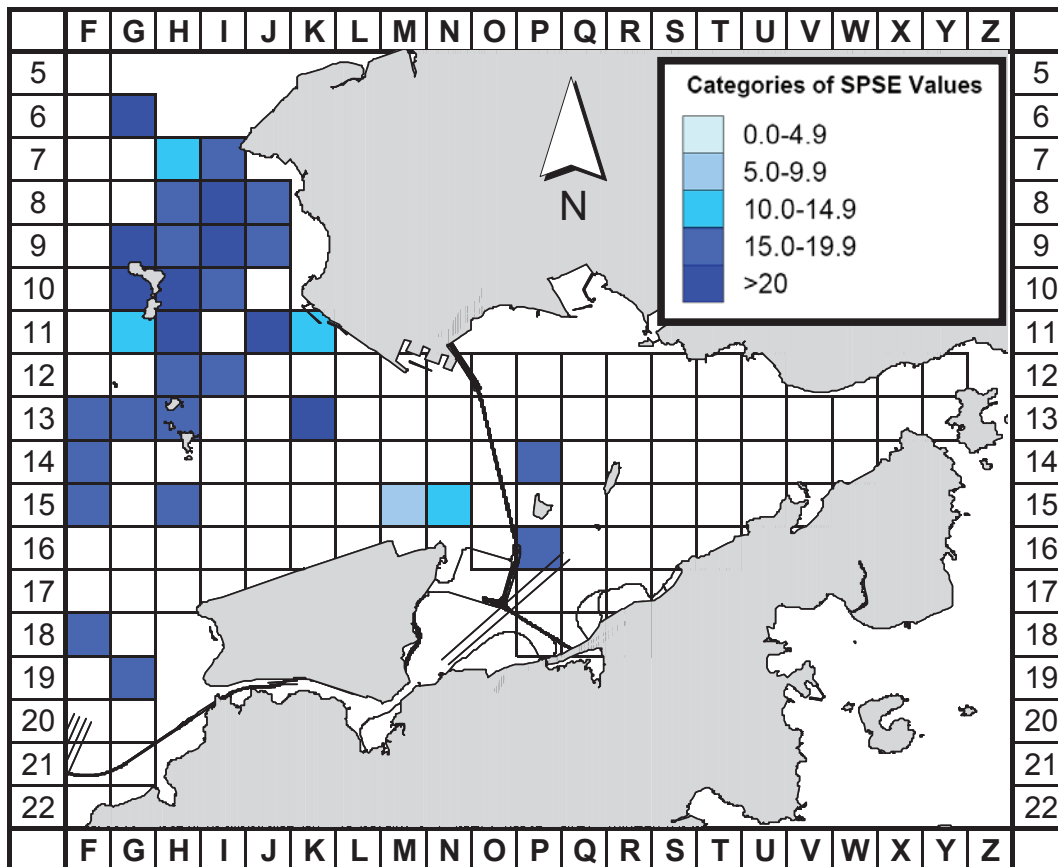


Figure 3a. Sighting density of Chinese white dolphins with corrected survey effort per km² in Northeast and Northwest Lantau survey areas, using data collected during HKLR03 impact monitoring period (Sep-Nov 13) (SPSE = no. of on-effort sightings per 100 units of survey effort)

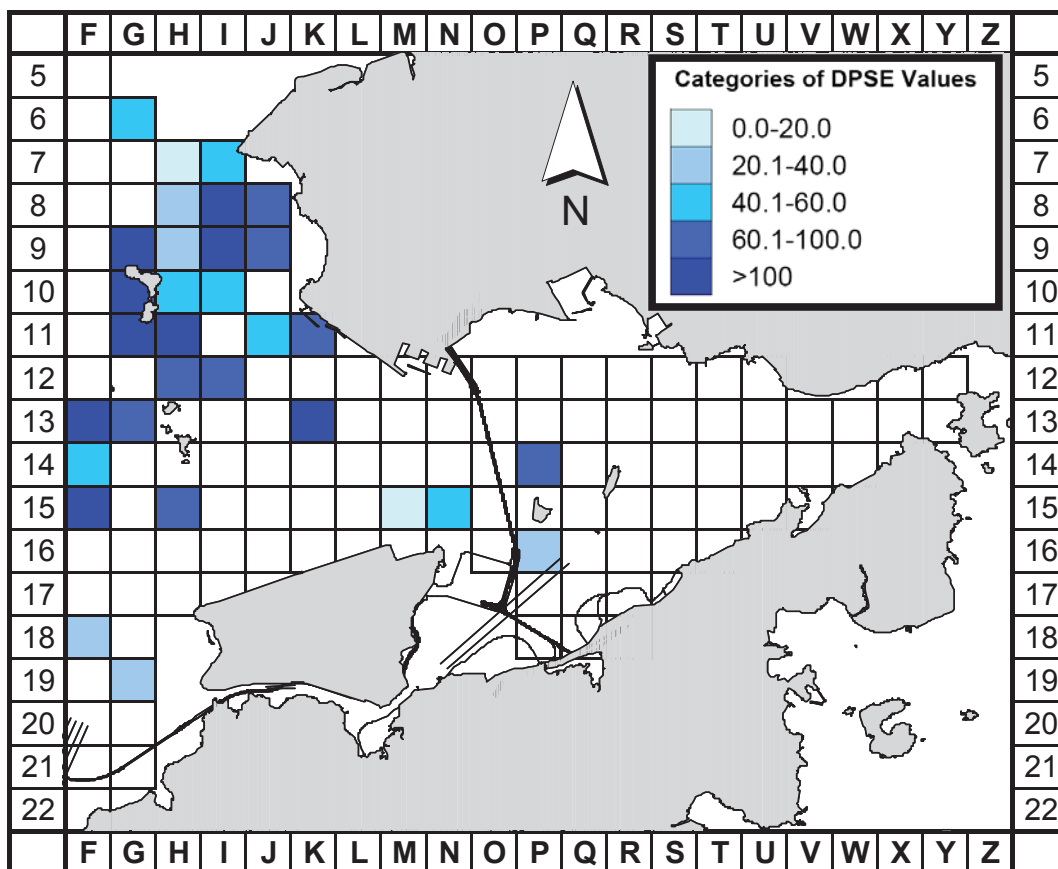


Figure 3b. Density of Chinese white dolphins with corrected survey effort per km² in Northeast and Northwest Lantau survey areas, using data collected during HKLR03 impact monitoring period (Sep-Nov 13) (DPSE = no. of dolphins per 100 units of survey effort)

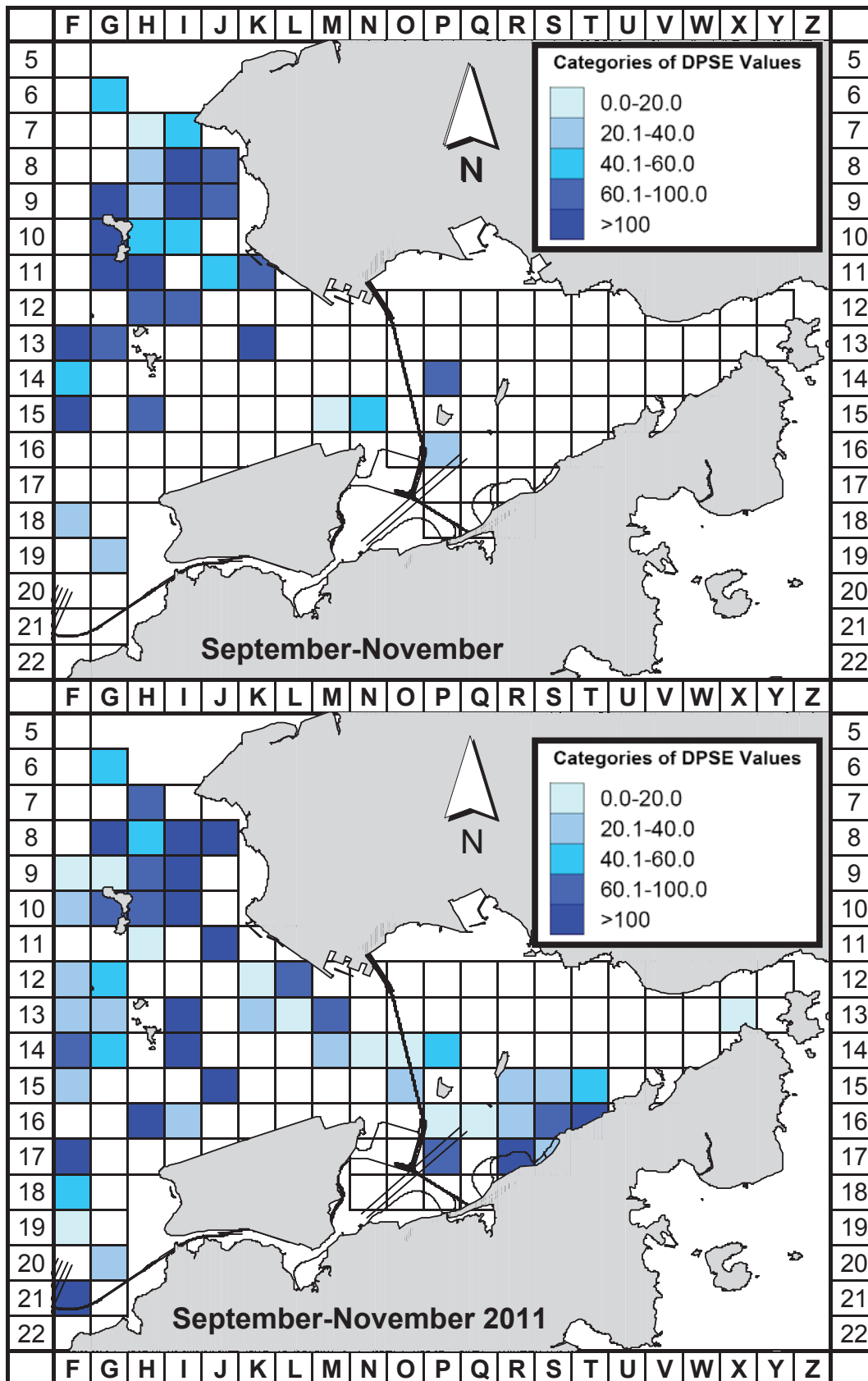


Figure 4. Comparison of density of Chinese white dolphins with corrected survey effort per km² in Northwest and Northeast Lantau survey area between the impact monitoring period (Sept-Nov 2013) and baseline monitoring period (Sept-Nov 2011) (DPSE = no. of dolphins per 100 units of survey effort)

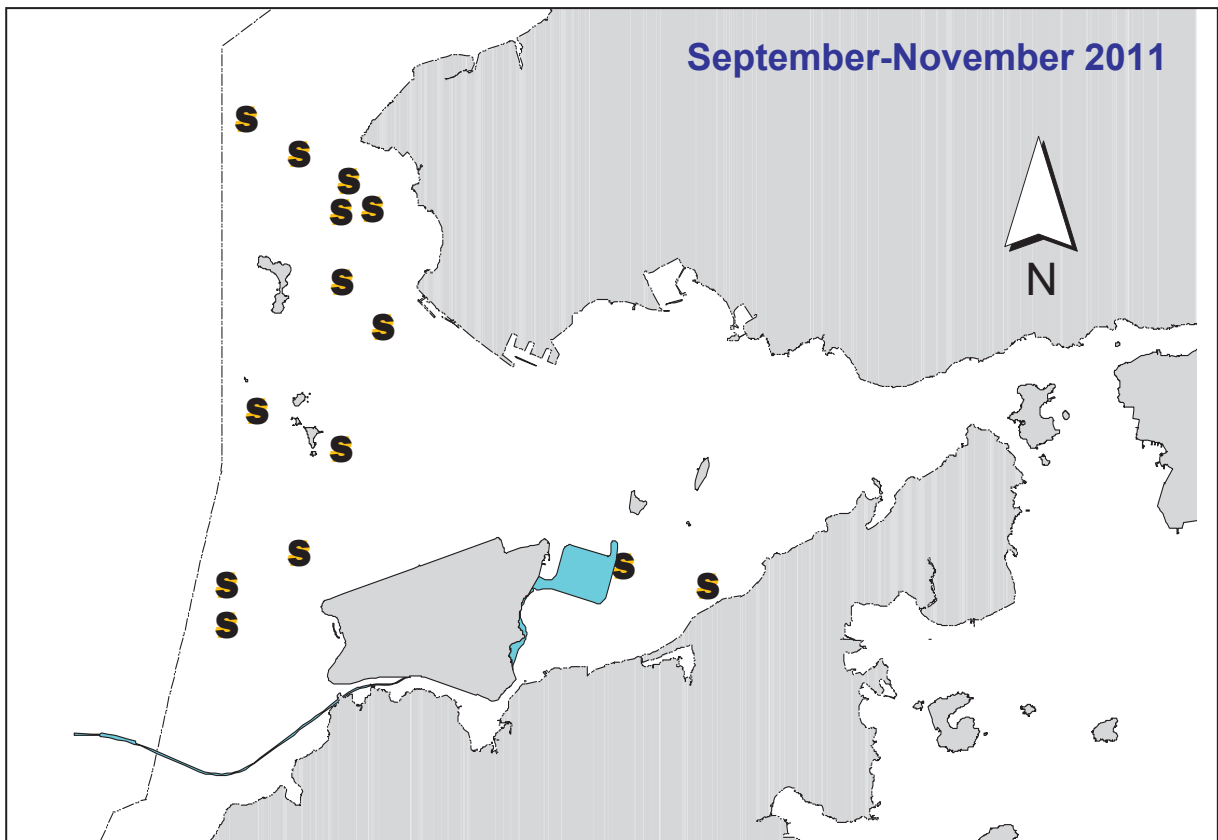
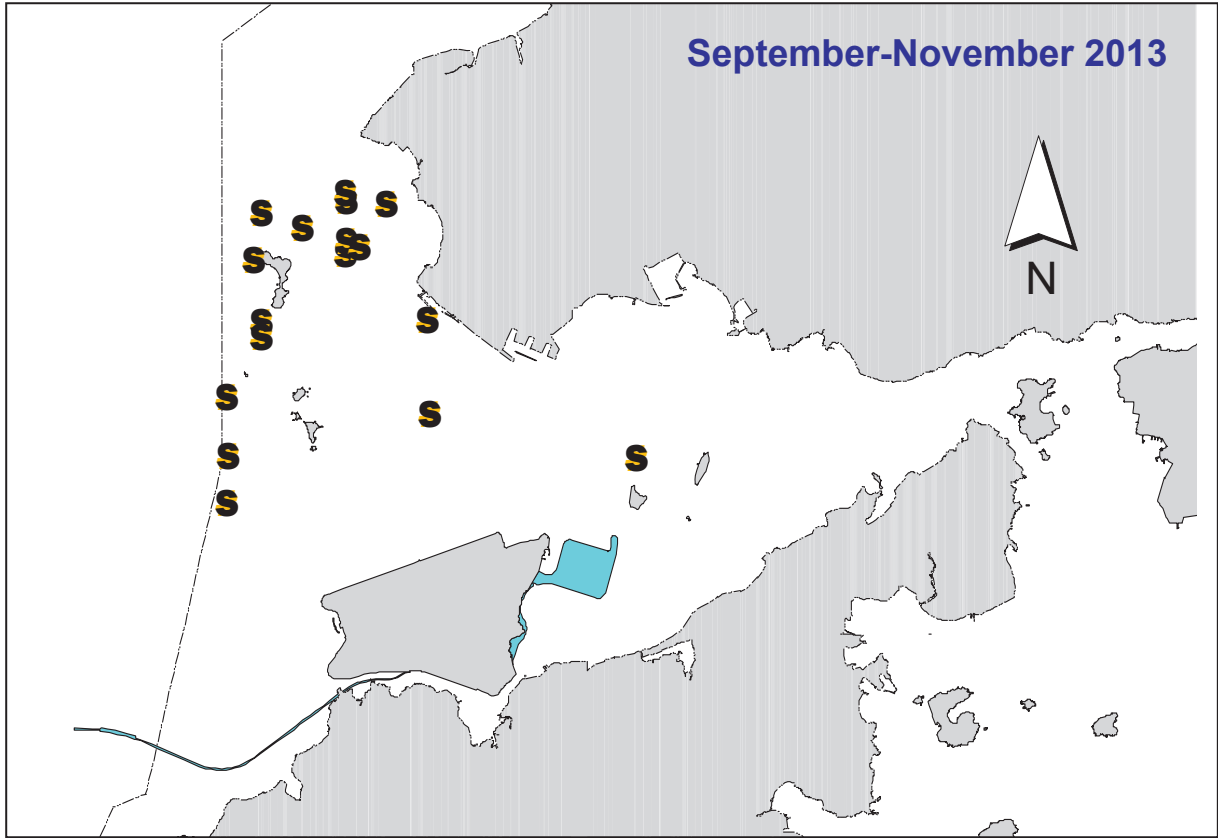


Figure 5. Distribution of young calves of Chinese white dolphins during HKLR03 impact phase (top) and baseline monitoring surveys (bottom)

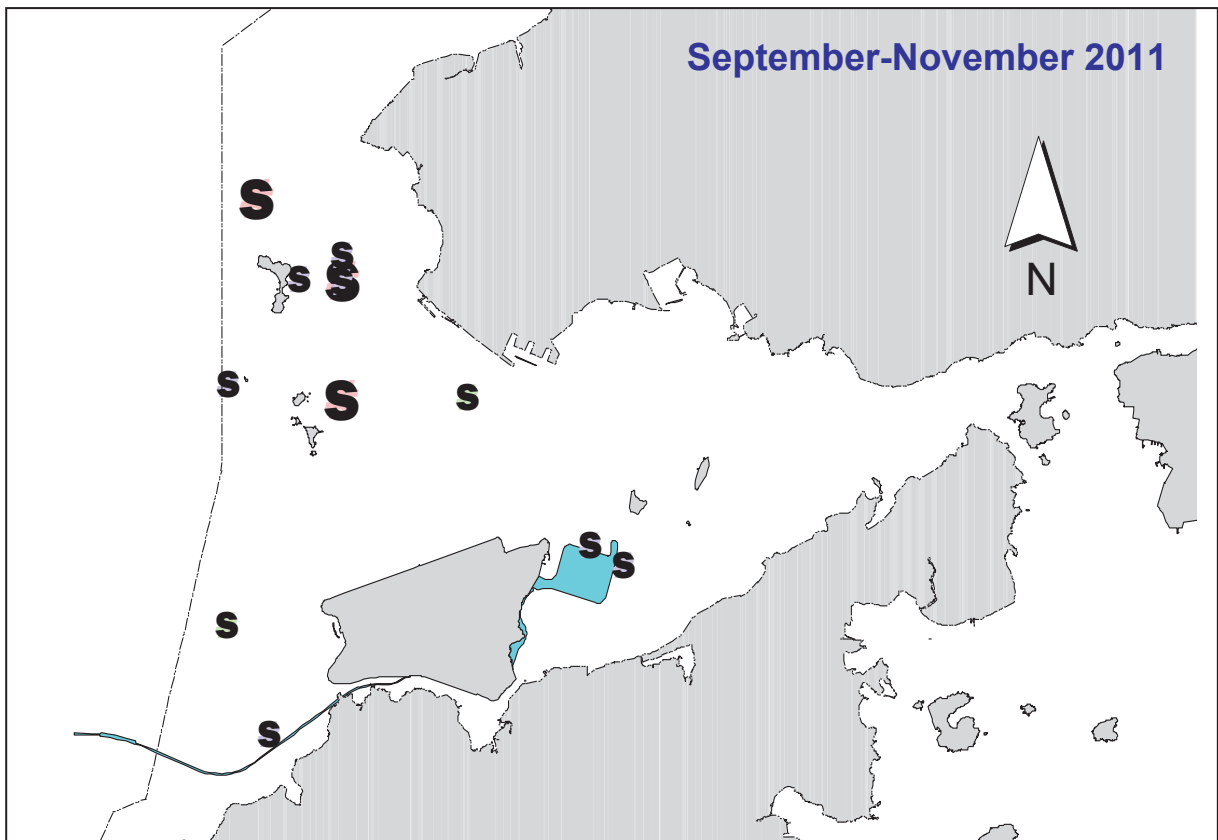
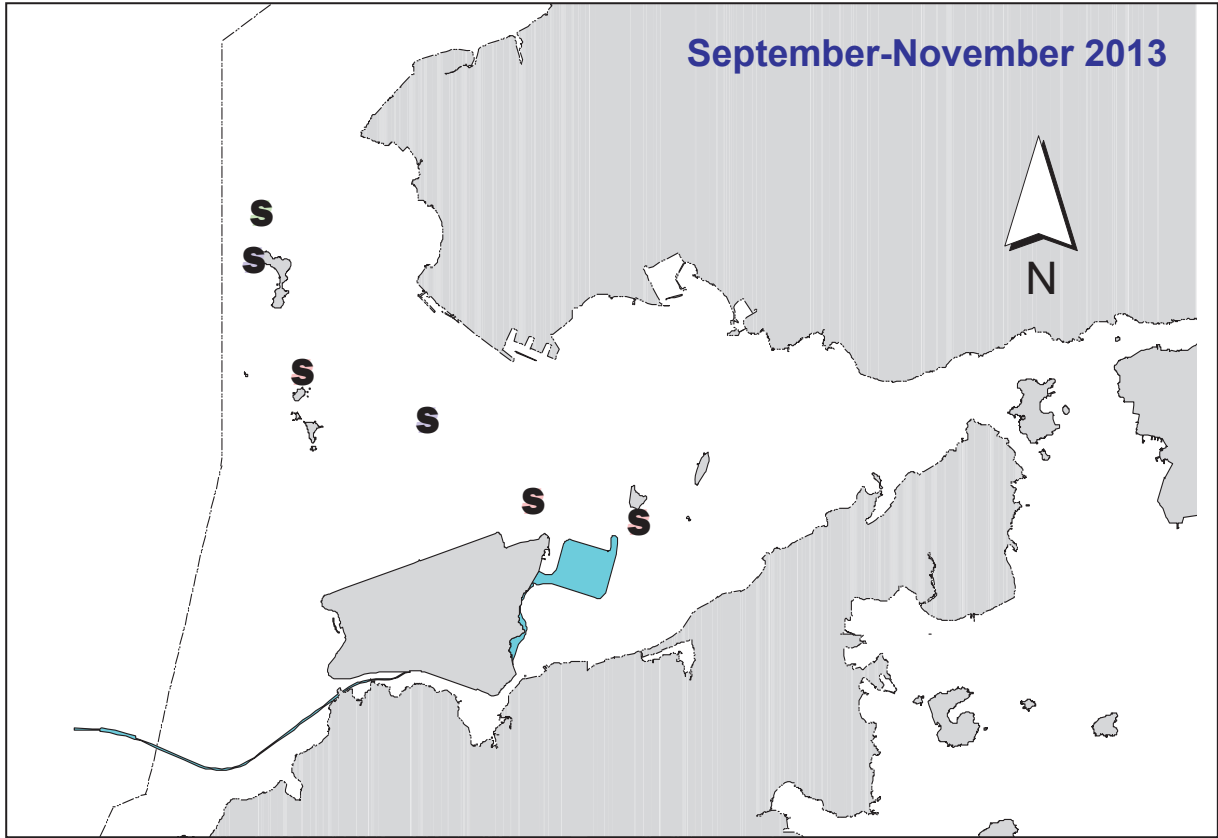


Figure 6. Distribution of Chinese white dolphins engaged in feeding (purple dots), socializing (pink dots) and traveling (green dots) activities during HKLR03 impact phase (top) and baseline monitoring surveys (bottom)

Annex I. HKLR03 Survey Effort Database (September-November 2013)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
3-Sep-13	NE LANTAU	1	4.10	AUTUMN	STANDARD31516	HKLR	P
3-Sep-13	NE LANTAU	2	13.80	AUTUMN	STANDARD31516	HKLR	P
3-Sep-13	NE LANTAU	1	4.22	AUTUMN	STANDARD31516	HKLR	S
3-Sep-13	NE LANTAU	2	5.08	AUTUMN	STANDARD31516	HKLR	S
3-Sep-13	NW LANTAU	1	1.40	AUTUMN	STANDARD31515	HKLR	P
3-Sep-13	NW LANTAU	2	35.28	AUTUMN	STANDARD31516	HKLR	P
3-Sep-13	NW LANTAU	3	4.23	AUTUMN	STANDARD31516	HKLR	P
3-Sep-13	NW LANTAU	2	11.67	AUTUMN	STANDARD31516	HKLR	S
3-Sep-13	NW LANTAU	3	1.42	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NW LANTAU	1	4.40	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NW LANTAU	2	10.05	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NW LANTAU	3	12.22	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NW LANTAU	4	4.35	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NW LANTAU	2	0.70	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NW LANTAU	3	4.07	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NW LANTAU	4	2.94	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NE LANTAU	2	7.70	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NE LANTAU	3	12.80	AUTUMN	STANDARD31516	HKLR	P
5-Sep-13	NE LANTAU	1	0.90	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NE LANTAU	2	8.60	AUTUMN	STANDARD31516	HKLR	S
5-Sep-13	NE LANTAU	3	1.00	AUTUMN	STANDARD31516	HKLR	S
10-Sep-13	NE LANTAU	1	8.82	AUTUMN	STANDARD31516	HKLR	P
10-Sep-13	NE LANTAU	2	9.18	AUTUMN	STANDARD31516	HKLR	P
10-Sep-13	NE LANTAU	1	2.19	AUTUMN	STANDARD31516	HKLR	S
10-Sep-13	NE LANTAU	2	4.30	AUTUMN	STANDARD31516	HKLR	S
10-Sep-13	NE LANTAU	3	2.11	AUTUMN	STANDARD31516	HKLR	S
10-Sep-13	NW LANTAU	1	5.52	AUTUMN	STANDARD31516	HKLR	P
10-Sep-13	NW LANTAU	2	32.26	AUTUMN	STANDARD31516	HKLR	P
10-Sep-13	NW LANTAU	3	3.40	AUTUMN	STANDARD31516	HKLR	P
10-Sep-13	NW LANTAU	1	0.32	AUTUMN	STANDARD31516	HKLR	S
10-Sep-13	NW LANTAU	2	11.97	AUTUMN	STANDARD31516	HKLR	S
18-Sep-13	NE LANTAU	3	11.11	AUTUMN	STANDARD31516	HKLR	P
18-Sep-13	NE LANTAU	4	8.60	AUTUMN	STANDARD31516	HKLR	P
18-Sep-13	NE LANTAU	2	0.97	AUTUMN	STANDARD31516	HKLR	S
18-Sep-13	NE LANTAU	3	7.52	AUTUMN	STANDARD31516	HKLR	S
18-Sep-13	NE LANTAU	4	2.00	AUTUMN	STANDARD31516	HKLR	S
18-Sep-13	NW LANTAU	2	10.48	AUTUMN	STANDARD31516	HKLR	P
18-Sep-13	NW LANTAU	3	19.93	AUTUMN	STANDARD31516	HKLR	P
18-Sep-13	NW LANTAU	4	1.34	AUTUMN	STANDARD31516	HKLR	P
18-Sep-13	NW LANTAU	2	3.81	AUTUMN	STANDARD31516	HKLR	S
18-Sep-13	NW LANTAU	3	3.49	AUTUMN	STANDARD31516	HKLR	S
8-Oct-13	NW LANTAU	2	1.46	AUTUMN	STANDARD31516	HKLR	P
8-Oct-13	NW LANTAU	3	19.09	AUTUMN	STANDARD31516	HKLR	P
8-Oct-13	NW LANTAU	4	20.08	AUTUMN	STANDARD31516	HKLR	P
8-Oct-13	NW LANTAU	3	2.90	AUTUMN	STANDARD31516	HKLR	S
8-Oct-13	NW LANTAU	4	9.37	AUTUMN	STANDARD31516	HKLR	S
8-Oct-13	NW LANTAU	5	0.90	AUTUMN	STANDARD31516	HKLR	S
8-Oct-13	NE LANTAU	2	6.60	AUTUMN	STANDARD31516	HKLR	P
8-Oct-13	NE LANTAU	3	10.67	AUTUMN	STANDARD31516	HKLR	P
8-Oct-13	NE LANTAU	2	6.46	AUTUMN	STANDARD31516	HKLR	S
8-Oct-13	NE LANTAU	3	3.87	AUTUMN	STANDARD31516	HKLR	S

Annex I. (cont'd)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
15-Oct-13	NW LANTAU	2	23.21	AUTUMN	STANDARD31516	HKLR	P
15-Oct-13	NW LANTAU	3	7.37	AUTUMN	STANDARD31516	HKLR	P
15-Oct-13	NW LANTAU	2	7.56	AUTUMN	STANDARD31516	HKLR	S
15-Oct-13	NE LANTAU	2	13.30	AUTUMN	STANDARD31516	HKLR	P
15-Oct-13	NE LANTAU	3	6.89	AUTUMN	STANDARD31516	HKLR	P
15-Oct-13	NE LANTAU	2	9.51	AUTUMN	STANDARD31516	HKLR	S
15-Oct-13	NE LANTAU	3	1.10	AUTUMN	STANDARD31516	HKLR	S
17-Oct-13	NE LANTAU	2	5.05	AUTUMN	STANDARD31516	HKLR	P
17-Oct-13	NE LANTAU	3	15.02	AUTUMN	STANDARD31516	HKLR	P
17-Oct-13	NE LANTAU	2	4.49	AUTUMN	STANDARD31516	HKLR	S
17-Oct-13	NE LANTAU	3	6.24	AUTUMN	STANDARD31516	HKLR	S
17-Oct-13	NW LANTAU	2	14.04	AUTUMN	STANDARD31516	HKLR	P
17-Oct-13	NW LANTAU	3	15.63	AUTUMN	STANDARD31516	HKLR	P
17-Oct-13	NW LANTAU	2	3.86	AUTUMN	STANDARD31516	HKLR	S
17-Oct-13	NW LANTAU	3	4.55	AUTUMN	STANDARD31516	HKLR	S
22-Oct-13	NW LANTAU	1	2.11	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NW LANTAU	2	18.78	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NW LANTAU	3	14.78	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NW LANTAU	1	2.43	AUTUMN	STANDARD31516	HKLR	S
22-Oct-13	NW LANTAU	2	2.22	AUTUMN	STANDARD31516	HKLR	S
22-Oct-13	NW LANTAU	3	6.44	AUTUMN	STANDARD31516	HKLR	S
22-Oct-13	NE LANTAU	1	0.97	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NE LANTAU	2	16.73	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NE LANTAU	3	0.26	AUTUMN	STANDARD31516	HKLR	P
22-Oct-13	NE LANTAU	2	9.78	AUTUMN	STANDARD31516	HKLR	S
22-Oct-13	NE LANTAU	3	0.31	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NW LANTAU	1	6.43	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	2	28.32	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	3	19.23	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	1	2.25	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NW LANTAU	2	5.73	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NW LANTAU	3	4.87	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NE LANTAU	2	3.67	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NE LANTAU	2	34.75	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NE LANTAU	2	10.65	AUTUMN	STANDARD31516	HKLR	S
5-Nov-13	NW LANTAU	2	13.99	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NW LANTAU	2	6.61	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	0	1.73	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	1	10.57	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	2	39.88	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	3	1.50	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	1	1.29	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	2	5.53	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	3	2.36	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NE LANTAU	1	5.70	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	2	21.79	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	3	9.60	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	2	11.71	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NE LANTAU	3	1.10	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NW LANTAU	1	1.93	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	2	5.89	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	3	6.87	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	2	4.22	AUTUMN	STANDARD31516	HKLR	S

Annex II. HKLR03 Chinese White Dolphin Sighting Database (September-November 2013)

(Abbreviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; BOAT ASSOC. = Fishing Boat Association P/S: Sighting Made on Primary/Secondary Line\$)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
3-Sep-13	1	1454	2	NW LANTAU	2	223	ON	HKLR	830628	805630	AUTUMN	NONE	S
5-Sep-13	1	1323	6	NW LANTAU	3	242	ON	HKLR	825416	809502	AUTUMN	NONE	P
10-Sep-13	1	1121	2	NE LANTAU	2	75	ON	HKLR	820812	814615	AUTUMN	NONE	P
10-Sep-13	2	1213	3	NW LANTAU	2	89	ON	HKLR	821281	812060	AUTUMN	NONE	S
18-Sep-13	1	1208	1	NW LANTAU	3	400	ON	HKLR	821271	811525	AUTUMN	NONE	P
18-Sep-13	2	1356	5	NW LANTAU	2	87	ON	HKLR	828132	807540	AUTUMN	NONE	P
18-Sep-13	3	1417	3	NW LANTAU	2	120	ON	HKLR	829251	807491	AUTUMN	NONE	P
15-Oct-13	1	1019	2	NW LANTAU	2	163	ON	HKLR	817184	805458	AUTUMN	NONE	P
15-Oct-13	2	1126	5	NW LANTAU	2	336	ON	HKLR	827871	805470	AUTUMN	NONE	P
17-Oct-13	1	1413	7	NW LANTAU	2	115	ON	HKLR	828321	807520	AUTUMN	NONE	P
17-Oct-13	2	1440	2	NW LANTAU	3	125	ON	HKLR	829573	806935	AUTUMN	NONE	S
17-Oct-13	3	1514	1	NW LANTAU	2	238	ON	HKLR	827804	805449	AUTUMN	NONE	P
17-Oct-13	4	1529	5	NW LANTAU	2	0	ON	HKLR	826819	805303	AUTUMN	NONE	S
22-Oct-13	1	943	8	NW LANTAU	3	1847	ON	HKLR	823278	809550	AUTUMN	NONE	S
22-Oct-13	2	1036	6	NW LANTAU	3	530	ON	HKLR	827755	808013	AUTUMN	NONE	S
22-Oct-13	3	1122	2	NW LANTAU	2	142	ON	HKLR	825440	808493	AUTUMN	NONE	P
22-Oct-13	4	1226	2	NW LANTAU	3	53	ON	HKLR	823661	806141	AUTUMN	NONE	S
22-Oct-13	5	1233	5	NW LANTAU	2	0	ON	HKLR	824236	806472	AUTUMN	NONE	S
22-Oct-13	6	1244	3	NW LANTAU	2	48	ON	HKLR	825632	806464	AUTUMN	GILLNET	P
22-Oct-13	7	1255	2	NW LANTAU	2	18	ON	HKLR	826540	806476	AUTUMN	NONE	P
22-Oct-13	8	1305	2	NW LANTAU	2	155	ON	HKLR	827547	806458	AUTUMN	NONE	P
22-Oct-13	9	1313	2	NW LANTAU	1	295	ON	HKLR	828179	806480	AUTUMN	NONE	P
22-Oct-13	10	1413	3	NW LANTAU	3	231	ON	HKLR	822302	804655	AUTUMN	NONE	P
22-Oct-13	11	1600	6	NE LANTAU	3	128	ON	HKLR	822285	814576	AUTUMN	NONE	P
1-Nov-13	1	1049	4	NW LANTAU	2	74	ON	HKLR	823145	809509	AUTUMN	NONE	P
1-Nov-13	2	1152	3	NW LANTAU	3	214	ON	HKLR	826947	807517	AUTUMN	NONE	P
1-Nov-13	3	1203	7	NW LANTAU	3	159	ON	HKLR	827235	807539	AUTUMN	NONE	P
1-Nov-13	4	1225	1	NW LANTAU	2	137	ON	HKLR	827490	807539	AUTUMN	NONE	P
1-Nov-13	5	1236	3	NW LANTAU	2	358	ON	HKLR	828232	807530	AUTUMN	NONE	P
1-Nov-13	6	1252	7	NW LANTAU	2	ND	OFF	HKLR	828941	807583	AUTUMN	NONE	N/A
1-Nov-13	7	1312	4	NW LANTAU	2	72	ON	HKLR	830018	805999	AUTUMN	NONE	S
1-Nov-13	8	1458	11	NW LANTAU	3	60	ON	HKLR	821228	804642	AUTUMN	NONE	P

Annex II. (cont'd)

(Abbreviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; BOAT ASSOC. = Fishing Boat Association P/S: Sighting Made on Primary/Secondary Line\$

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
5-Nov-13	1	1421	5	NW LANTAU	2	378	ON	HKLR	828097	808508	AUTUMN	NONE	P
8-Nov-13	1	1041	4	NW LANTAU	1	302	ON	HKLR	824489	807678	AUTUMN	NONE	P
8-Nov-13	2	1103	8	NW LANTAU	2	694	ON	HKLR	827091	807858	AUTUMN	NONE	P
8-Nov-13	3	1152	7	NW LANTAU	3	299	ON	HKLR	827660	805459	AUTUMN	NONE	P
8-Nov-13	4	1215	9	NW LANTAU	2	756	ON	HKLR	825357	805465	AUTUMN	NONE	P
8-Nov-13	5	1232	5	NW LANTAU	2	ND	OFF	HKLR	825025	805464	AUTUMN	NONE	N/A
8-Nov-13	6	1249	4	NW LANTAU	2	7	ON	HKLR	823806	805462	AUTUMN	NONE	P
8-Nov-13	7	1400	2	NW LANTAU	2	155	ON	HKLR	818382	804657	AUTUMN	NONE	P
8-Nov-13	8	1426	8	NW LANTAU	2	149	ON	HKLR	823675	804648	AUTUMN	NONE	P
8-Nov-13	9	1526	1	NW LANTAU	2	45	ON	HKLR	826872	806446	AUTUMN	NONE	P
8-Nov-13	10	1536	4	NW LANTAU	1	225	ON	HKLR	825643	806454	AUTUMN	NONE	P
8-Nov-13	11	1606	4	NW LANTAU	2	223	ON	HKLR	821988	806457	AUTUMN	NONE	P
13-Nov-13	1	1451	1	NW LANTAU	3	343	ON	HKLR	825118	808482	AUTUMN	NONE	P

Annex III. Individual dolphins identified during HKLR03 monitoring surveys in September-November 2013

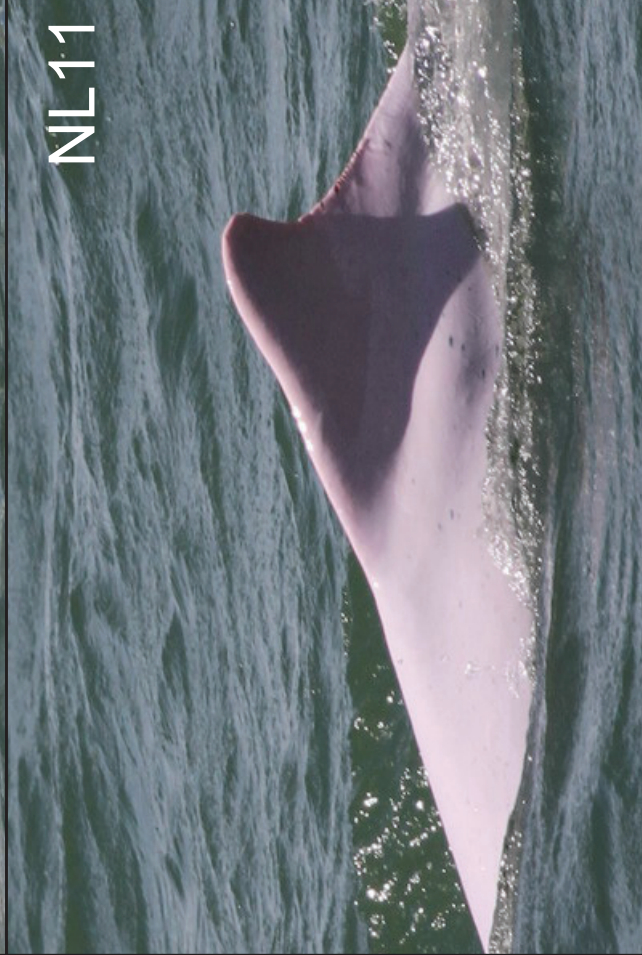
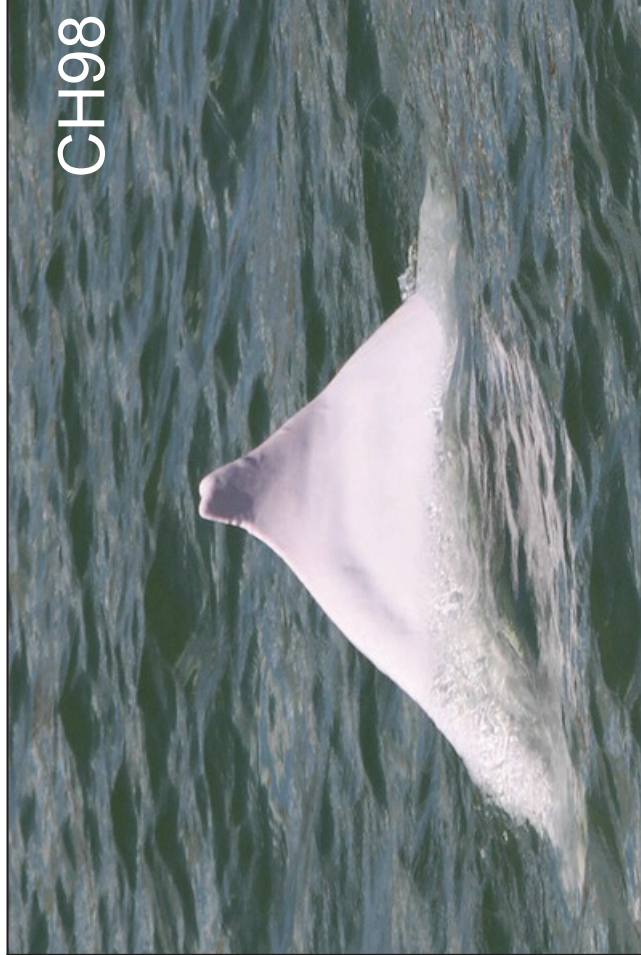
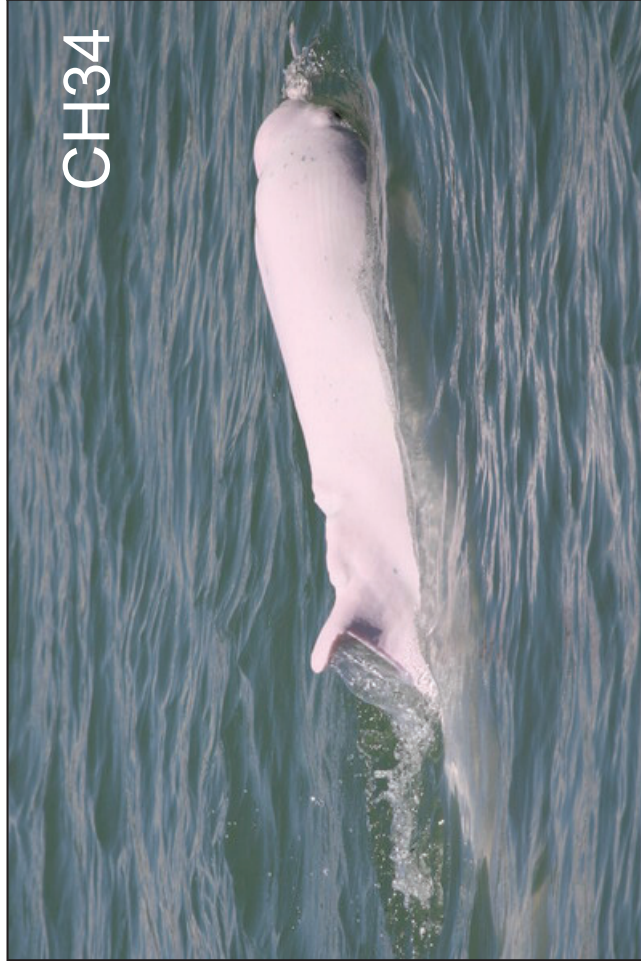
ID#	DATE	STG#	AREA
CH34	18/09/13	2	NW LANTAU
	05/11/13	1	NW LANTAU
	08/11/13	4	NW LANTAU
	08/11/13	5	NW LANTAU
CH98	17/10/13	1	NW LANTAU
	17/10/13	3	NW LANTAU
EL01	10/09/13	1	NE LANTAU
	10/09/13	2	NW LANTAU
	05/11/13	1	NW LANTAU
NL11	22/10/13	2	NW LANTAU
NL24	22/10/13	1	NW LANTAU
	08/11/13	4	NW LANTAU
	08/11/13	5	NW LANTAU
NL33	05/11/13	1	NW LANTAU
	08/11/13	4	NW LANTAU
	08/11/13	5	NW LANTAU
	08/11/13	11	NW LANTAU
NL37	08/11/13	2	NW LANTAU
NL46	22/10/13	8	NW LANTAU
	01/11/13	3	NW LANTAU
NL48	08/11/13	9	NW LANTAU
NL49	22/10/13	5	NW LANTAU
	08/11/13	2	NW LANTAU
NL80	01/11/13	3	NW LANTAU
	01/11/13	6	NW LANTAU
	08/11/13	6	NW LANTAU
NL93	01/11/13	8	NW LANTAU
NL98	22/10/13	1	NW LANTAU
	22/10/13	4	NW LANTAU
	22/10/13	11	NE LANTAU
	01/11/13	2	NW LANTAU
NL103	17/10/13	1	NW LANTAU
	08/11/13	3	NW LANTAU
NL105	18/09/13	2	NW LANTAU
NL123	22/10/13	11	NE LANTAU
	08/11/13	11	NW LANTAU
NL136	01/11/13	8	NW LANTAU
NL139	01/11/13	8	NW LANTAU
	08/11/13	1	NW LANTAU
NL145	22/10/13	2	NW LANTAU
	01/11/13	3	NW LANTAU

ID#	DATE	STG#	AREA
NL150	22/10/13	2	NW LANTAU
	08/11/13	3	NW LANTAU
NL165	22/10/13	5	NW LANTAU
	01/11/13	8	NW LANTAU
NL182	08/11/13	1	NW LANTAU
	17/10/13	1	NW LANTAU
NL188	22/10/13	3	NW LANTAU
	01/11/13	6	NW LANTAU
	05/09/13	1	NW LANTAU
NL191	22/10/13	10	NW LANTAU
	08/11/13	8	NW LANTAU
	10/09/13	1	NE LANTAU
NL212	10/09/13	2	NW LANTAU
	08/11/13	3	NW LANTAU
NL213	08/11/13	3	NW LANTAU
	15/10/13	2	NW LANTAU
NL214	22/10/13	7	NW LANTAU
	17/10/13	4	NW LANTAU
NL220	17/10/13	4	NW LANTAU
	05/09/13	1	NW LANTAU
	17/10/13	1	NW LANTAU
	22/10/13	1	NW LANTAU
	22/10/13	4	NW LANTAU
NL221	22/10/13	11	NE LANTAU
	15/10/13	2	NW LANTAU
	17/10/13	1	NW LANTAU
NL226	17/10/13	4	NW LANTAU
	01/11/13	1	NW LANTAU
	18/09/13	3	NW LANTAU
NL236	01/11/13	7	NW LANTAU
	08/11/13	2	NW LANTAU
	18/09/13	2	NW LANTAU
NL242	08/11/13	4	NW LANTAU
	08/11/13	5	NW LANTAU
	08/11/13	5	NW LANTAU
NL244	10/09/13	2	NW LANTAU
NL259	01/11/13	8	NW LANTAU
NL261	01/11/13	1	NW LANTAU
	08/11/13	1	NW LANTAU
	08/11/13	10	NW LANTAU
NL262	01/11/13	8	NW LANTAU
NL264	05/09/13	1	NW LANTAU
NL269	01/11/13	8	NW LANTAU

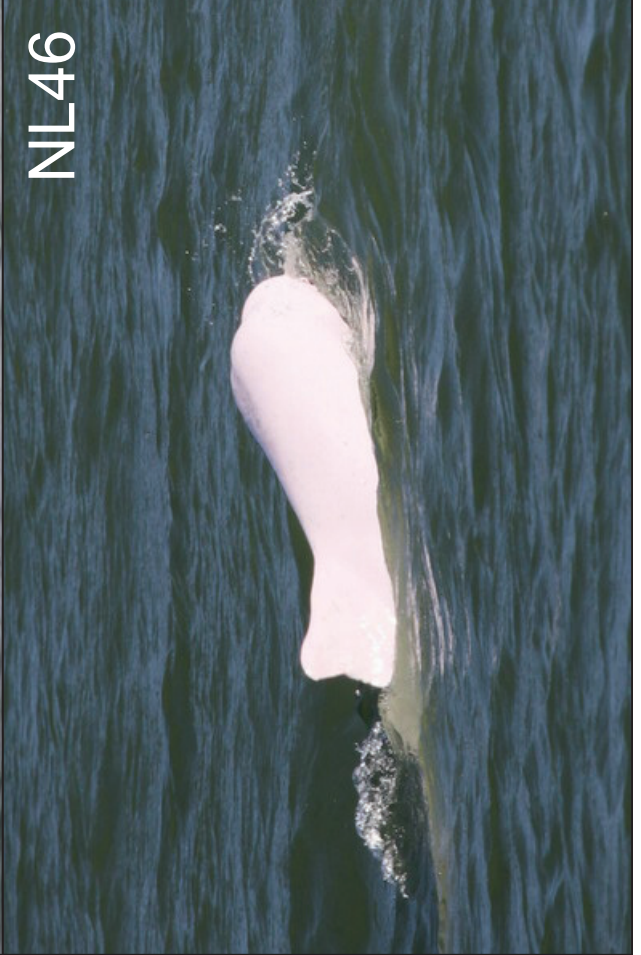
Annex III. (cont'd)

ID#	DATE	STG#	AREA
NL272	01/11/13	1	NW LANTAU
	08/11/13	4	NW LANTAU
NL284	01/11/13	1	NW LANTAU
NL285	22/10/13	11	NE LANTAU
	08/11/13	11	NW LANTAU
NL287	22/10/13	2	NW LANTAU
NL288	05/09/13	1	NW LANTAU
NL295	22/10/13	6	NW LANTAU
	22/10/13	11	NE LANTAU
NL296	22/10/13	6	NW LANTAU
	22/10/13	11	NE LANTAU
	05/11/13	1	NW LANTAU
NL300	08/11/13	6	NW LANTAU
NL301	01/11/13	4	NW LANTAU
	01/11/13	6	NW LANTAU
SL35	08/11/13	10	NW LANTAU
WL04	01/11/13	8	NW LANTAU
WL05	05/09/13	1	NW LANTAU
	18/09/13	2	NW LANTAU
	22/10/13	5	NW LANTAU
	01/11/13	8	NW LANTAU
WL11	05/09/13	1	NW LANTAU
	08/11/13	2	NW LANTAU
WL15	08/11/13	10	NW LANTAU
WL46	17/10/13	1	NW LANTAU
WL79	08/11/13	4	NW LANTAU
WL98	08/11/13	4	NW LANTAU
WL124	15/10/13	2	NW LANTAU
	08/11/13	8	NW LANTAU

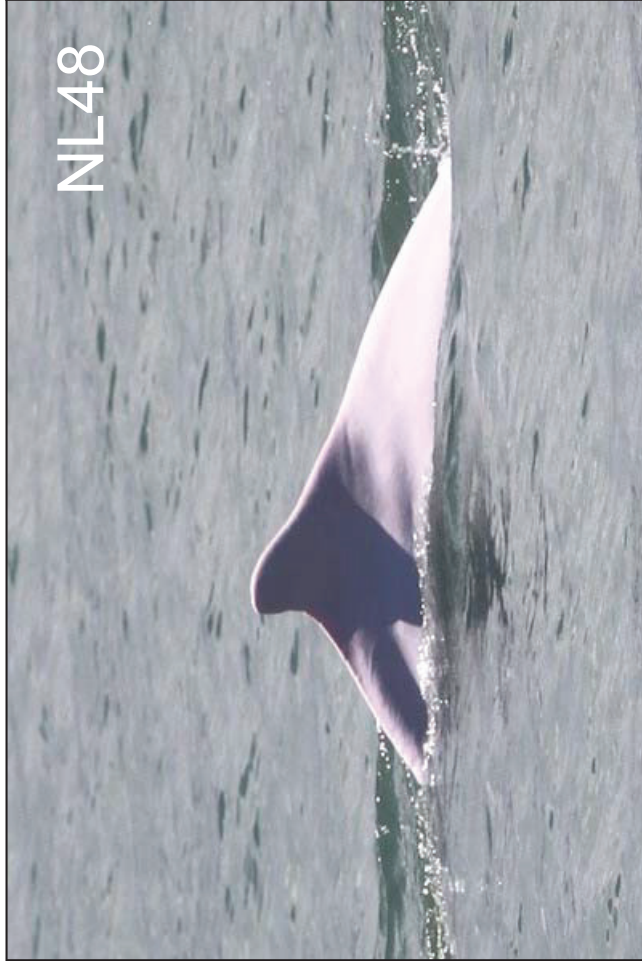
Annex IV. Fifty-six individual dolphins that were identified during September-November 2013 under HKLR03 impact phase monitoring surveys



Annex IV. (cont'd)



Annex IV. (cont'd)



Annex IV. (cont'd)



NL98



NL103



NL105



NL123

Annex IV. (cont'd)



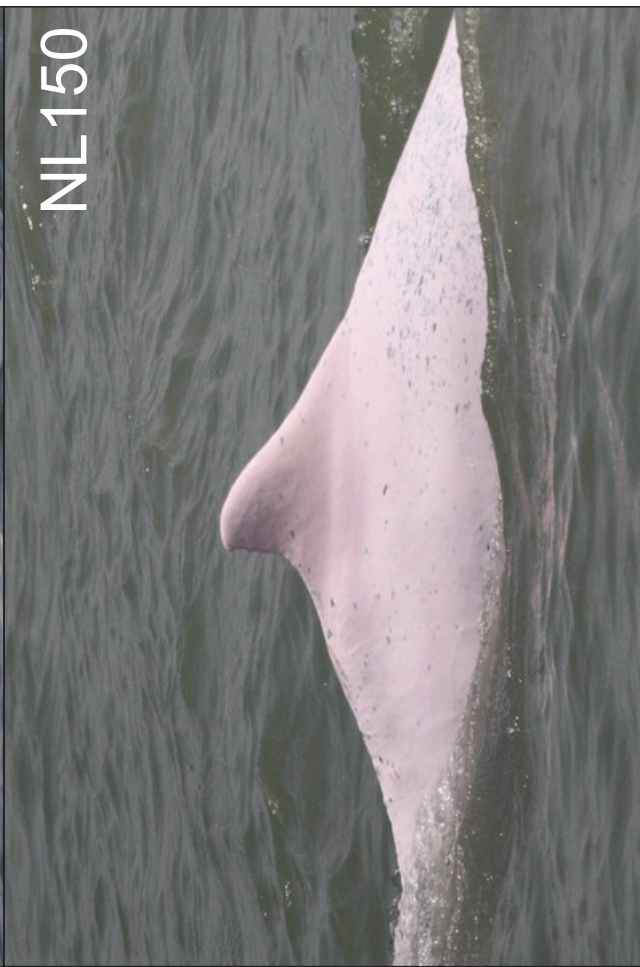
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NL139



NL145

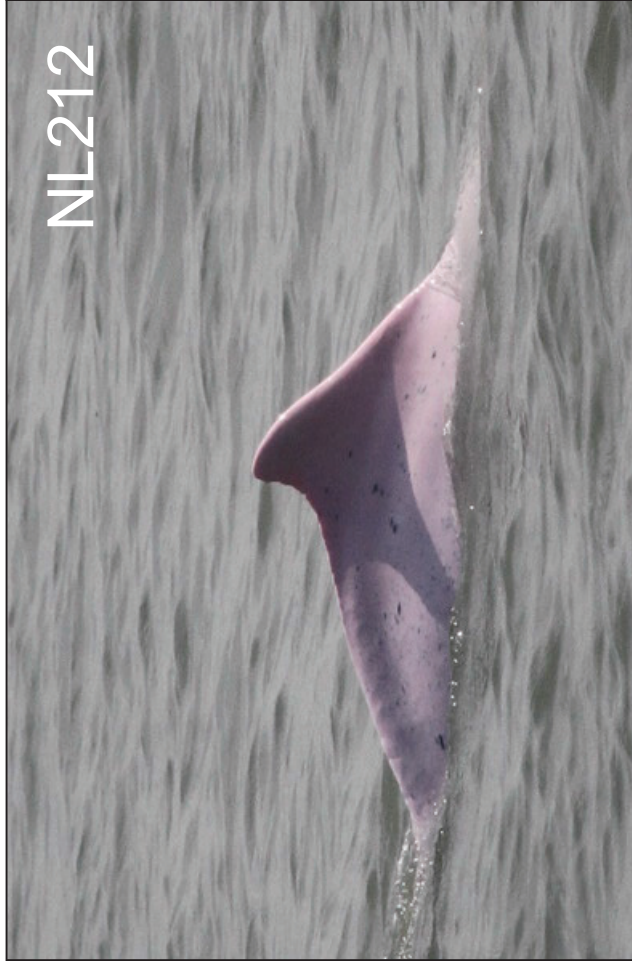


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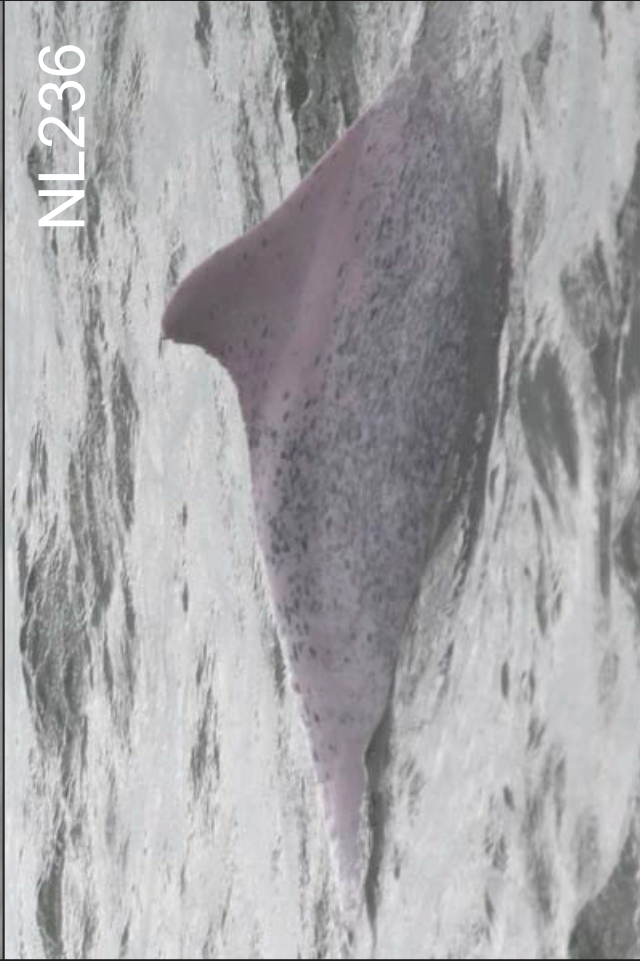
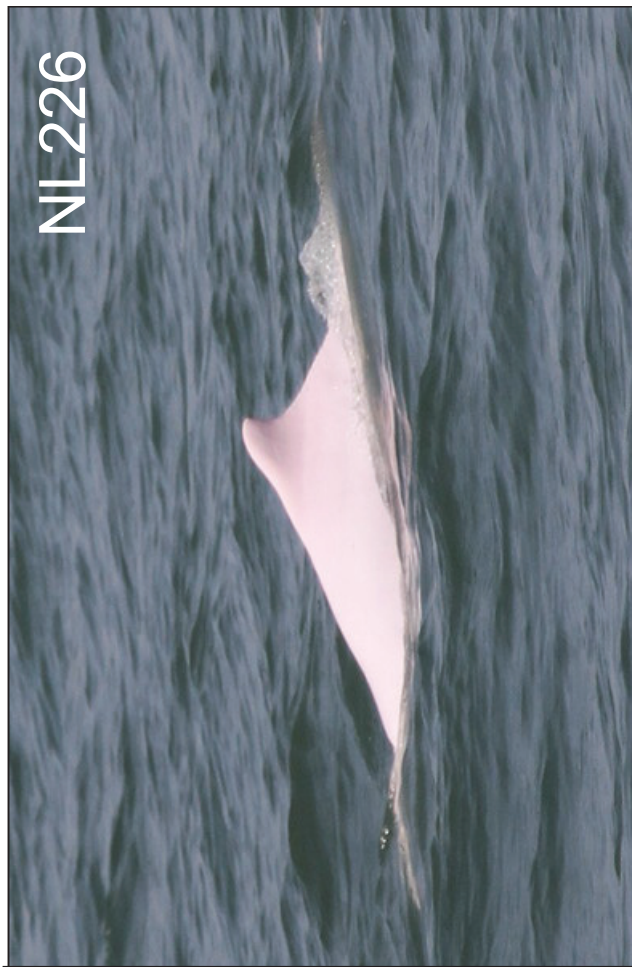
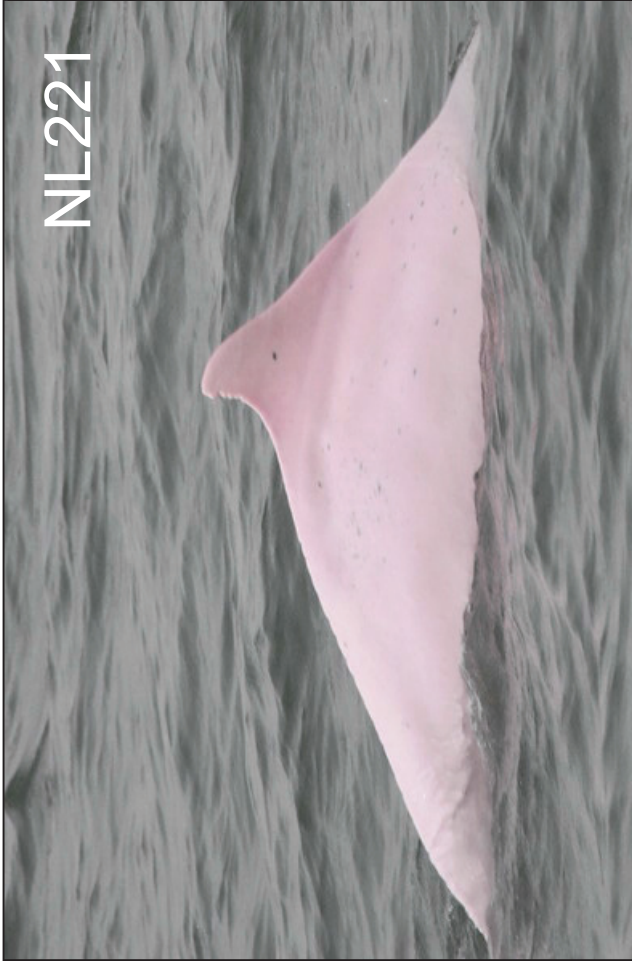
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Annex IV. (cont'd)



Annex IV. (cont'd)



Annex IV. (cont'd)



NL244



NL259

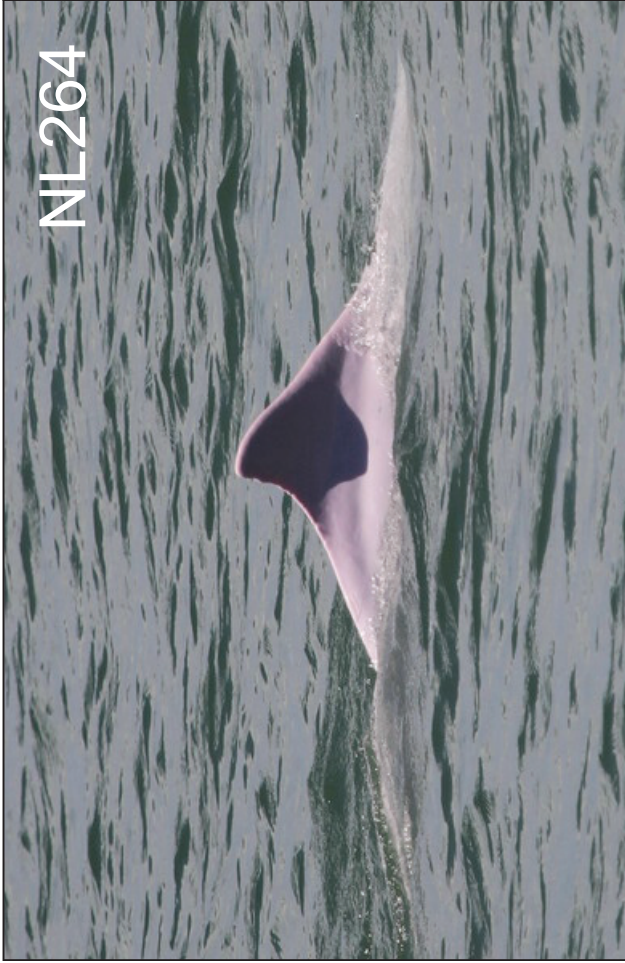


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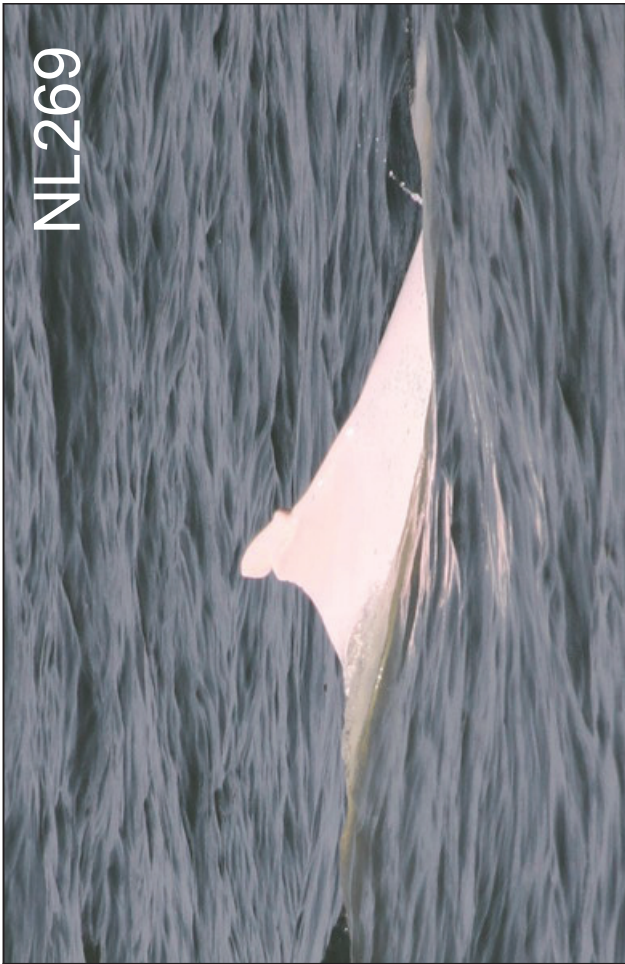


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Annex IV. (cont'd)



NL264



NL269

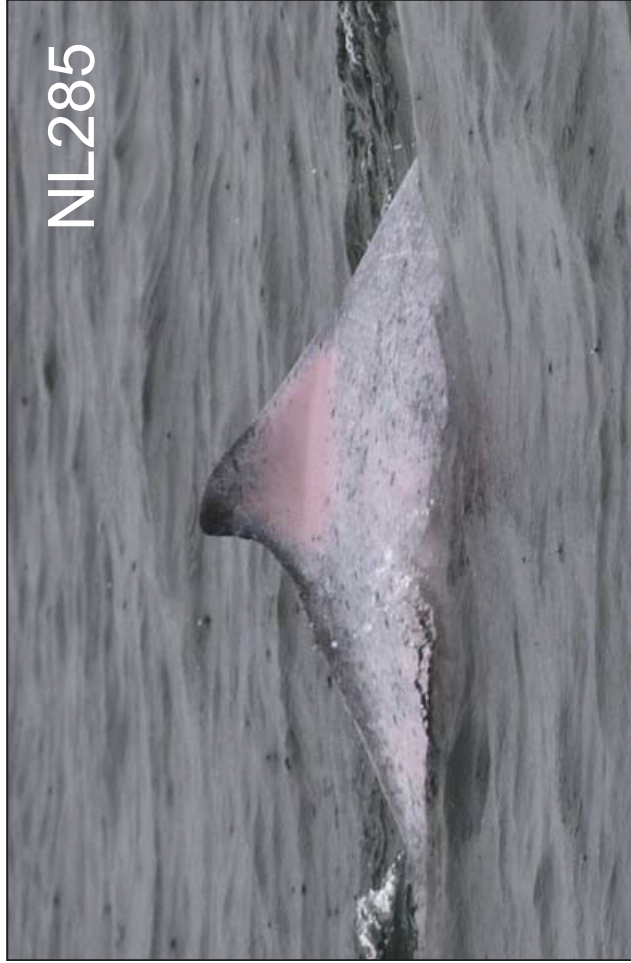


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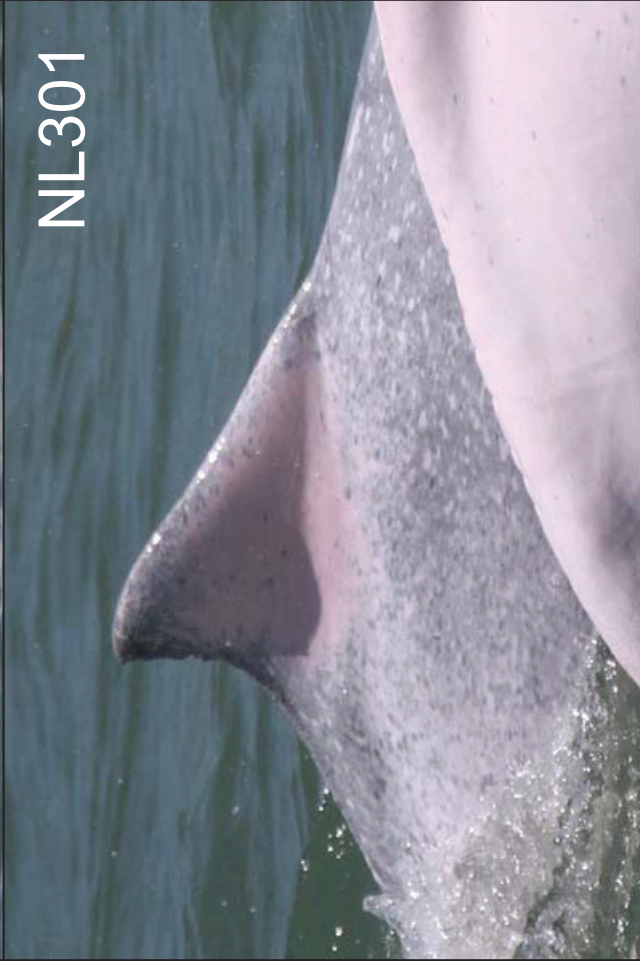


NL284

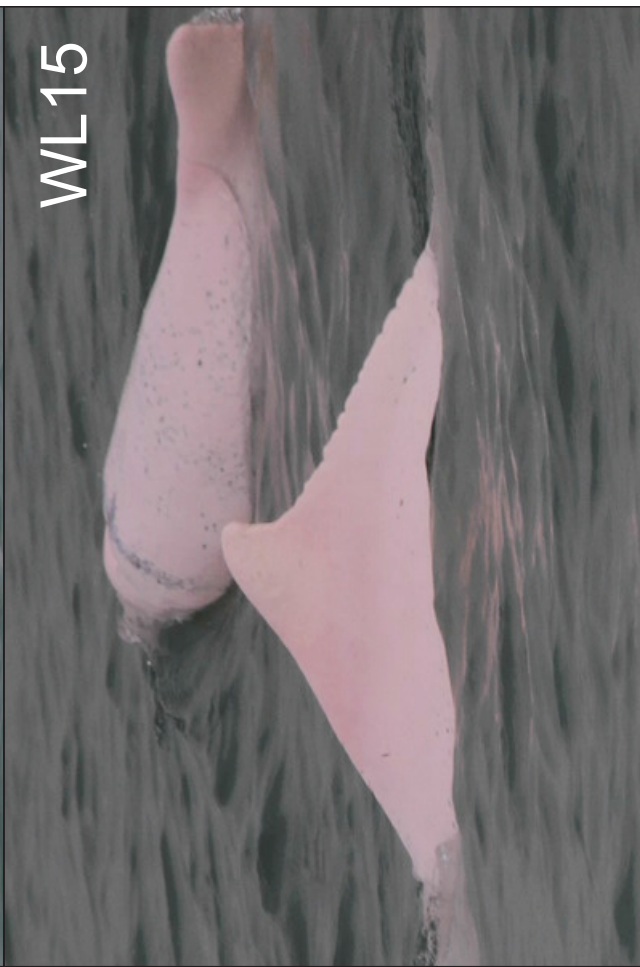
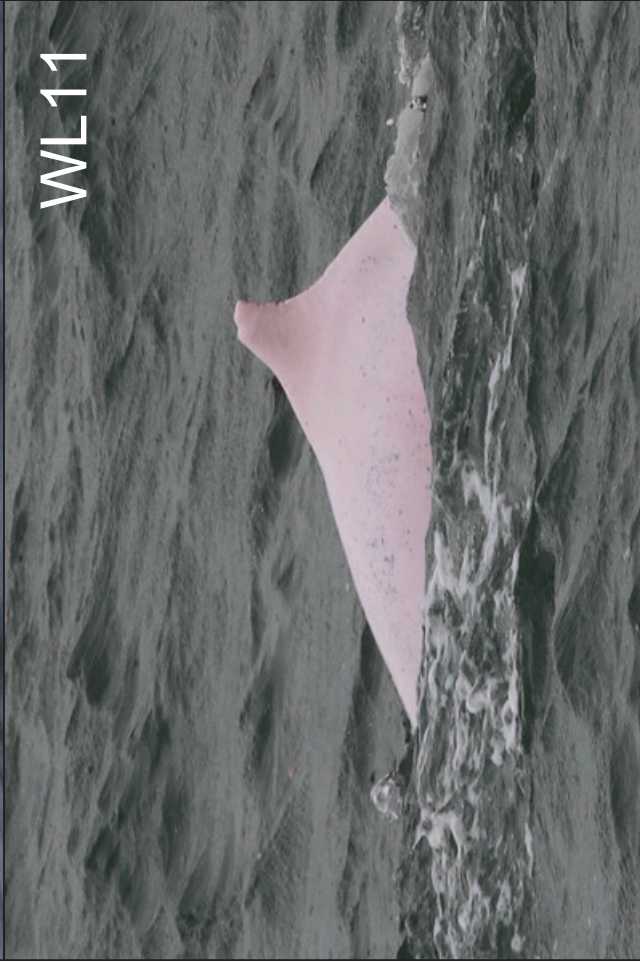
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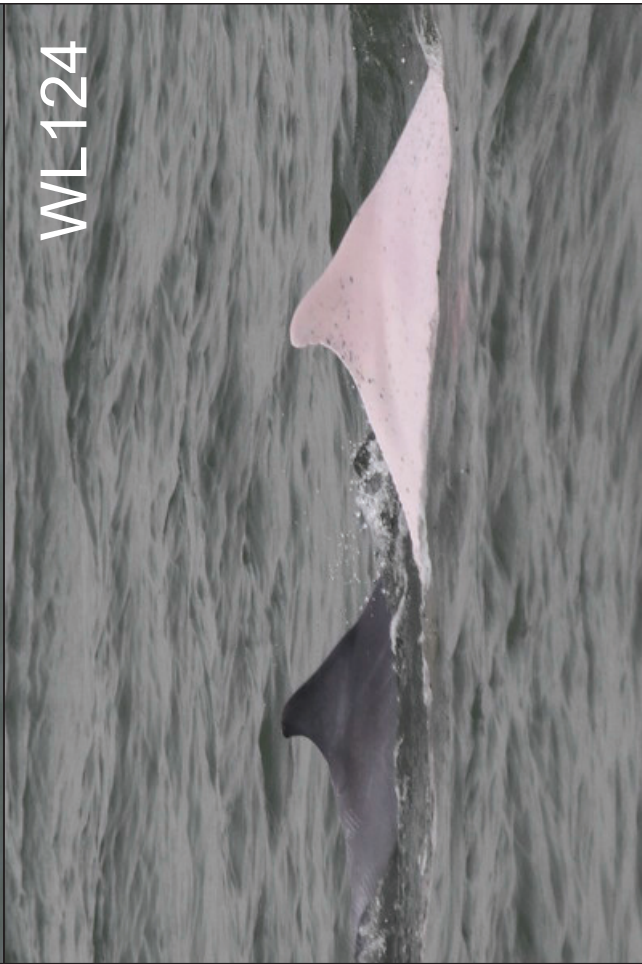
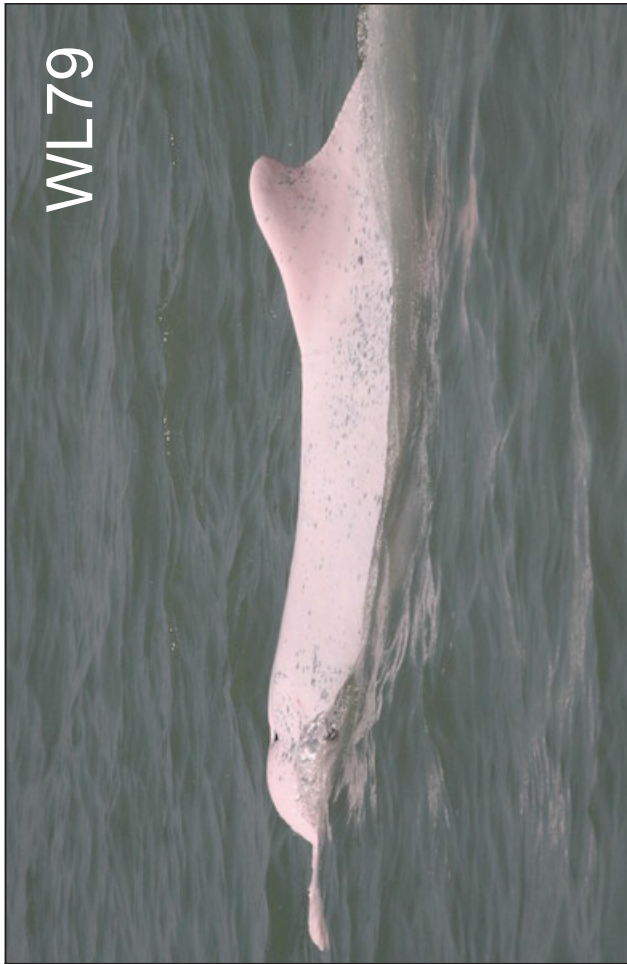
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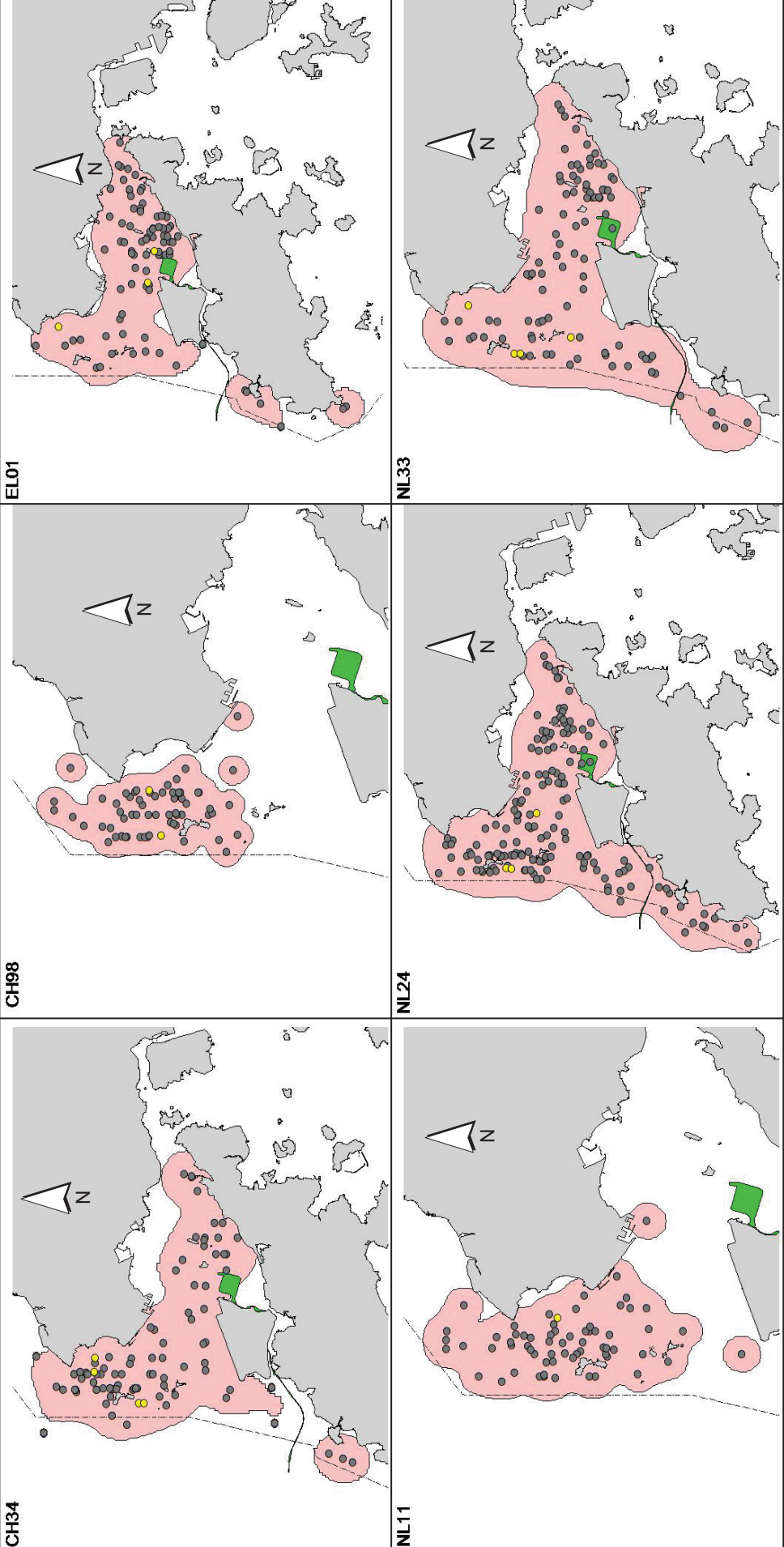
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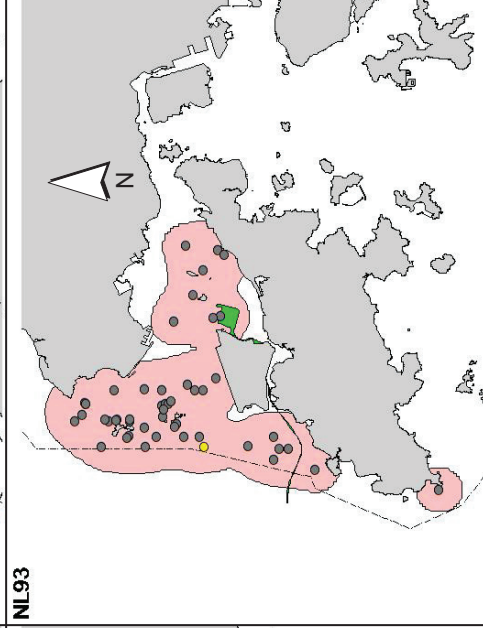
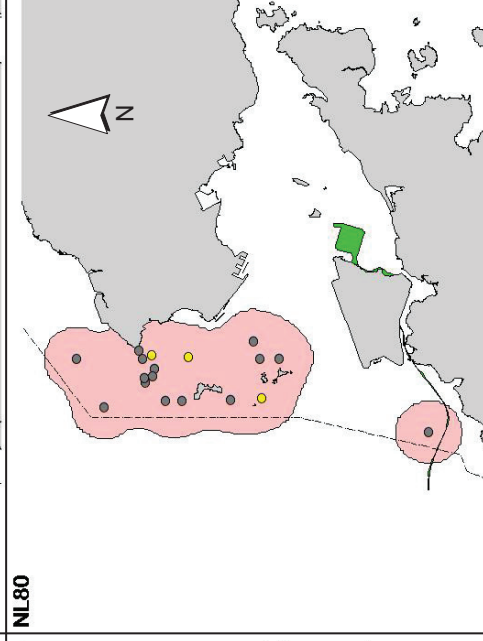
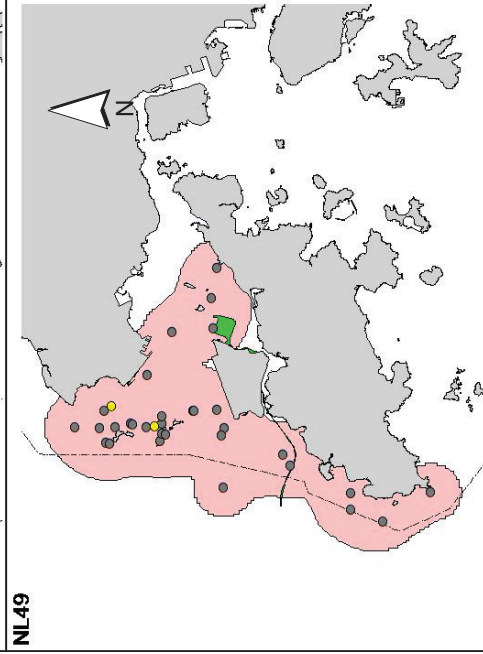
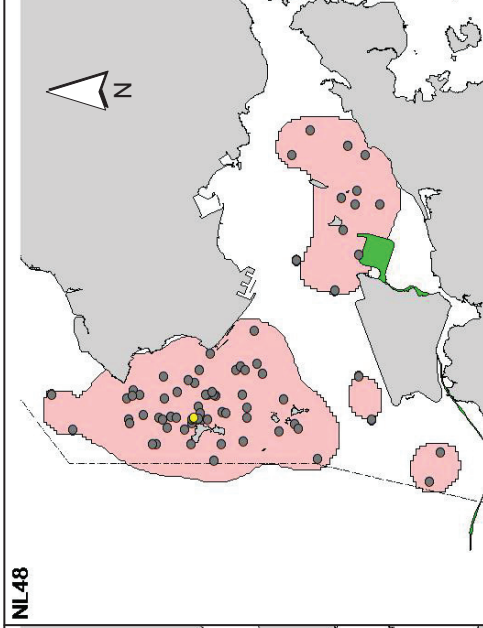
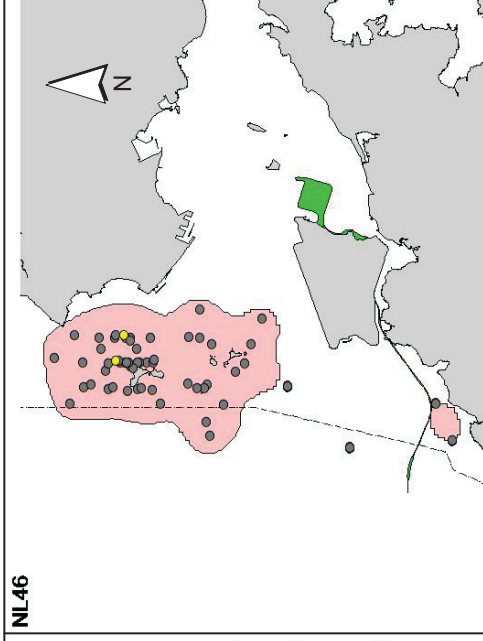
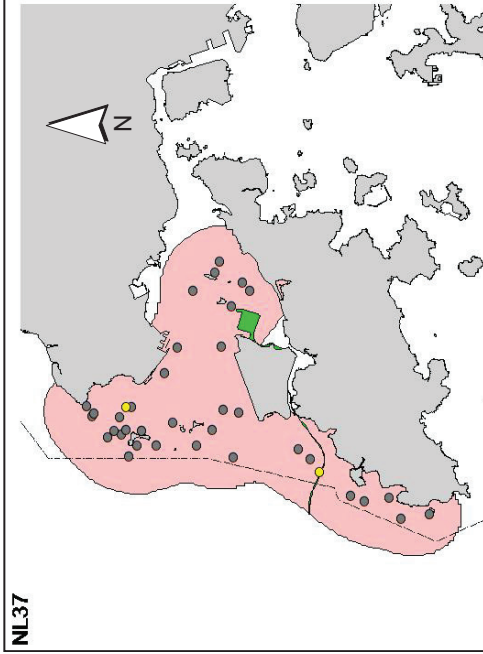
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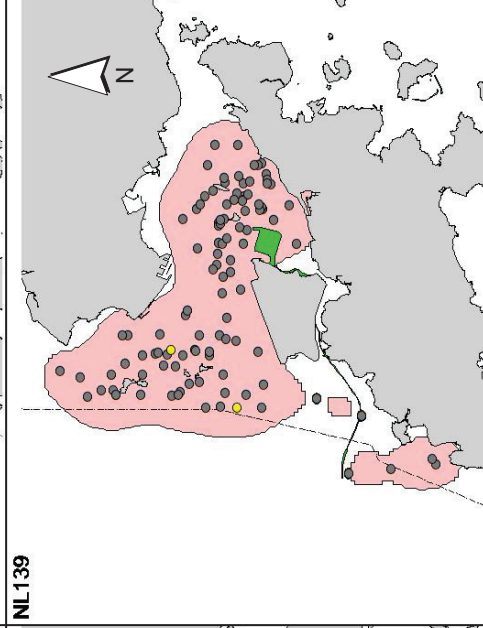
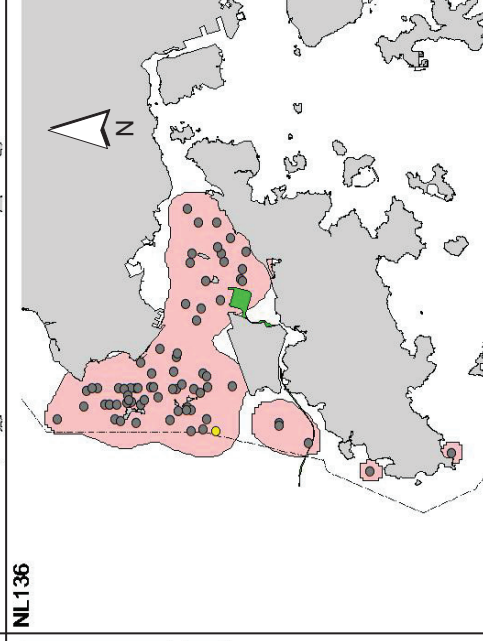
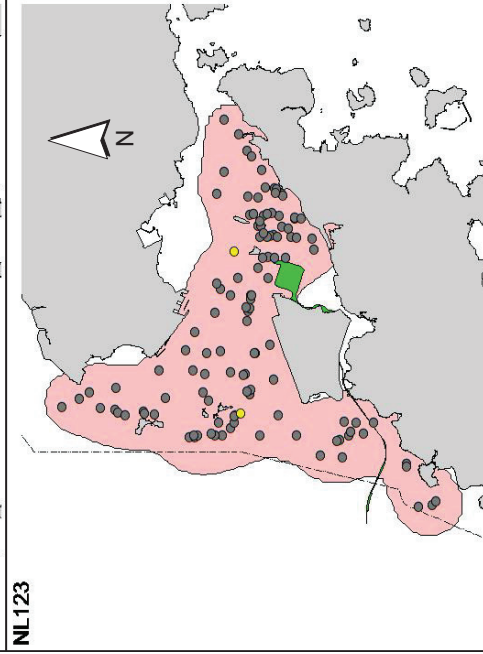
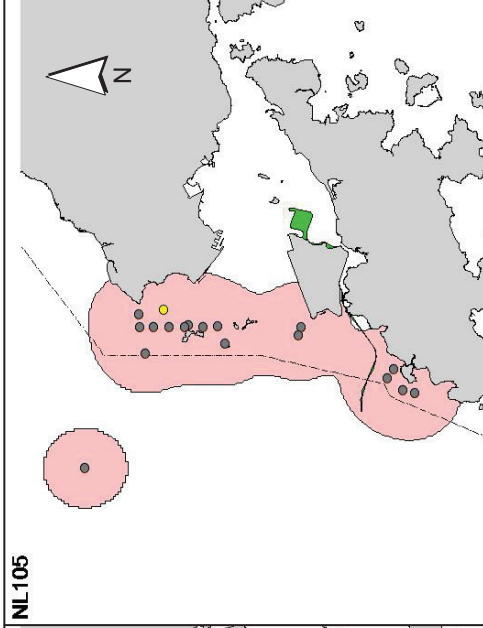
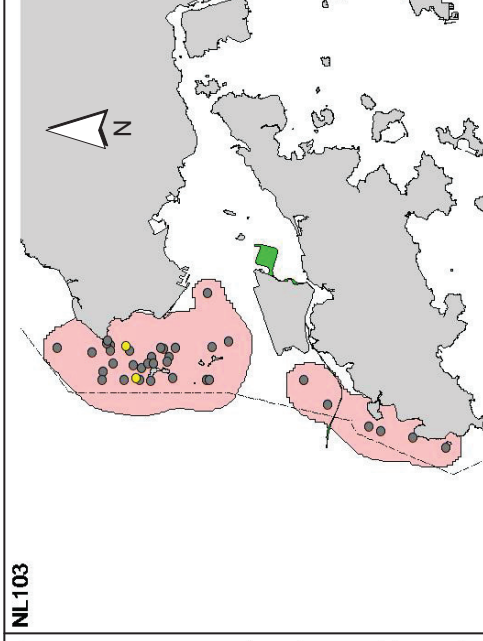
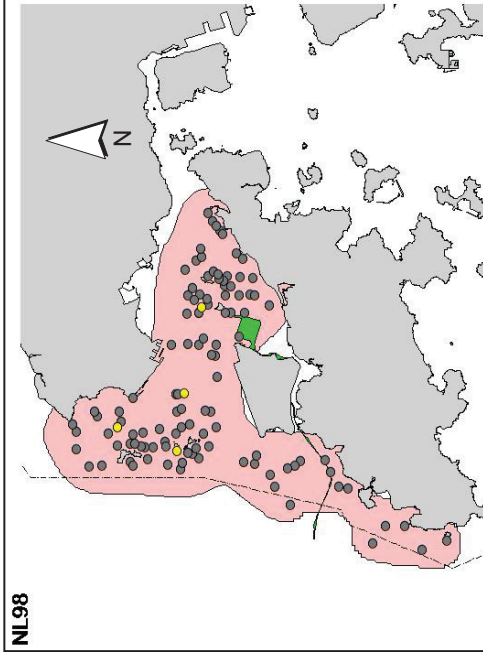
Annex V. Ranging patterns (95% kernel ranges) of 56 individual dolphins that were sighted during HKLR03 impact phase monitoring period (note: yellow dots indicates sightings made in September – November 2013)



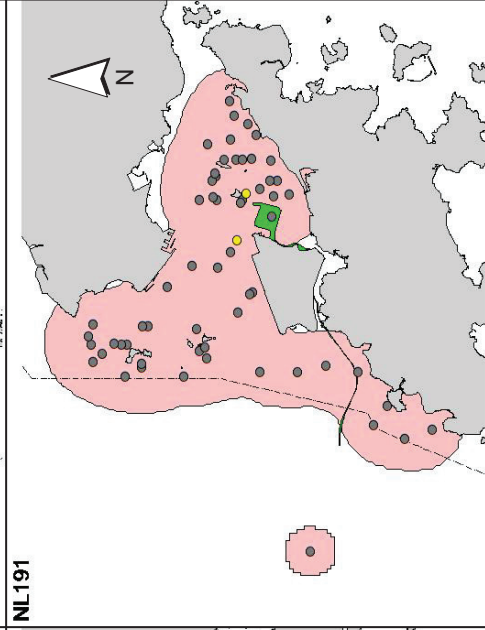
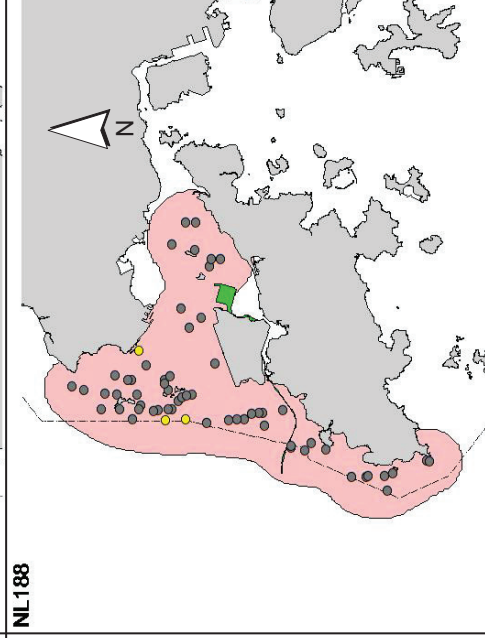
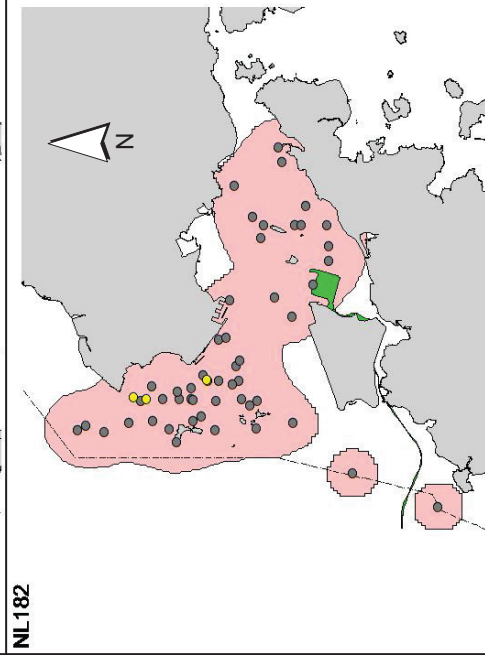
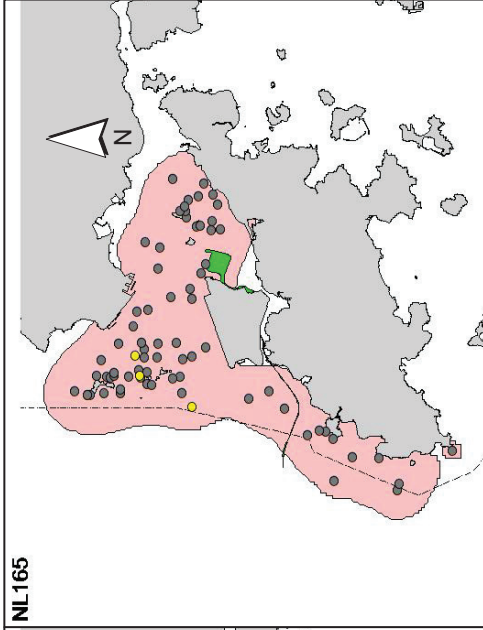
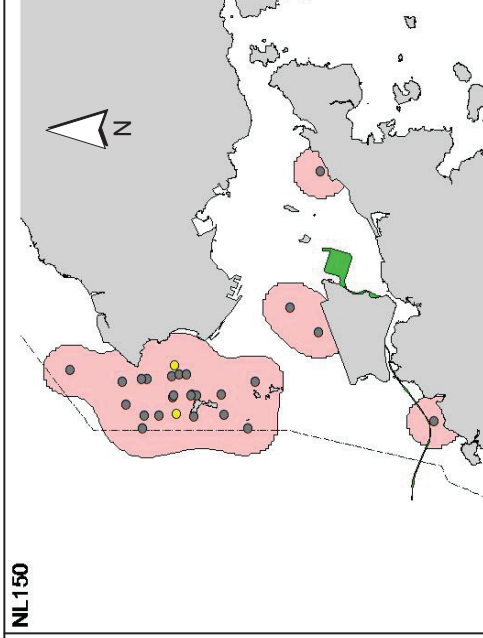
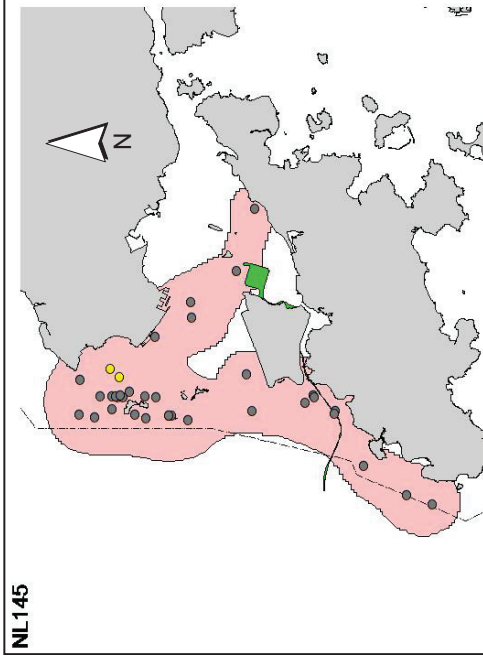
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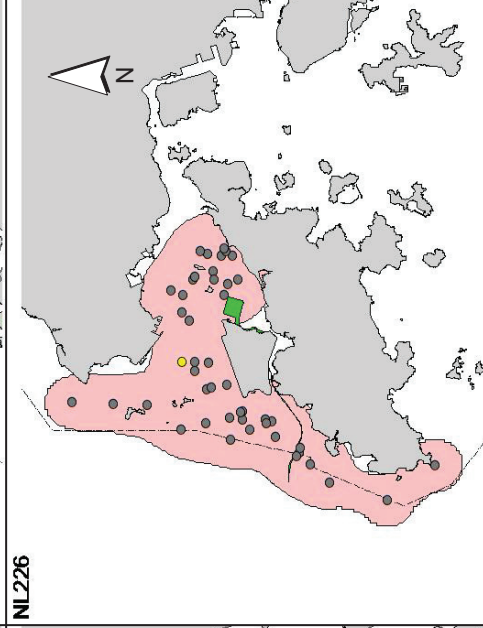
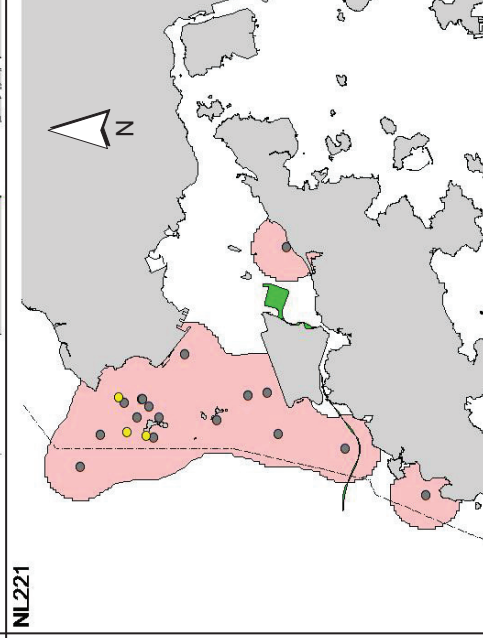
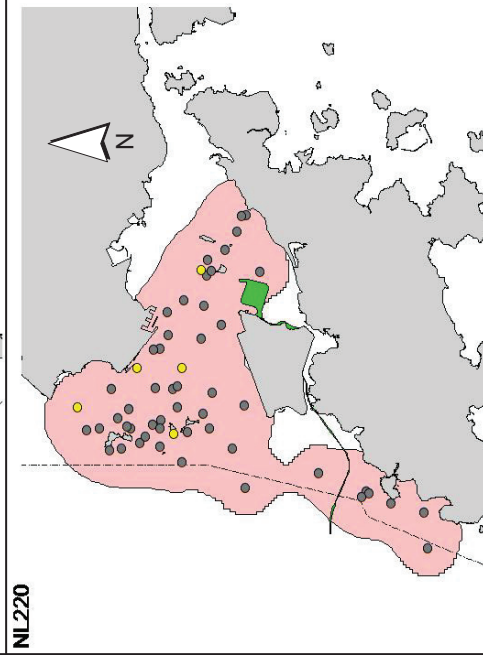
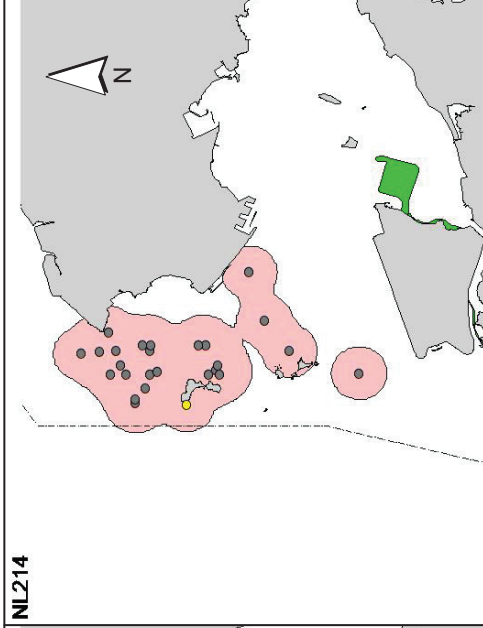
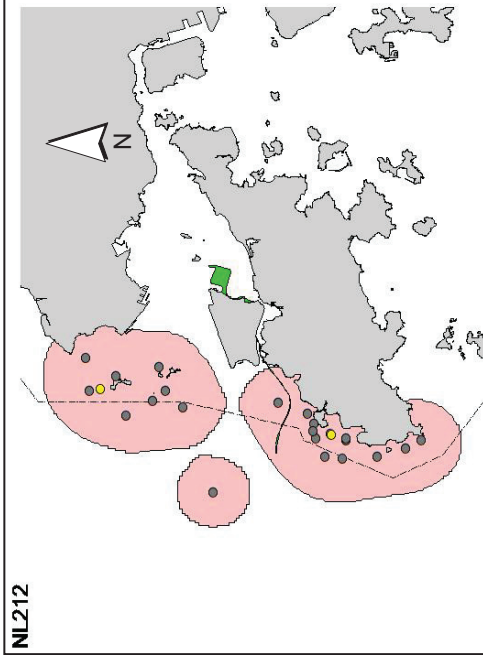
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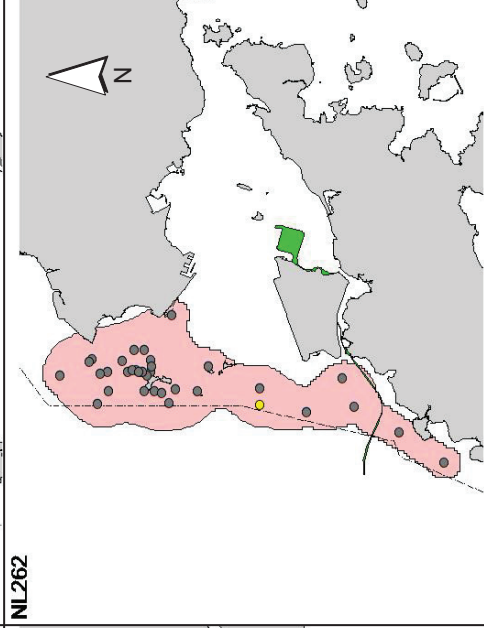
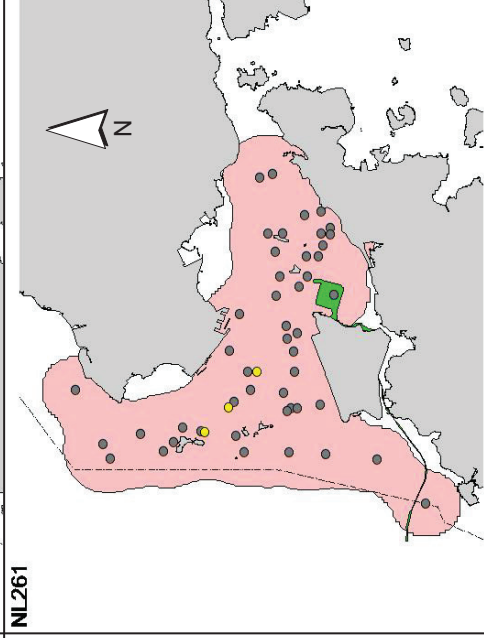
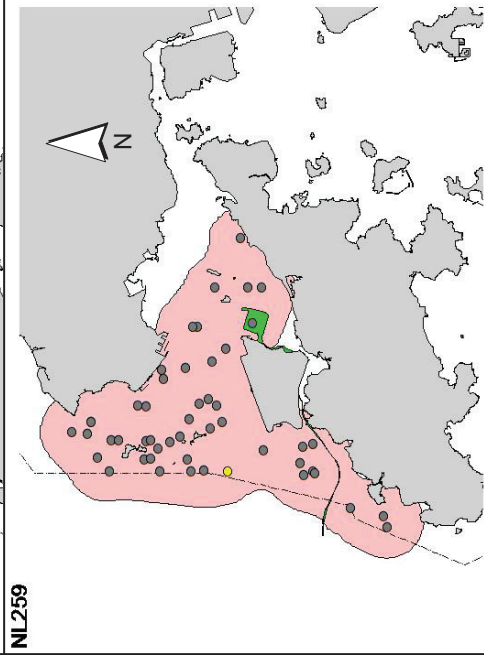
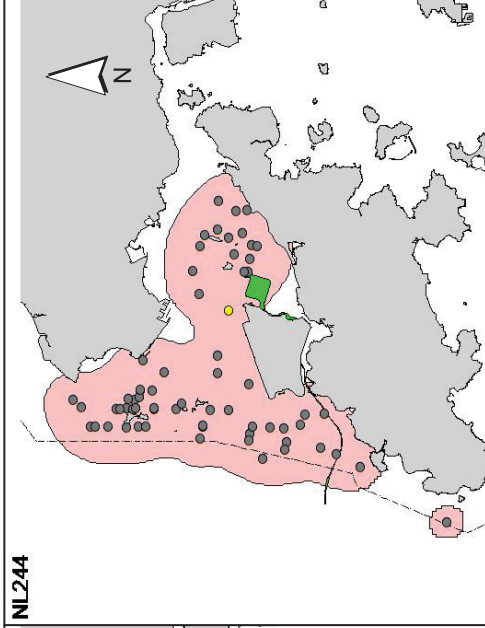
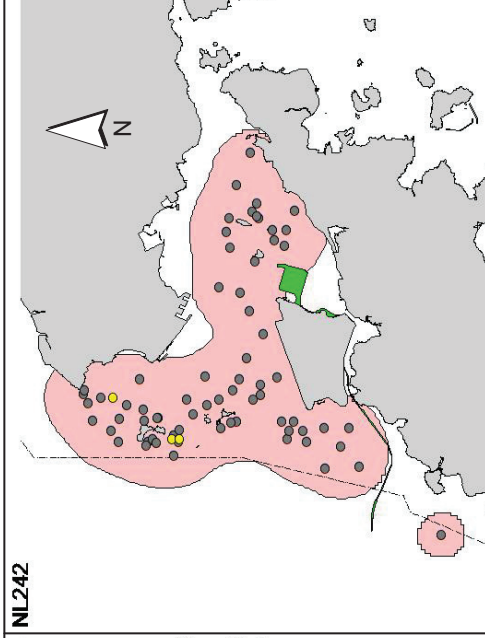
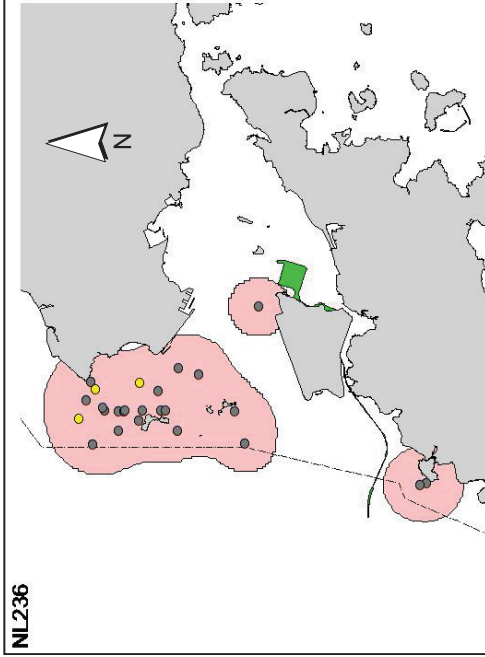
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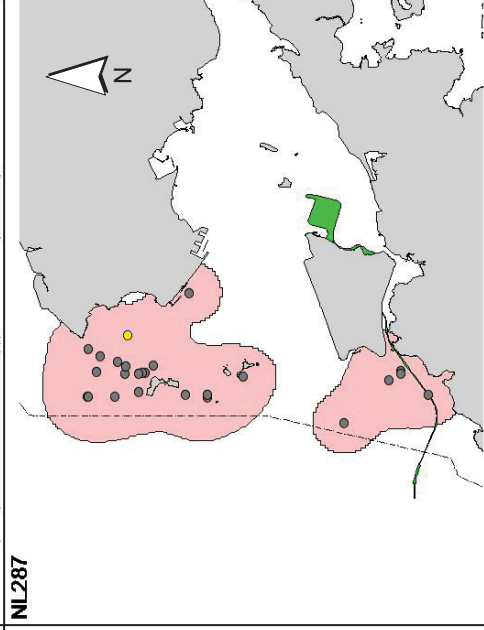
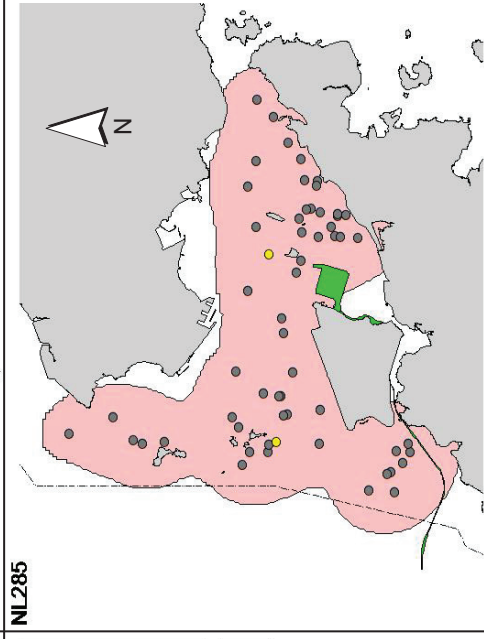
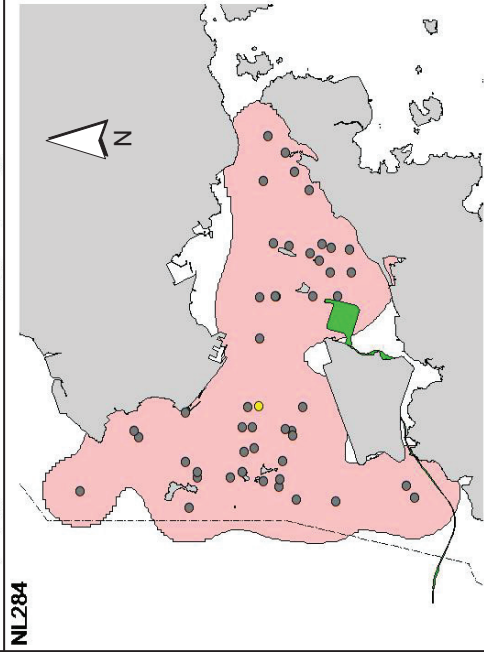
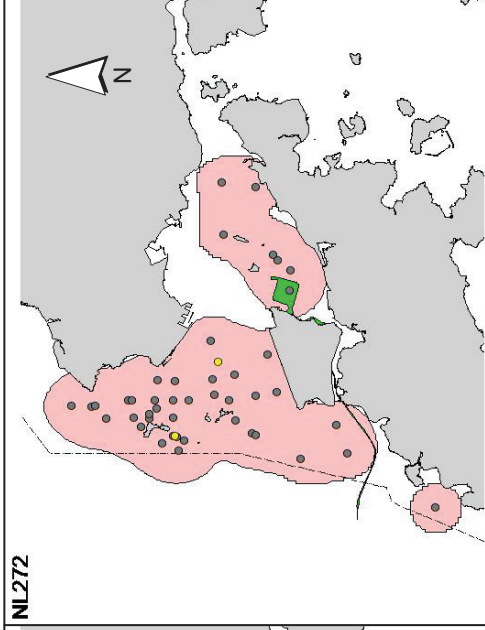
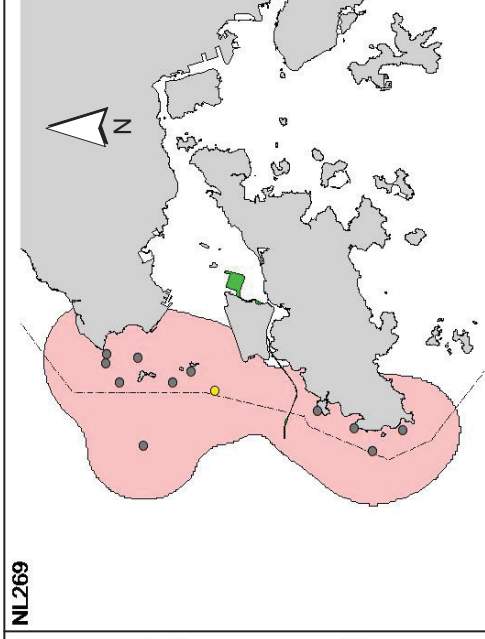
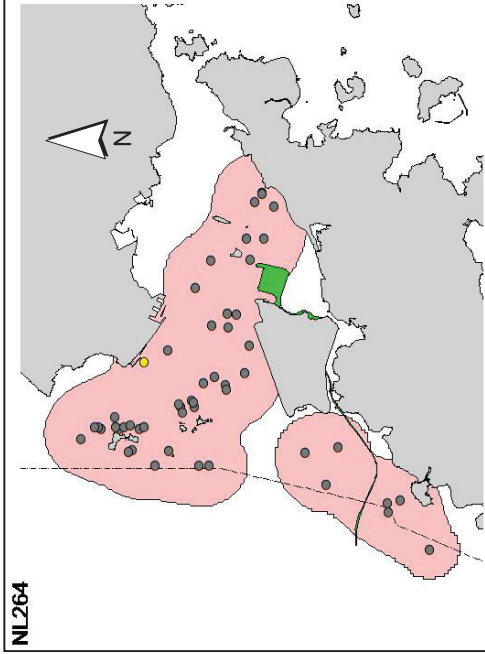
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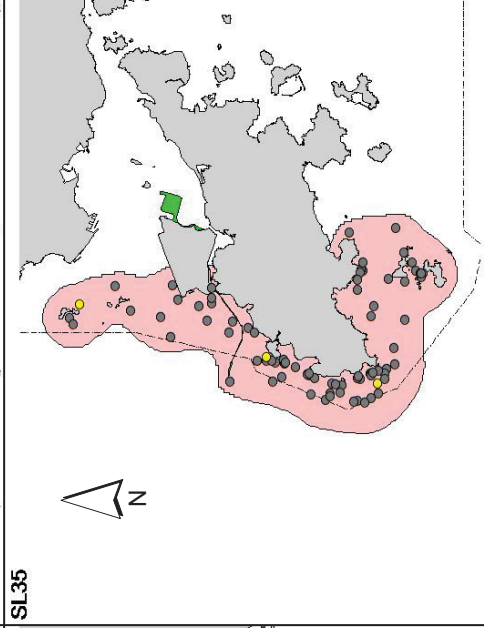
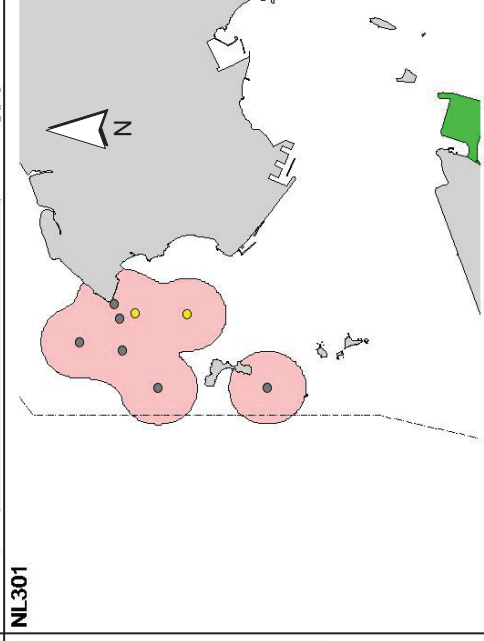
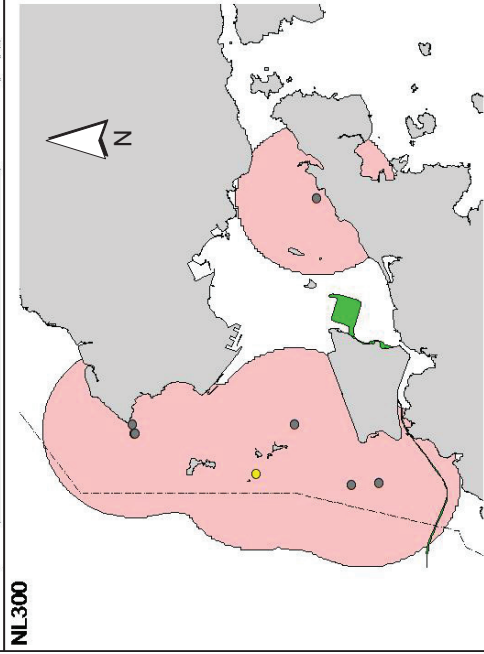
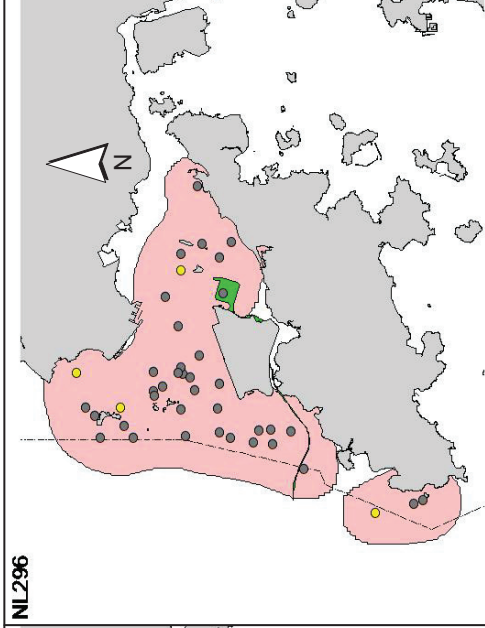
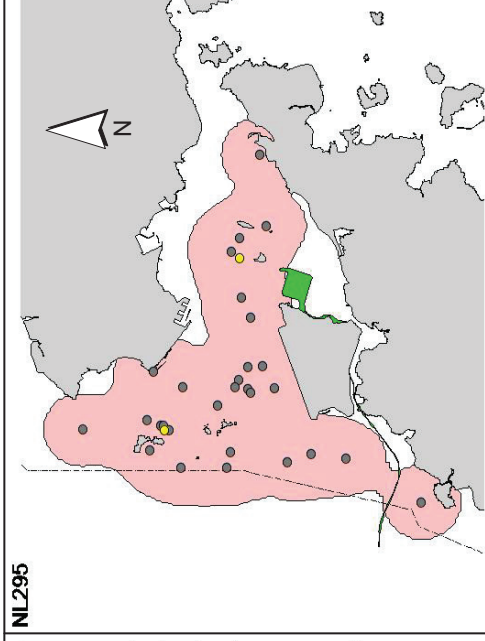
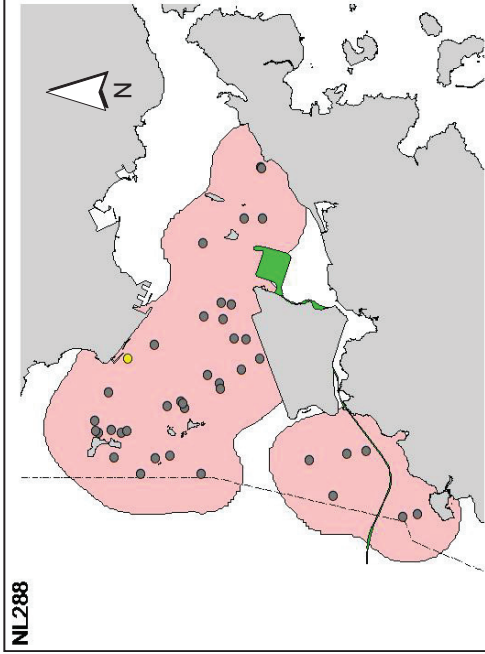
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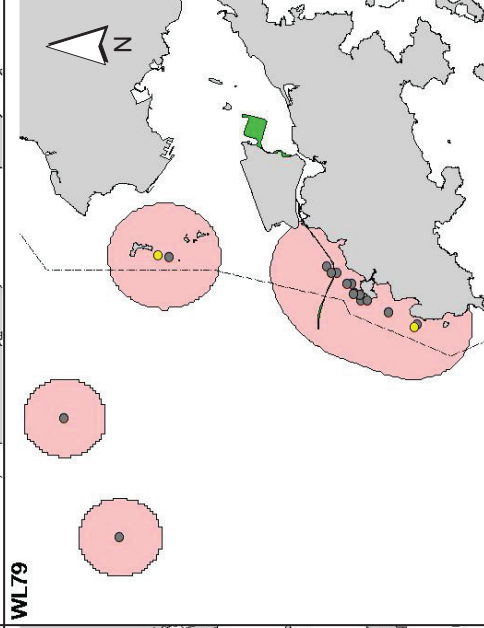
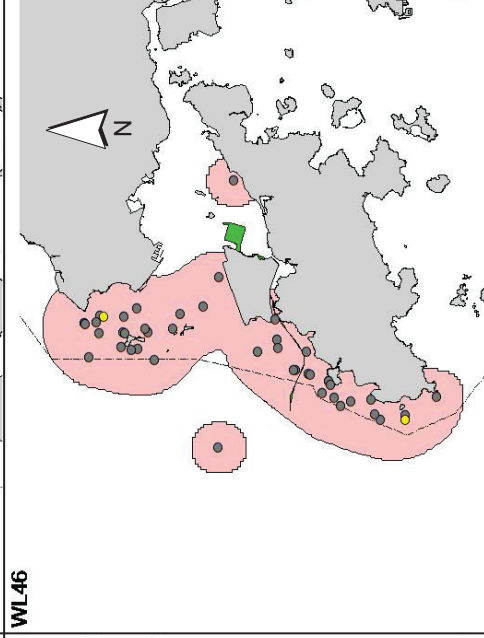
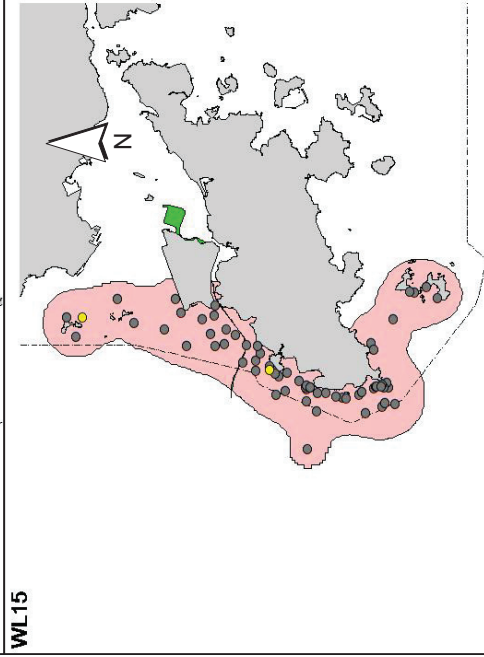
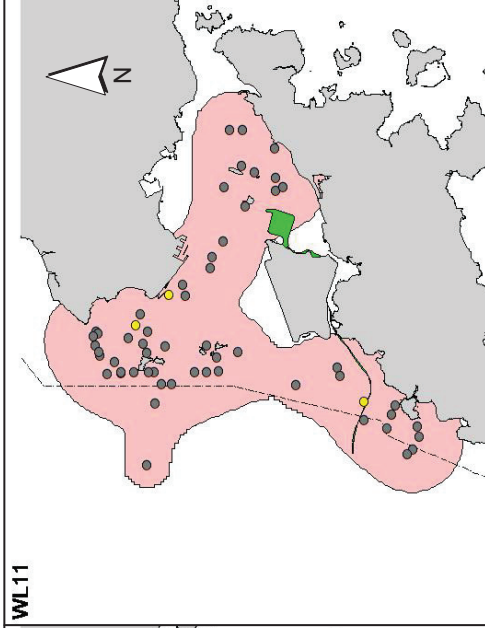
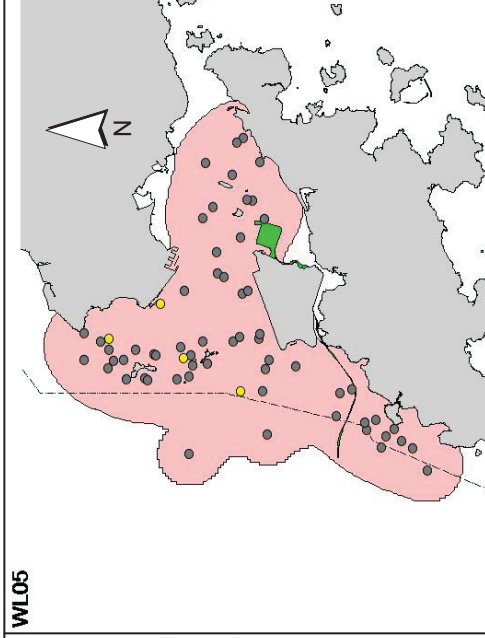
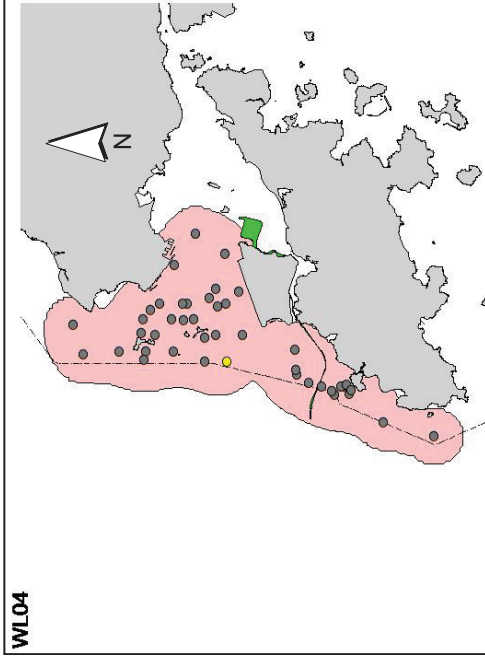
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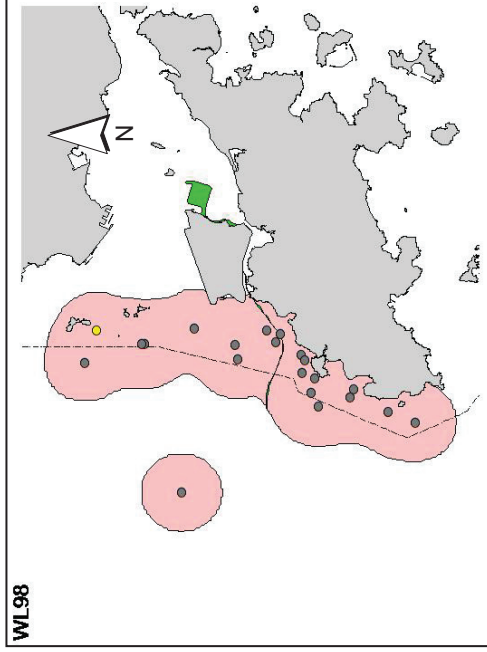
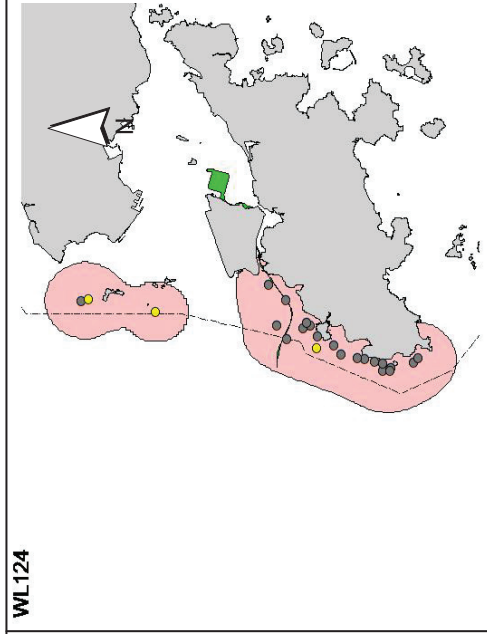
Annex V. (cont'd)



Annex V. (cont'd)



Annex V. (cont'd)





路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX K

Waste Flow Table



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

MONTHLY SUMMARY WASTE FLOW TABLE

Name of Department: Hyd

Particular Specification

HKZMB Section Between HKLR and HKBCF
Contract No.: HY/2011/03

Monthly Summary Waste Flow Table for 2013

Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract (Note 8)	Reused in Other Projects (Note 8)	Disposed as Public Fill (Note 6)	Imported Fill (Note 6)	Metals	Paper / Cardboard Packaging	Plastics (Note 3)	Chemical Waste	Others, e.g. general refuse (Note 8)			
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)			
Jan	8.472	0.000	8.472	0.000	0.000	11.120	0.000	0.000	0.000	0.000	0.293			
Feb	8.644	0.000	8.644	0.000	0.000	8.501	0.000	0.000	0.000	0.000	0.091			
Mar	6.826	0.000	6.826	0.000	0.000	1.548	0.000	0.243	0.000	0.000	0.117			
Apr	6.822	0.000	6.822	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.059			
May	8.588	0.000	8.584	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.098			
Jun	7.073	0.000	7.073	0.000	0.000	7.977	0.000	0.000	0.000	0.000	0.182			
Sub-total	46.423	0.000	46.420	0.000	0.004	29.204	0.000	0.243	0.000	0.508	0.839			
Jul	11.495	0.000	11.495	0.000	0.000	14.006	0.000	0.000	0.000	0.000	0.143			
Aug	4.963	0.000	4.963	0.000	0.000	9.268	0.000	0.000	0.000	1.600	0.338			
Sep	10.574	0.000	10.574	0.000	0.000	57.331	0.000	0.000	0.000	0.000	0.319			
Oct	10.820	0.000	10.820	0.000	0.000	116.284	0.000	0.000	0.000	0.000	0.176			
Nov	8.223	0.000	8.223	0.000	0.000	162.132	0.000	0.000	0.000	0.000	0.182			
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Sub- total	46.074	0.000	46.074	0.000	0.000	359.021	0.000	0.000	0.000	1.600	1.157			
Total	92.497	0.000	92.493	0.000	0.004	388.225	0.000	0.243	0.000	2.108	1.996			

Notes: (1) The performance target are given in ER Appendix 8J Clause 14

(2) The waste flow table shall also include C&D materials that are not specified in the Contract to be imported for use at the Site

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.

(5) All recyclable materials, including metals, paper / cardboard packaging, plastics, etc. will be collected by registered collector for (6) Conversion factors for reporting purpose:

excavated (bulk): rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³; sand=1.9tonnes/m³

(7) Numbers are rounded off to the nearest three decimal places

(8) 30T dump truck carries C&D waste of 8.0m³; 24T dump truck carries C&D waste of 6.5m³



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX L

Summary of Environmental Licenses and Permits



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Summary of Environmental Licences and Permits Application and Status

Environmental Permit

Date Application Submitted	Status	Date EP Issued	EP No.	EP Holder	Expiry Date
28.08.2013	VEP issued	05.09.2013	EP-352/2009/C	Highways Department	N/A
29.07.2013	VEP Issued	06.08.2013	EP-353/2009/G	Highways Department	N/A

Notification of Carrying Out Notifiable Works under Air Pollution Control (Construction Dust) Regulation

Date Notification Submitted	Notification Ref. No.	Valid Since	Expiry Date
25.05.2012	345690	01.06.2012	N/A

Billing Account for Disposal of Construction Waste

Date Application Submitted	Account No	Valid Since	Expiry Date
01.06.2012	7015313	27.06.2012	N/A

Chemical Waste Producer Registration

Date Registration Submitted	Waste Producer No.	Date Registration Issued	Major Waste Type	Expiry Date
20.06.2012	5213-950-C1169-43	12.07.2012	Spent lubricating oil, spent flammable liquid (diesel), surplus paint, spent organic solvent and their containers, spent batteries, soil containing mineral oil	N/A

Wastewater Discharge License

Item No.	Date Application Submitted	Area Applied	Status	Expiry Date
1	22.06.2012	Site Office for Supervising Officer (WA6)	Application Ref. No. 346651 Letter from the EPD (Ref: EP/RS/0000346267) dated 19.07.2012 confirming that license under WPCO is not required.	N/A
2	04.07.2012	Site Office for China States (WA6)	Application Ref. No. 346982 Water Discharge License WT00014182-2012 was granted on 20 Sep 2012	Valid until 30 Sept 2017
3.	31.07.2012	Portion B, Portion X & Portion Y	Application Ref. No. 348019 Water Discharge License WT00014118-2012 was granted on 20 Sep 2012	Valid until 30 Sept 2017.

4.	15.01.2013	WA 3	Application Ref No.356237 Water Discharge License Ref. WT00015423-2013 was granted on 4 Mar 2013	Valid until 31/03/2018
5.	15.01.2013	WA 4	Application Ref No. 356240 Applied for Water Discharge License and pending for approval	N/A
6	02.04.2013	Airport Road (Southern)	Water discharge license Ref. WT00015866-2013 was granted on 29 Apr 2013	Valid until 30/04/2018
7	02.04.2013	Airport Road (Northern)	Water discharge license Ref. WT00015865-2013 was granted on 29 Apr 2013	Valid until 30/04/2018

Construction Noise Permit

Item No.	Date Application Submitted	Works Area Applied	Description	Status	CNP No.	Validity of CNP	
						From	To
1	20.05.2013	WA4	Loading of plants and fill materials	CNP issued on 05.06.2013	GW-RW0366-13	05.06.2013 1900	03.12.2013 2300
2	19.06.2013	Kwo Lo Wan	Pile Piling	CNP issued on 03.07.2013	GW-RS0731-13	14.07.2013 1900	03.12.2013 2300
3	19.06.2013	Kwo Lo Wan	Pile piling	CNP issued on 12.07.2013	GW-RS0733-13	14.07.2013 2300	03.12.2013 0700
4	08.07.2013	Airport Road	Pile piling (N13)	CNP issued on 25.07.2013	GW-RS0834-13	04.08.2013 19:00	03.02.2014 2300
5	08.07.2013	Airport Road	Lighting/ wastewater treatment	CNP issued on 25.07.2013	GW-RS0836-13	13.08.2013 23:00	12.02.2014 0700
6	30.08.2013	WA3	Stockpiling and wastewater treatment	CNP issued on 13.09.2013	GW-RS1012-13	28.09.2013 19:00	27.03.2014 0700
7	04.09.2013	Kwo Lo Wan	Trial for jet grouting	CNP issued on 17.09.2013 (Superseded by GW-RS1214-13)	GW-RS-1024-13	18.09.2013 00:00	18.11.2013 0700

Item No.	Date Application Submitted	Works Area Applied	Description	Status	CNP No.	Validity of CNP	
						From	To
8	13.09.2013	West Portal	Canopy/ grouting works	CNP issued on 27.09.2013	GW-RS1076-13	27.09.2013 19:00	26.03.2014 2400
9	27.09.2013	Portion X	Marine works	CNP issued on 15.10.2013	GW-RS1144-13	15.10.2013 23:00	11.04.2014 0700
10	05.10.2013	Portion X	Marine works	CNP issued on 22.10.2013	GW-RS1170-13	22.10.2013 1900	18.04.2014 2300
11	21.10.2013	Kwo Lo Wan	Trial for jet grouting (renewal)	CNP issued on 04.11.2013	GW-RS1214-13	19.11.2013 0000	18.01.2014 0700
12	30.10.2013	Kwo Lo Wan	Water treatment	CNP issued on 07.11.2013	GW-RS1253-13	04.12.2013 0000	03.06.2014 2400
13	04.11.2013	Kwo Lo Wan	Pile piling	CNP issued on 15.11.2013	GW-RS1303-13	04.12.2013 1900	03.06.2014 2300
14	05.11.2013	N13	Billboard construction	CNP issued on 11.11.2013	GW-RS1268-13	21.11.2013 0000	17.02.2014 0700
15	08.11.2013	Tung Fai Road	Water pipes installation	CNP issued on 15.11.2013	GW-RS1308-13	25.11.2013	24.05.2014



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX M

Record of “Notification of Environmental Quality Limit Exceedances



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Contract No. HY/2011/03 -

Hong Kong- Zhuhai- Macao Bridge

Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Notifications of Environmental Quality Limits Exceedances

Notification No.: 149

Date of Notification: 19 September 2013

Works Inspected: Data collected from water sampling works on 6 September 2013 and the test report was issued on 13 September 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS(Mf)9	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 3.35 x 120% = 4.0 mg/L for mid ebb) AND CS(Mf)5: 4.40 x 120% = 5.3 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 3.35 x 130% = 4.4 mg/L for mid ebb) AND CS(Mf)5: 4.40 x 130% = 5.7 mg/L for mid flood)	4.6	24.4

Notes:

DA means depth average.

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 6 September 2013, an AL exceedance at station IS(Mf)9 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

1. Geotextile laying activity at Zone 1 and filling activities at Zone 3A and Zone 2 were carried within silt curtain as recommended in the EIA Report.
2. The ranges of suspended solid at station IS(Mf)9 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)9	5.5 to 20.1	7.3 to 26

The measured value at station IS(Mf)9 was within the range of suspended solid during baseline monitoring for mid-flood tide.

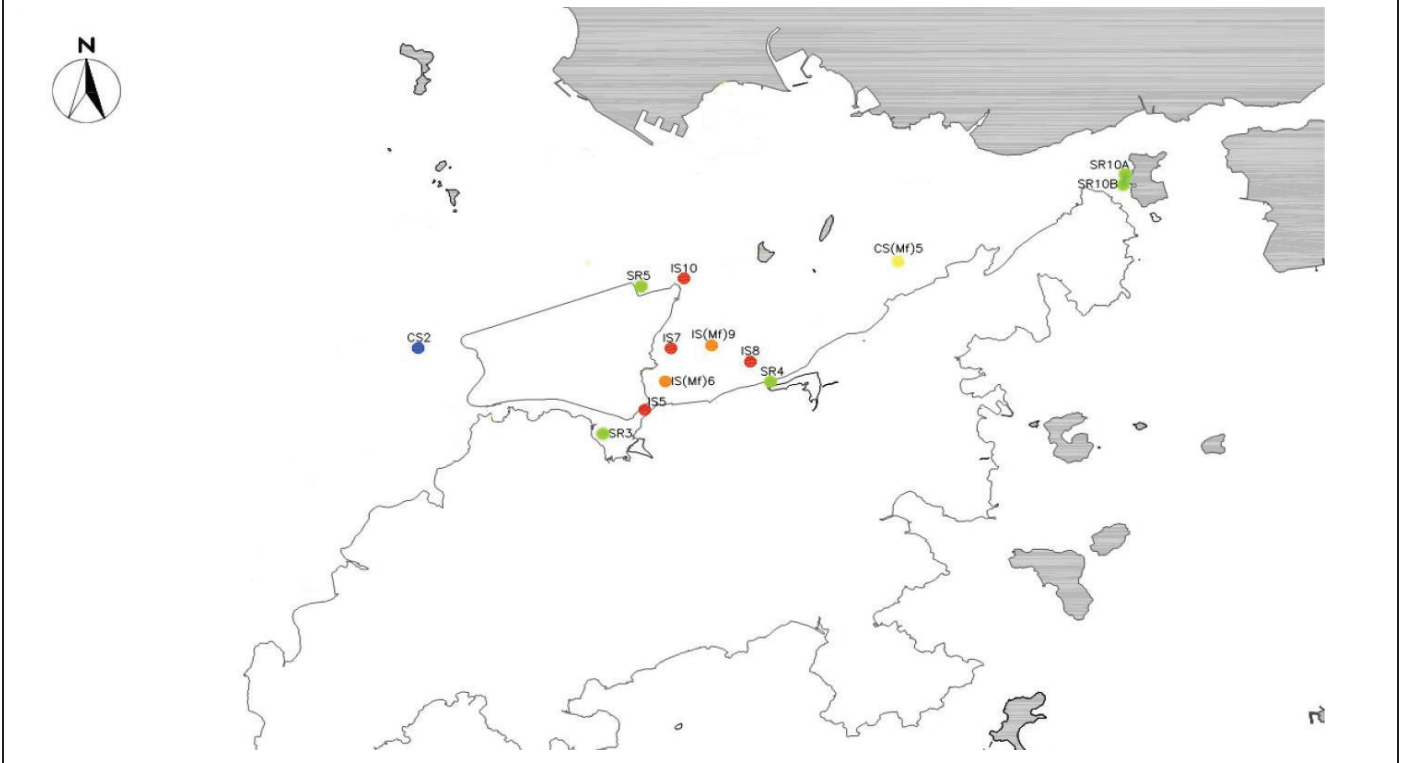
3. There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.
4. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 19 September 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances Notification No.: 150 (ver1)

Date of Notification: 4 October 2013

Works Inspected: Data collected from water sampling works on 16 September 2013 and the test report was issued on 23 September 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS(Mf)6	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.58 x 120% = 5.5 mg/L for mid ebb) AND CS(Mf)5: 6.70 x 120% = 8.0 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.58 x 130% = 6.0 mg/L for mid ebb) AND CS(Mf)5: 6.70 x 130% = 8.7 mg/L for mid flood)	24.9	12.5

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 16 September 2013, an AL exceedance at station IS(Mf)6 was recorded during mid-ebb tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

- Geotextile laying activity and filling works at Zone 1, stone column installation and filling works at Zone 2 and stone column installation at Zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station IS(Mf)6 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)6	7.1 to 19	8.5 to 35

The measured value at station IS(Mf)6 was above the range of suspended solid during baseline monitoring for mid-ebb tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

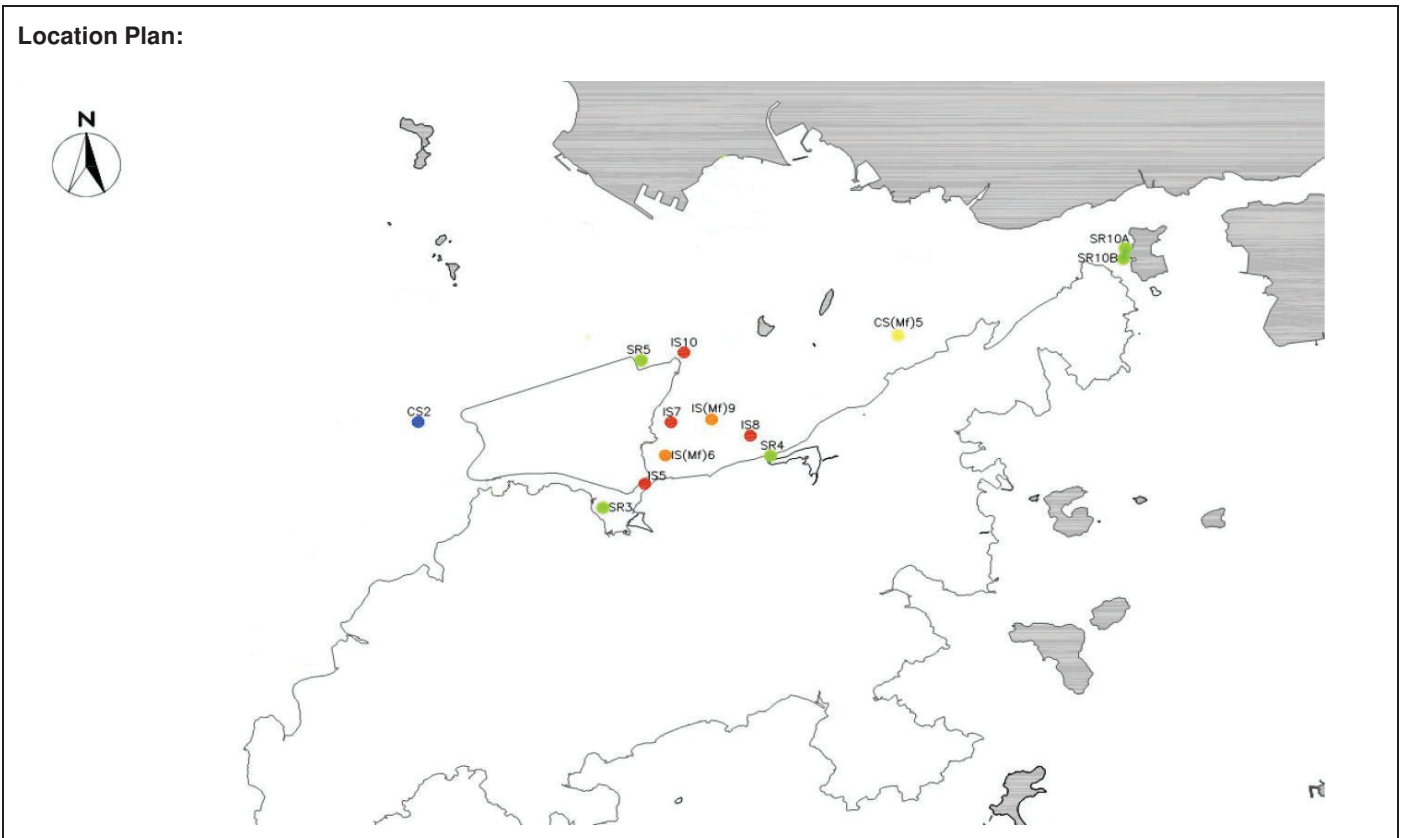
- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 4 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances Notification No.: 151

Date of Notification: 4 October 2013

Works Inspected: Data collected from water sampling works on 18 September 2013 and the test report was issued on 26 September 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	SR4	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.08 x 120% = 7.3 mg/L for mid ebb) AND CS(Mf)5: 6.92 x 120% = 8.3 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.08 x 130% = 7.9 mg/L for mid ebb) AND CS(Mf)5: 6.92 x 130% = 9.0 mg/L for mid flood)	7.8	23.8

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 18 September 2013, an AL exceedance at station SR4 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

- Stone column installation and filling works at Zone 2 and filling works at Zone 3B were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station SR4 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
SR4	5.3 to 20	5.6 to 24.5

The measured value at station SR4 was within the range of suspended solid during baseline monitoring for mid-flood tide.

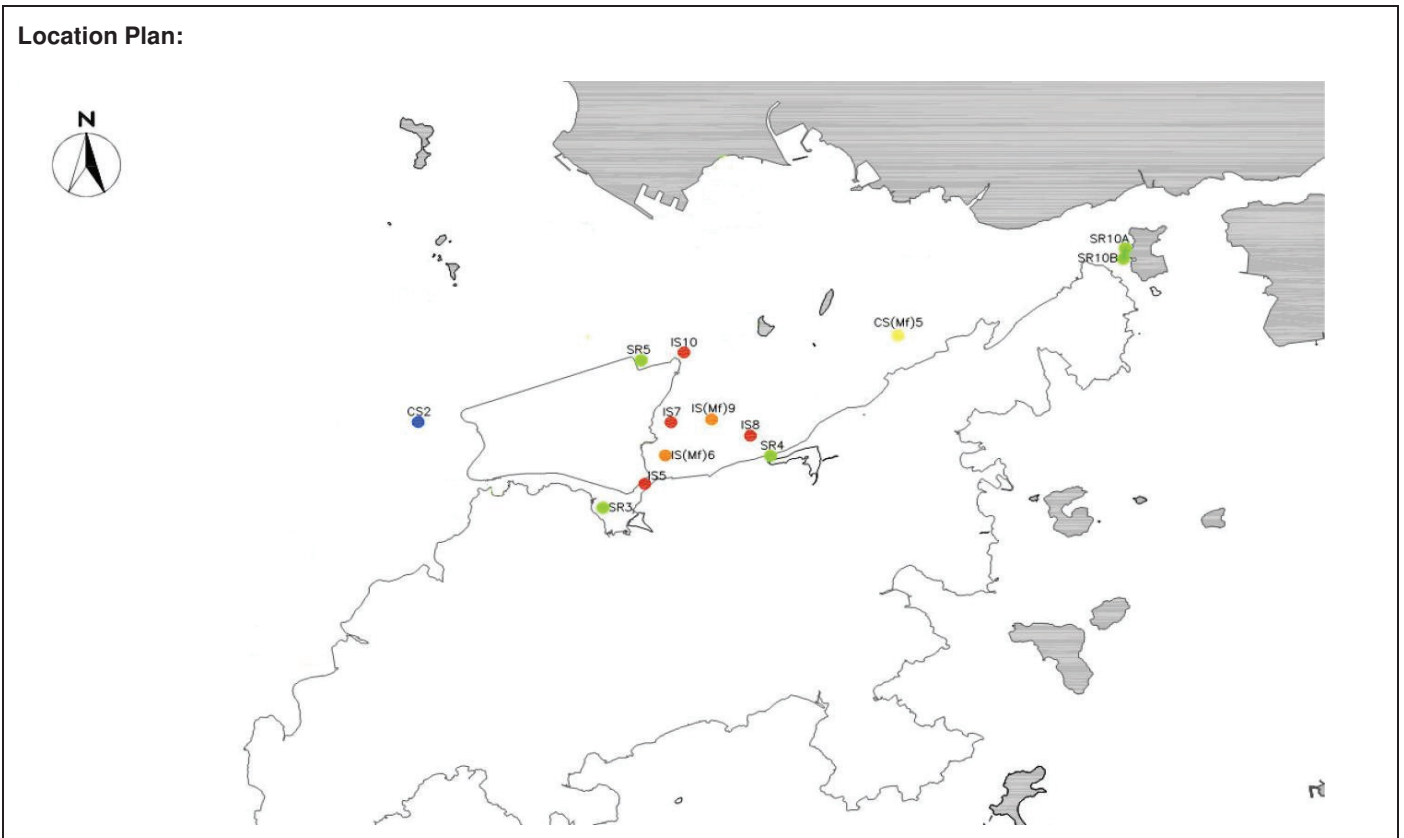
- There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.
- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 4 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 -

Hong Kong- Zhuhai- Macao Bridge

Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Notifications of Environmental Quality Limits Exceedances

Notification No.: 152

Date of Notification: 28 October 2013

Works Inspected: Data collected from water sampling works on 16 October 2013 and the test report was issued on 23 October 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS(Mf)9	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.07 x 120% = 6.1 mg/L for mid ebb) AND CS(Mf)5: 4.80 x 120% = 5.8 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.07 x 130% = 6.6 mg/L for mid ebb) AND CS(Mf)5: 4.80 x 130% = 6.2 mg/L for mid flood)	16.5	<u>34.8</u>

Notes:

DA means depth average.

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 16 October 2013, a LL exceedance at station IS(Mf) 9 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

1. Filling works at Zone 1, stone column installation at Zone 2 and unloading of fill materials on stone platform at Zone 3A were carried out within silt curtain as recommended in the EIA Report.
2. The ranges of suspended solid at station IS(Mf) 9 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)9	5.5 to 20.1	7.3 to 26

The measured value at station IS(Mf) 9 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results as water quality mitigation measures were implemented as recommended in the EIA Report.

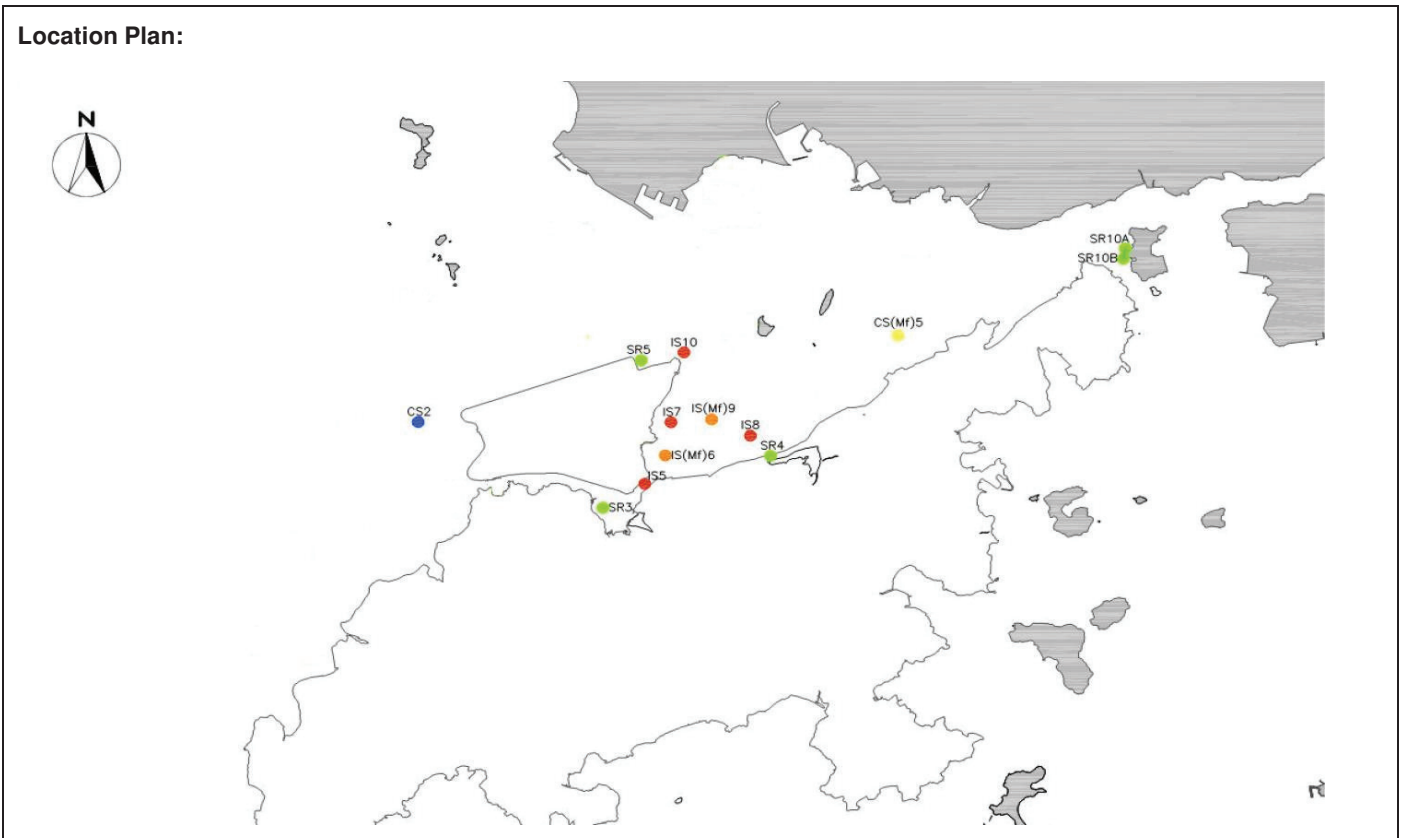
3. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 28 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

**Contract No. HY/2011/03 -
Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities**
Notifications of Environmental Quality Limits Exceedances Notification No.: 153 (ver1)

Date of Notification: 13 November 2013

Works Inspected: Data collected from water sampling works on 18 October 2013 and the test report was issued on 25 October 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: ~~Dissolved Oxygen (DO)~~ Suspended Solids (SS)/ ~~Turbidity (TURB)~~

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS7	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.28 x 120% = 5.1 mg/L for mid ebb) AND CS(Mf)5: 3.13 x 120% = 3.8 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.28 x 130% = 5.6 mg/L for mid ebb) AND CS(Mf)5: 3.13 x 130% = 4.1 mg/L for mid flood)	7.5	24.1

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 18 October 2013, an AL exceedance at station IS7 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

1. Stone column works/installation, filling and leveling of stone platform at Zone 2, stone column installation, sand filling, transfer of fill material, filling and leveling of stone platform at Zone 3A, and fill material transfer between barges at Zone 3C. Silt curtains are installed enclosing the filling activities and silt curtains are fully maintained throughout the works as recommended in the EIA Report. In addition, cover was placed between barges during transfer of fill material at Zone 3C.
2. The ranges of suspended solid at station IS7 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS7	6.1 to 21	7.8 to 34

The measured value at station IS7 was within the range of suspended solid during baseline monitoring for mid-flood tide.

3. There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.
4. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 13 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances Notification No.: 154 (ver2)

Date of Notification: 13 November 2013

Works Inspected: Data collected from water sampling works on 25 October 2013 and the test report was issued on 1 November 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS10	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 14.20 x 120% = 17.0 mg/L for mid ebb) AND CS(Mf)5: 7.42 x 120% = 8.9 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 14.20 x 130% = 18.5 mg/L for mid ebb) AND CS(Mf)5: 7.42 x 130% = 9.6 mg/L for mid flood)	17.5	<u>57.8</u>
SS	SR5	DA			18.4	<u>56.9</u>

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 25 October 2013, LL exceedances at stations IS10 and SR5 were recorded during mid-flood tide.

The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Filling and leveling of stone platform between Zone 1 and 2, stone column works and sand filling at Zone 2, stone column installation, fill material transfer and unloading of fill materials on stone platform at Zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station IS10 and SR5 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide		Range of Suspended Solid (mg/L) Mid- Flood Tide	
IS10	6.1	to	20.2	7.2 to 16
SR5	6.7	to	16.5	6.5 to 31.2

The measured value at stations IS10 and SR5 were above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 27 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances Notification No.: 155 (ver1)

Date of Notification: 19 November 2013

Works Inspected: Data collected from water sampling works on 6 November 2013 and the test report was issued on 13 November 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS10	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 9.67 x 120% = 11.6 mg/L for mid ebb) AND CS(Mf)5: 9.60 x 120% = 11.5 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 9.67 x 130% = 12.6 mg/L for mid ebb) AND CS(Mf)5: 9.60 x 130% = 12.5 mg/L for mid flood)	7.1	28.3
SS	SR5	DA			10.3	29.3

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 6 November 2013, AL exceedances at stations IS10 and SR5 were recorded during mid-flood tide.

The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Sand filling at Zone 1, stone column work at Zone 2, sand filling, public fill filling, transfer of public fill material and sand and stone column work at zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at stations IS10 and SR5 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS10	6.1 to 20.2	7.2 to 16
SR5	6.7 to 16.5	6.5 to 31.2

The measured value at station SR5 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS10 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 27 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

**Contract No. HY/2011/03 -
 Hong Kong- Zhuhai- Macao Bridge
 Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
 Notifications of Environmental Quality Limits Exceedances** Notification No.: 156

Date of Notification: 25 November 2013

Works Inspected: Data collected from water sampling works on 11 November 2013 and the test report was issued on 18 November 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS(Mf)6	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.67 x 120% = 8.0 mg/L for mid ebb) AND CS(Mf)5: 5.07 x 120% = 6.1 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.67 x 130% = 8.7 mg/L for mid ebb) AND CS(Mf)5: 5.07 x 130% = 6.1 mg/L for mid flood)	27.7	31.5

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 11 November 2013, AL exceedances at station IS(Mf)6 were recorded during mid-ebb tide and mid-flood tide.
 The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Sand filling at Zones 2 and 3A, filling public fill at Zone 3A, transferring fill material at Zone 3A, transferring sand at Zone 3A and installation of stone column at Zone 2 were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at stations IS(Mf)6 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)6	7.1 to 19	8.5 to 35

The measured value at station IS(Mf)6 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS(Mf)6 was above the range of suspended solid during baseline monitoring for mid-ebb tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 25 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

**Contract No. HY/2011/03 -
Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances**

Notification No.: 157

Date of Notification: 5 December 2013

Works Inspected: Data collected from water sampling works on 22 November 2013 and the test report was issued on 29 November 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS5	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.12 x 120% = 6.1 mg/L for mid ebb) AND CS(Mf)5: 8.12 x 120% = 9.7 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.12 x 130% = 6.7 mg/L for mid ebb) AND CS(Mf)5: 8.12 x 130% = 10.6 mg/L for mid flood)	15.1	25.4
SS	SR3	DA	CS(Mf)5: 8.12 x 120% = 9.7 mg/L for mid flood)	CS(Mf)5: 8.12 x 130% = 10.6 mg/L for mid flood)	14.2	24.2

Notes:

DA means depth average.

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 22 November 2013, AL exceedances at stations IS5 and SR3 were recorded during mid-flood tide.

The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Sand filling and installation of stone column at Zone 1, installation of stone column at Zone 2, and transferring of fill material and sand, filling of public fill and rock and installation of stone column at Zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at stations IS5 and SR3 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS5	8.1 to 25.7	7 to 23.7
SR3	6.7 to 31	7.6 to 28

The measured value at station SR3 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS5 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 5 December 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

**Contract No. HY/2011/03 -
Hong Kong- Zhuhai- Macao Bridge
Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities
Notifications of Environmental Quality Limits Exceedances** Notification No.: 158

Date of Notification: 6 January 2014

Works Inspected: Not Applicable

Monitoring Location: NEL & NWL

Parameter: Ecology (Chinese White Dolphin Monitoring)

Action & Limit Levels		Monitoring Results
	North Lantau Social Cluster	The quarter of September 2013-November 2013
	Action Level (AL)	Limit Level (LL)
Northeast Lantau (NEL)	STG < 4.2 & ANI < 15.4	<i>STG = 1.01; ANI = 3.77</i>
Northwest Lantau (NWL)	STG < 6.9 & ANI < 31.3	STG = 8.04; ANI = 32.48
	NEL: (STG < 2.4 & ANI < 8.9) and NWL: (STG < 3.9 & ANI < 17.9)	

- Notes:
1. STG means quarterly encounter rate of number of dolphin sightings.
 2. ANI means quarterly encounter rate of total number of dolphins.
 3. For North Lantau Social Cluster, AL will be triggered if either NEL or NWL falls below the criteria; LL will be triggered if both NEL and NWL fall below the criteria.
 4. ***Bold Italic*** means AL exceedances.
 5. ***Bold Italic with underline*** means LL exceedances

Possible reason for Action Level Non-compliance:

According to the contractor's information, the marine activities undertaken for HKLR03 during the two quarterly periods (June to August 2013 and September to November 2013) included stone platform construction, reclamation, stone column installation, band drain installation and excavation of stone platform. During the quarterly period of September to November 2013, geotextile laying activities were also carried out.

There is no evidence showing the current AL non-compliance directly related to the construction works of HKLR03. It should also be noted that reclamation work under HKLR03 (adjoining the Airport Island) situates in waters which has rarely been used by dolphins in the past, and the working vessels under HKLR03 have been travelling from source to destination in accordance with the Marine Travel Route to minimize impacts on Chinese White Dolphin. In addition, the contractor will implement proactive mitigation measures such as avoiding anchoring at Marine Department's designated anchorage site – Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

Actions taken/ to be taken:

Inform the IEC, ER/SOR and Contractor
The ETL informed IEC, ENPO SOR and Contractor via email on 10 December 2013.

Repeat statistical data analysis to confirm findings and check monitoring data:
A two-way ANOVA with repeated measures and unequal sample size was conducted to examine whether there were any significant differences in the average encounter rates between the baseline and impact monitoring periods. The two variables that were examined included the two periods (baseline and impact phases) and two locations (NEL and NWL).
For the comparison between the baseline period and the present quarter (fourth quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.1424 and 0.2339 respectively. If the alpha value is set at 0.1, no significant difference was detected between the baseline and present quarters in the average dolphin encounter rates of STG and ANI.
For the comparison between the baseline period and the cumulative quarters in impact phase (i.e. first four quarters of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0366 and 0.0179 respectively. If the alpha value is set at 0.1, significant difference was detected in both the average dolphin encounter rates of STG and ANI (i.e. between the two periods and the locations).

Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences:
The AFCD monitoring data during September-November 2013 has been reviewed by the dolphin specialist, and only two groups of three dolphins were sighted from 77.81 km of survey effort on primary lines in NEL during the same quarter. This review has confirmed that the very low occurrence of dolphins reported by the HKLR03 monitoring survey in summer 2013 in NEL is accurate.

Identify source(s) of impact:
There is no evidence showing that the sources of impact directly related to the construction works of HKLR03 that may have affected the dolphin usage in the NEL region.

Recommendations/ mitigation measures/ actions if necessary:

Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary:

All dolphin protective measures are fully and properly implemented in accordance with the EM&A Manual. In order to minimise disturbance to the Brother's Island, the Contractor provide training to skippers to ensure that their working vessels travel from source to destination to minimize impacts on Chinese White Dolphin and avoid anchoring at Marine Department's designated anchorage site - Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

Reviewed by : Claudine Lee _____ Title : ET Leader _____



Date : 6 January 2014 _____

Copied to : Supervising Officer, ENPO, IEC, EPD, Contractor

Summary of Notifications of Summons and Prosecutions

Total No. of Notifications of Summons / Prosecutions Received	No. of Notifications of Summons / Prosecutions Received during Reporting Period	Status of Notifications of Summons / Prosecutions
0	0	N/A



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2011/03 : Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road - Section between Scenic Hill
and Hong Kong Boundary Crossing Facilities
5th Quarterly EM&A Report (Rev.1)

APPENDIX N

Cumulative Statistic on Complaints



中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

HyD Contract No. HY/2011/03
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road
 Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Complaint Register

Complaint No.	Received Date	Received Time	Source	Category	Complaint Details	Location	Improvement Measures Taken	Status	Remarks
COM-2012-008	22-Oct-12	16:41	EPD	Environmental (Water Pollution)	X在昂洲橋頭邊發現有黑煙及水柱，有污水排到河中 (發現黑煙及水柱，有污水排到河中，要求有關部門處理)。 (Photos attached). The "phenomenon" was observed over the past week. The photos attached were taken on 19, 10, 2012, 22, 10, 2012 and 23, 10, 2012	Portion X	The pelican barge as shown in the photos provided on 24 October 2012 did not belong to the Contractor.	Closed	-
COM-2012-009	05-Nov-12	-	1823 CASE:1-391341859	Environmental (Noise and light)	The complainant complained about noise and light pollution from barges working on the Zhuhai Macau Bridge project. Barge machinery working to about 10pm at night and lighting machinery working to about 11pm at night. The noise is more audible because the machinery is sited on over the water.	Portion X	The Contractor has adjusted the emission angle of the lights on working vessels with a view to minimizing the glaring effect to the adjoining residential areas	Closed	-
COM-2012-009(2)	11-Nov-12	-	1823 CASE:1-391341859	Environmental (Noise, water quality & air quality)	The complainant noted that the barges are still working on a Sunday, up until 10pm at night, very noisy, causing pollution of the water and at times expelling black smoke from their engines. A photograph taken at 10:40am on Sunday 11 November 2012 was attached.	Portion X	-	Closed	-
COM-2012-009(3)	14-Nov-12	-	1823 CASE:1-391341859	Environmental (Noise)	The complainant did not accept the reply. He further said that "All staff has to do is come out either at night or a Sunday to check, so easy. If this continues I will have no choice to call the police out."	Portion X	The Contractor has taken the following further mitigation measures for the reclamation works: (a) Mitigation Measures for Noise Nuisance: • Improvement of noise covers onto the generators / motors on barges; and • Increase frequency of applying lubricant to all moving parts and gear wheels of the working barges. (b) Mitigation Measures for Smoke Emission: • Increase frequency of maintenance and checking of engines on barges that may emit smoke; and • Installation/ replacement of smoke suppression device such as air filter, at engines where necessary.	Closed	-
COM-2012-010(1)	06-Nov-12	-	<tzmbenquiry@hyd.gov.hk>	Environmental (Noise)	The complainant stated that lately work has started opposite Le Bleu Daux estate using barges. The work in process is generated high level of noise from powered tools used on these barges. Even if the noise was acceptable on weekdays during daytime, it is definitely creating nuisance to local resident at night (past 7pm) and on Sunday. Basically as 5 November 12 evening, he could not leave his window open as the level of noise prevent his baby to sleep and he could not even hear the TV in his flat, the noise coming from the site is higher than the sounds from my TV. He would like to know what measure you are planning to put in place to address this issue. He did not think that the current level of noise are acceptable past 7pm and on Sunday.	Portion X	-	Closed	-
COM-2012-010(2)	15-Nov-12	-	<tzmbenquiry@hyd.gov.hk>	Environmental (Noise & air quality)	The noise can be very annoying, on days depending of the wind direction, you are making more noise than the plane taking off (I measured it myself), to give you an idea of the disturbance you are creating again, I would also like to bring another topic beside the noise. Since the beginning of the filling operation, very strong smell of exhaust pipe gas can be smelt in the residential area and I think this is a huge health concern for the local population. On certain days when the wind is blowing towards the residential areas, I have the feeling that there is a diesel engine running in my living room. I would like to know how you are planning to address this?	Portion X	-	Closed	-

HyD Contract No. HY/2011/03
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road
 Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Complaint Register

Complaint No.	Received Date	Received Time	Source	Category	Complaint Details	Location	Improvement Measures Taken	Status	Remarks
COM-2012-010(3)	15-Nov-12	-	EPD	Environmental (Noise, water quality & air quality)	The complainant has copied his reply from HyD dated 15 Nov 2012 to EPD and Health Department and he further complained on the following issues: • Noise nuisance generated by diesel engine; • Smell of exhaust pipe gas in his residence; and • Suspected marine water pollution (see enclosed photo). The complainant also requested EPD to install noise and air quality monitoring at Le Bleu Deux estate.	WA6 Portion X	Noise from blowing horn from vessels and barges and Metallic Parts thrown on Ground • Reminded the Contractor to request the captains of the vessels and barges not blowing the horn except in case of emergency or prevention of ship collisions/serious safety matters; • The supervision teams would enhance their tight control on the vessels and barges working at that location, and monitor the situation and take corresponding actions; and • To enhance the work force of RSS to supervise each step of construction activities and the use of hand tools until the completion of the site office erection. Noise from Engines and Cranes of the Barges during Marine Operation • Installation of noise covers onto the generators / motors on all working barges; • Increase frequency of applying lubricant to all moving parts and gear wheels of the working barges to avoid generation of abnormal sound; and • Review of working hours for the reclamation works and switching off all unnecessary machinery and plants at night time and Sundays. Noise from power generators • All generators shall be either screened or covered by adequate sound reducing materials; • All generators situated in front of Le Bleu Deux estate will be switched off at 19:00 hrs, except two generators will be kept running up to 22:00hrs and one generator will be kept running overnight for maintaining minimum power requirement; and • Arrangement with CLP Power HK Ltd (CLP) for the permanent power supply to the site offices has been chased in a matter of urgency. The use of power generators will be terminated in phase starting from 6 December 2012. Dust from Earth Excavation • The contractor should use the machine and generators in the vicinity of Le Bleu Deux estate, and • Closely monitor the frequency on engine cleansing and replacement of dust filter. Change of Sea Water in Yellow • The Contractor was reminded to move their vessels and barges at areas with adequate water depth as practically as possible.	Closed	-
COM-2012-010(4)	19-Nov-12	22:25 hrs.	EPD	Environmental (Air quality and Noise)	The complainant filed again a complaint for the strong exhaust pipe fumes smell coming for the construction site in Tung Chung tonight, as well as the extremely high level of noise as at: at 10:30 pm (19/11/12).	WA6			
COM-2012-010(5)	24-Nov-12	13:42 hrs. 13:49 hrs	EPD (cc to HyD)	Environmental (Air quality and Noise)	The noise is coming for the following sources: - power generator - engines from the barges used for marine operation - noise from the cranes use of the construction barges. - engine from the boat used to transport staff in and out - boats blowing their horn late in the evening and at night Gas emissions: - power generators - marine operation The complainant file again a complaint against the strong exhaust pipe emission flowing towards le Bleu Deux estate this afternoon 24/11/12 at 13:47. I can assure you that it is not "not that bad" whatever that means for you. And again strong noise of metallic parts being thrown on the ground. / <i>thought you have already sorted out that problem according to your multiple replies to my complaints since July ???</i>	WA6 Portion X			
	25-Nov-12	22:02 hrs. 22:08 hrs.	EPD (cc to HyD)		A picture taken this morning (25/11/12) around 9:30am-10am showing the water pollution in different area outside the floating barriers. At 21:56 hrs, boat used by the Highway Department against blew their horn repetitively at close proximity from the residential estate.				
COM-2012-012(1)	13-Nov-12	22:27 hrs.	HyD	Environmental (Noise)	Once again your site continues to work late. The attached photo was taken at 10:15pm on Tuesday 13 Nov. The machinery used on the barges is very noisy. Why do you continue to work till 10pm and why do you work on a Sunday. Surely this is classified as a construction site for which you are in breach of various ordinances. An early reply is appreciated.	Portion X	The following further mitigation measures during the course of the reclamation works will be taken: • Installation of noise covers onto the generators / motors on all working barges; • Increase frequency of applying lubricant to all moving parts and gear wheels of the working barges to avoid generation of abnormal sound; and • Review of working hours for the reclamation works and switching off all unnecessary machinery and plants at nighttime and Sundays.	Closed	-
COM-2013-015	17-Jan-13	-	EPD	Environmental (Air)	The complainant raised that construction dust was arising from construction site of China State Construction Engineering (Hong Kong) Ltd near Su Ho Wan Sewage Treatment Works due to insufficient dust suppression and inadequate wheel washing.	WA3	The Contractor of HY2011/03 would take the following actions with immediate effect • To ensure no loosed earth material exposed at the edges of earth stockpiled earth materials i.e. to prevent erosion by wind and water; • To cover the stockpiled earth material by adequate tarpaulin; • To enhance the frequency of watering (3 times per day) onto existing haul road, and other area as appropriate; and • To install a water sprinker system to enhance the existing dust suppression measures once the water point is ready for water supply by WSD.	Closed	

HyD Contract No.HY/2011/03
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road
 Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Complaint Register

Complaint No.	Received Date	Received Time	Source	Category	Complaint Details	Location	Improvement Measures Taken	Status	Remarks
COM-2013-016	18-Jan-13	-	EPD	Environmental (Water)	The complainant advised that turbid water and concrete/cement has been arising from the Hong Kong-Zhuhai-Macao Bridge Hong Kong Projects to marine water. The complainant did not specify the source of the turbid water and concrete/cement.	N/A	-	Closed	-
COM-2013-018	02-Mar-13	-	HyD	Environmental (Noise)	The complainant advised that "it seems that the Contractor's cranes operating on the barges are again in need of bit of lubricant", as this evening i.e. 2 March 2013, the cranes are again polluting the neighborhood with intolerable noise." The complainant requested Mr. Ng from EPD to take note of this complaint and expected a detailed report.	Portion X	The Contractor has been reminded to continue the process of applying lubricant/grease to all barges which are to be worked in the site area near Le Bleu Deux.	Closed	-
COM-2013-018 (2)	04-Mar-13	-	EPD	Environmental (Noise)	The complainant complained that the cranes operating on the barges for the HZMB HK project generating squeak noise in the evening of 1 March 2013 causing an annoyance to him/her.	Portion X	The Contractor implemented the following measures : - Briefing given to the operator for the proper operation of marine vessels; - Keep adequate routine maintenance ; - Minimize the quantities of plant after 7pm ; & - Review the working hours of night time works and switch off all unnecessary machinery and plants at night time.	Closed	-
COM-2013-018 (3)	13-Mar-13	-	HyD	Environmental (Noise)	The complainant asked what noise mitigation the Contractor was taking. The complainant pointed out that the noise in question was so strong that it woke up his baby girl.	Portion X	-	Closed	-
COM-2013-018 (4)	22-Mar-13	14:19 hrs	HyD	Environmental (Noise)	The complainant complained that "the lifting appliance was operated gently and softly to keep the noise emission as low as possible" but the noise still woke up his baby. "Lubricant was regularly applied to smoothen all moving parts and gear wheels of the working barges" that did not seem to be the case at all. The complainant pointed that the crane operating at 10:27 hrs on 24 March 2012 needed lubricant.	Portion X	The Contractor will keep on closely monitoring the situation and carry out the necessary noise mitigation measures while barges are working in the site area nearby residential area.	Closed	-
COM-2013-018 (5)	31-Mar-13	10:28 hrs	HyD	Environmental (Noise)	The complainant complained that noise emitted from a crane at 10:19 hrs. The complainant further complained that noise was generated from a barge at 07:30 hrs.	Portion Y	-	Closed	-
COM-2013-018 (6), (7) & (9)	15-Apr-13	15:41 hrs	EPD	Environmental (Noise)	The complainant complained that machinery noise generated from the construction site near Tung Chung Development Pier operating for the Hong Kong-Zhuhai-Macao Bridge Hong Kong during the normal working hours on 6 April 2013 and 13 April 2013 and the late evening of 10 April 2013 causing nuisance to public.	Portion X	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours and non-restricted hours, the Contractor has implemented the following additional measures: - Briefing given to the operator of the barges for proper operation of marine vessels; - Operating barge by experienced operators only; - Keeping adequate routine maintenance for barges e.g. application of lubricants into moving parts in order to minimize squeak noise; - Install noise covers onto noisy equipment where practicable. - Remind subcontractor only well-maintained plant should be operated on-site. - Minimize the quantities of plant used after 7pm as far as practicable; - Speed up of construction works in order to shorten the duration (days) of potential noise impact/nuisance to the surrounding environment; and - Regular review of working hours for night time works and switch off all unnecessary machinery and plants at night time.	Closed	-

Hyd Contract No. HY/2011/03
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road
 Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Complaint Register

Complaint No.	Received Date	Received Time	Source	Category	Complaint Details	Location	Improvement Measures Taken	Status	Remarks
COM-2013-018 (11)	28-Apr-13	15:44	EPD	Environmental (Noise)	The complainant complained that machinery noise generated from the reclamation site near Tung Chung Development Pier at around 22:00 of 28 April 2013 causing nuisance to public.	Portion X	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: - Briefing given to the operator of the barges for proper operation of maine vessels; - Operating adequate routine maintenance for barges e.g. application of lubricants into moving parts in order to avoid squeak noise; - Install noise covers onto noisy equipment where practicable. - Remind subcontractor only well-maintained plant should be operated on-site. - Speed up of construction works in order to shorten the duration (days) of potential noise impact/nuisance to the surrounding environment; and - Regular review of working hours for night time works and switch off all unnecessary machinery and plants at night time.	Closed	-
COM-2013-022	08-Apr-13	--	EPD	Environmental (Water)	The complainant alleged that oil was dumped from various vessels operating for HZMB HK projects near Tung Chung Development Pier over the past few months. Photos were provided by the complainant.	Portion X	The Contractor has checked the photos provided by the complainant and confirmed that the vessels and boats shown in the photos do not belong to Contract No. HY/2011/03. As this complaint is not related to this Contract, no follow up action is required. The Contractor has reminded their subcontractors to implement the measures recommended in the Spill Response Plan (SRP) in case of accidental release of oils from vessel.	Closed	-
COM-2013-022(2)	23-May-13	09:15 hrs	EPD	Environmental (Water)	This complaint was a follow-up of a previous complaint received by EPD on 8 April 2013 regarding oil slicks caused by vessels. It was alleged that oil was still being dumped from various vessels operating for HZMB HK projects near Tung Chung Development Pier over the past few months. On the other hand, this complainant would also like to know the complaint alleged that there were metal parts dropped on the ground creating noise at 12:59 on 1 May 2013.	Portion X	The Contractor has reminded their subcontractors to implement the measures recommended in the Spill Response Plan in case of accidental release of oils from vessel and handle the chemical waste (waste oil) in accordance with the requirements provided in the EM&A Manual.	Closed	-
COM-2013-023	02-May-13	--	HyD	Environmental (Noise)	The complainant alleged that there were metal parts dropped on the ground creating noise at 12:59 on 1 May 2013.	WA6	If there are metal handling works, the Contractor will not carry out the metal handling works in early morning in order to minimize potential noise disturbance as far as practicable in future.	Closed	-
COM-2013-024	23-May-13	09:50 hrs	EPD	Environmental (Noise)	A complaint was received on 23 May 2013 regarding noise generated from dropping metal parts on numerous occasion on the pier opposite Le Bleu Deux at around 05:45 to 10:00 hrs of 18 May 2013 and loading/unloading activities creating noise disturbance by the contractor of HY/2011/03.	WA6	If there are metal handling works, the Contractor will not carry out the metal handling works in early morning in order to minimize potential noise disturbance as far as practicable in future.	Closed	-
COM-2013-027	29-Jun-13	10:02 hrs	RSS	Environmental (Noise)	A complaint was received on 29 June 2013 regarding noise generated from the works area near the site office (WA6) around 10:00 hrs on 29 June 2013.	WA6	The Contractor was recommended to minimize the potential noise impacts generated from the construction sites as far as practicable in future.	Closed	-
COM-2013-033	13-Sep-13	Around 22:00 hrs	RSS	Environmental (Noise)	A complaint was received regarding the noise nuisance from barge at about 22:20 hrs on 13 September 2013 and 02:30 hrs on 14 September 2013.	Portion X	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: - Minimized the quantities of plant used after 7pm as far as practicable; and - Regular review of working hours for night time works and switch off all unnecessary machinery and plants at night time.	Closed	-
COM-2013-034	17-Sep-13	--	HyD	Environmental (Noise)	A complaint was received on 17 September 2013 regarding the noise nuisance from tree transplanting activities in the morning of 14 September 2013.	Portion Y	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: - Minimized the quantities of plant used after 7pm as far as practicable; and - Regular review of working hours for night time works and switch off all unnecessary machinery and plants at night time.	Closed	-

HyD Contract No.HY/2011/03
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road
 Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Complaint Register

Complaint No.	Received Date	Received Time	Source	Category	Complaint Details	Location	Improvement Measures Taken	Status	Remarks
COM-2013-037	8-Oct-2013 9-Oct-2013 16-Oct-2013	--	Supervising Officer's Representative	Environmental (Noise)	The complainant complained the noise from barge operation from 21:30 to 22:30 hrs on 4 October 2013. The complainant complained that several loud bangs were heard starting from 21:00 hrs on 7 October 2013. The complainant complained that it was very noisy at the noon of 14 October 2013.	Partion X	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: -minimize the quantities of plant used during restricted hours as far as practicable; and -regular review of working duration for restricted hours works and switch off all unnecessary machinery and plants during restricted hours.	Closed	-
COM-2013-041	31-Oct-13	21:52 hrs	EPD	Environmental (Noise)	A complaint was received on 31 October 2013 regarding the noise generated from a barge being moved by a tug boat in the morning of 31 October 2013 (around 06:55).	N/A	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: - minimize the quantities of plant used during restricted hours as far as practicable; and - regular review of working duration for restricted hours works and switch off all unnecessary machinery and plants during the night-time and early morning period (7pm to 7am).	Closed	-
COM-2013-043	11-Nov-13	--	EPD	Environmental (Noise)	A complaint was received on 11 November 2013 regarding a barge moving through the southern channel of HUD's construction site after 23:00 hrs on 8 November 2013.	Partion X	The Contractor has been reminded to comply with CNP conditions for construction works undertaken during restricted hours. To minimize the potential noise impact during restricted hours, the Contractor has implemented the following additional measures: -minimize the quantities of plant used during restricted hours as far as practicable; and -regular review of working duration for restricted hours works and switch off all unnecessary machinery and plants during restricted hours.	Closed	-



APPENDIX O

Mudflat Monitoring Results



Table 3.1. Record of horseshoe crab survey at every sampling zone.

Species	Ind. #	Sub.	GPS coordinate	Record of prosomal width (mm)
<u>Sampling site TC1 (Search hour = 2 hrs)</u>				
<i>Tachypleus tridentatus</i>	1	S	22° 16.996' N 113° 55.984' E	26.91
<i>T. tridentatus</i>	1	S	22° 16.995' N 113° 55.985' E	25.34
<i>T. tridentatus</i>	1	S	22° 16.993' N 113° 55.986' E	42.34
<i>T. tridentatus</i>	1	S	22° 17.001' N 113° 55.982' E	25.95
<i>T. tridentatus</i>	2	S	22° 17.004' N 113° 55.990' E	19.33 25.26
<i>T. tridentatus</i>	1	S	22° 17.006' N 113° 55.992' E	38.92
<i>T. tridentatus</i>	1	S	22° 17.006' N 113° 55.990' E	31.15
<i>T. tridentatus</i>	1	M	22° 17.024' N 113° 55.982' E	47.62
<i>T. tridentatus</i>	1	M	22° 17.065' N 113° 55.985' E	29.38
<u>Sampling site TC2 (Search hour = 2 hrs)</u>				
<i>Tachypleus tridentatus</i>	1	S	22° 16.855' N 113° 55.833' E	31.28
<i>T. tridentatus</i>	1	M	22° 16.918' N 113° 55.900' E	19.74

Ind. #: number of Individuals (individuals in a group are shown at the same row)

Sub.: Substratum type; G = Gravel and Boulders, M = Soft mud, S = Sand

Table 3.1 (Cont'd). Record of horseshoe crab survey at every sampling zone.

Species	Ind. #	Sub.	GPS coordinate	Record of prosomal width (mm)
<u>Sampling site TC3 (Search hour = 2 hrs)</u>				
<i>Tachypleus tridentatus</i>	1	S	22° 17.061' N 113° 55.620' E	67.63
<i>T. tridentatus</i>	1	S	22° 17.025' N 113° 55.631' E	34.83
<i>T. tridentatus</i>	2	S	22° 17.007' N 113° 55.638' E	24.3 22.24
<i>T. tridentatus</i>	1	S	22° 16.996' N 113° 55.653' E	24.83
<i>T. tridentatus</i>	1	M	22° 17.023' N 113° 55.681' E	20.85
<i>T. tridentatus</i>	1	S	22° 16.978' N 113° 55.648' E	21.39
<u>Sampling site ST (Search hour = 3 hrs)</u>				
<i>Tachypleus tridentatus</i>	2	S	22° 17.239' N 113° 55.492' E	60.14 39.62
<i>T. tridentatus</i>	1	S	22° 17.230' N 113° 55.492' E	25.25
<i>T. tridentatus</i>	1	S,G	22° 17.228' N 113° 55.488' E	34.15
<i>T. tridentatus</i>	3	S,G	22° 17.220' N 113° 55.490' E	25.63 33.45 41.42
<i>T. tridentatus</i>	1	S,G	22° 17.215' N 113° 55.489' E	35.45
<i>T. tridentatus</i>	4	S,G	22° 17.219' N 113° 55.476' E	31.91 33.3 47.84 41.47

Ind. #: number of Individuals (individuals in a group are shown at the same row)

Sub.: Substratum type; G = Gravel and Boulders, M = Soft mud, S = Sand

Table 3.1 (Cont'd). Record of horseshoe crab survey at every sampling zone.

Species	Ind. #	Sub.	GPS coordinate		Record of prosomal width (mm)						
<u>Sampling site ST (Search hour = 3 hrs)</u>											
<i>T. tridentatus</i>	4	S	22°17.212'N	113°55.474'E	24.05	20.91	36.85	27.77			
<i>T. tridentatus</i>	8	S	22°17.212'N	113°55.481'E	32.3	33.9	42.02	33.77	39.68	39.62	44.91 41.82
<i>T. tridentatus</i>	9	S	22°17.209'N	113°55.487'E	29.22	47.55	34.83	36.29	35.02	44.59	39.89 41.83 30.39
<i>T. tridentatus</i>	1	S	22°17.209'N	113°55.490'E	33.6						
<i>T. tridentatus</i>	1	S, G	22°17.381'N	113°55.463'E	43.51						
<i>T. tridentatus</i>	1	S	22°17.382'N	113°55.453'E	36.25						
<i>T. tridentatus</i>	1	S	22°17.387'N	113°55.452'E	47.79						
<i>T. tridentatus</i>	11	S	22°17.389'N	113°55.457'E	44.26	33.65	36.86	39.34	36.85	43	41.39 41.2 42.79 38.55
					49.7						
<i>T. tridentatus</i>	1	M	22°17.366'N	113°55.483'E	35.08						
<i>T. tridentatus</i>	1	M	22°17.367'N	113°55.485'E	29.04						
<i>T. tridentatus</i>	2	S	22°17.195'N	113°55.498'E	37.4	60.23					
<i>T. tridentatus</i>	1	S	22°17.210'N	113°55.500'E	59.39						
<i>T. tridentatus</i>	1	S	22°17.191'N	113°55.509'E	66.96						

Ind. #: number of Individuals (individuals in a group are shown at the same row)

Sub.: Substratum type; G = Gravel and Boulders, M = Soft mud, S = Sand

Table 3.1 (Cont'd). Record of horseshoe crab survey at every sampling zone.

Species	Ind. #	Sub.	GPS coordinate	Record of prosomal width (mm)								
<u>Sampling site ST (Search hour = 3 hrs)</u>												
<i>T. tridentatus</i>	2	M	22°17.187' N 113°55.529' E	66.47	62.75							
<i>T. tridentatus</i>	9	S	22°17.164' N 113°55.509' E	25.28	26.79	46.47	28.02	31.46	59.46	35.46	29.54	35.11
<i>T. tridentatus</i>	9	S	22°17.172' N 113°55.489' E	50.63	45.13	46.75	54.33	65.02	62.82	68.01	55.48	44.72
<i>T. tridentatus</i>	7	S	22°17.177' N 113°55.483' E	34.22	36.1	35.02	38.21	28.41	41.65	49.36		
<i>T. tridentatus</i>	5	S	22°17.188' N 113°55.478' E	36.99	34.79	35.55	51.19	37.93				
<i>T. tridentatus</i>	2	S	22°17.177' N 113°55.471' E	26.98	31.12							
<i>T. tridentatus</i>	2	S	22°17.159' N 113°55.476' E	38.79	50.07							
<i>T. tridentatus</i>	3	S	22°17.148' N 113°55.490' E	31.19	46.19	46.37						
<i>T. tridentatus</i>	1	M	22°17.134' N 113°55.511' E	22.75								
Released artificially breed individuals												
<i>T. tridentatus</i>	9	S	22°17.212' N 113°55.483' E	31.45	28.76	32.07	34.55	33.84	38.93	32.92	38.8	56
<i>T. tridentatus</i>	9	S	22°17.209' N 113°55.487' E	34.45	47.08	37.54	38.53	38.09	39.41	38.28	39.92	35.12

Ind. #: number of Individuals (individuals in a group are shown at the same row)

Sub.: Substratum type; G = Gravel and Boulders, M = Soft mud, S = Sand

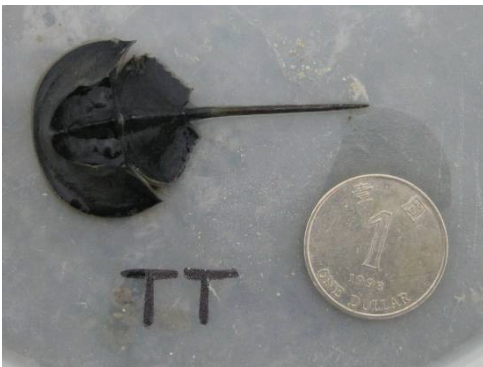
Table 3.2. Summary of horseshoe crab survey at every sampling zone.

	TC1	TC2	TC3	ST
Search duration (hr)	2	2	2	3
<i>Tachypleus tridentatus</i>				
no. of individuals	10	2	7	94
mean prosomal width (mm)	31.22	25.51	30.87	40.39
range of prosomal width (mm)	19.33-47.62	19.74-31.28	20.85-67.63	20.91-68.01
Search record (ind. hr ⁻¹ person ⁻¹)	2.50	0.50	1.75	15.67

TC1



TC2



TC3

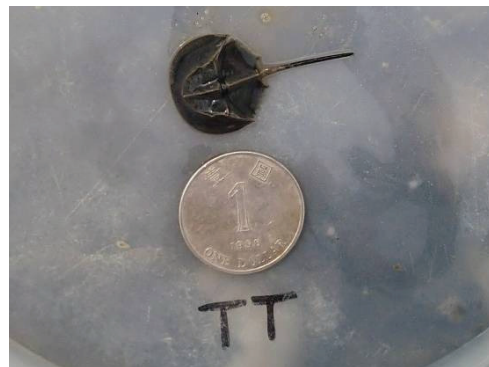


Figure 3.1. Examples of photographic records of horseshoe crab *Tachypleus tridentatus* in the present survey (taken on 15 & 21 /09/2013)

ST

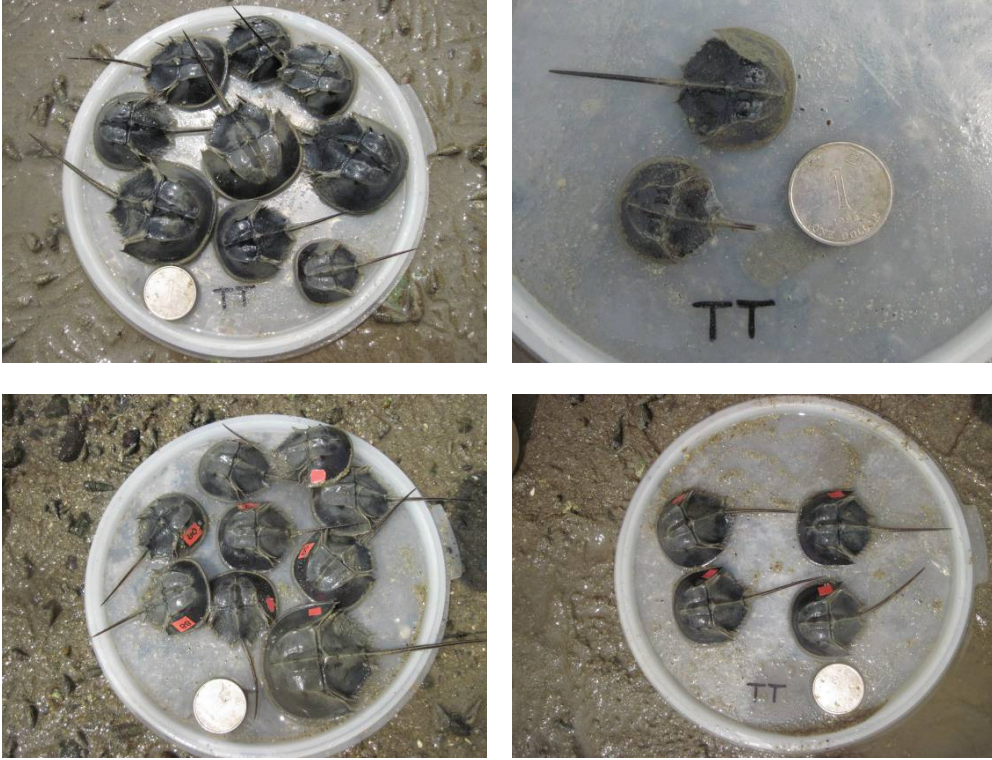


Figure 3.1 (Cont'd). *Examples of photographic records of horseshoe crab *Tachypleus tridentatus* in the present survey (taken on 15 & 21 /09/2013)*

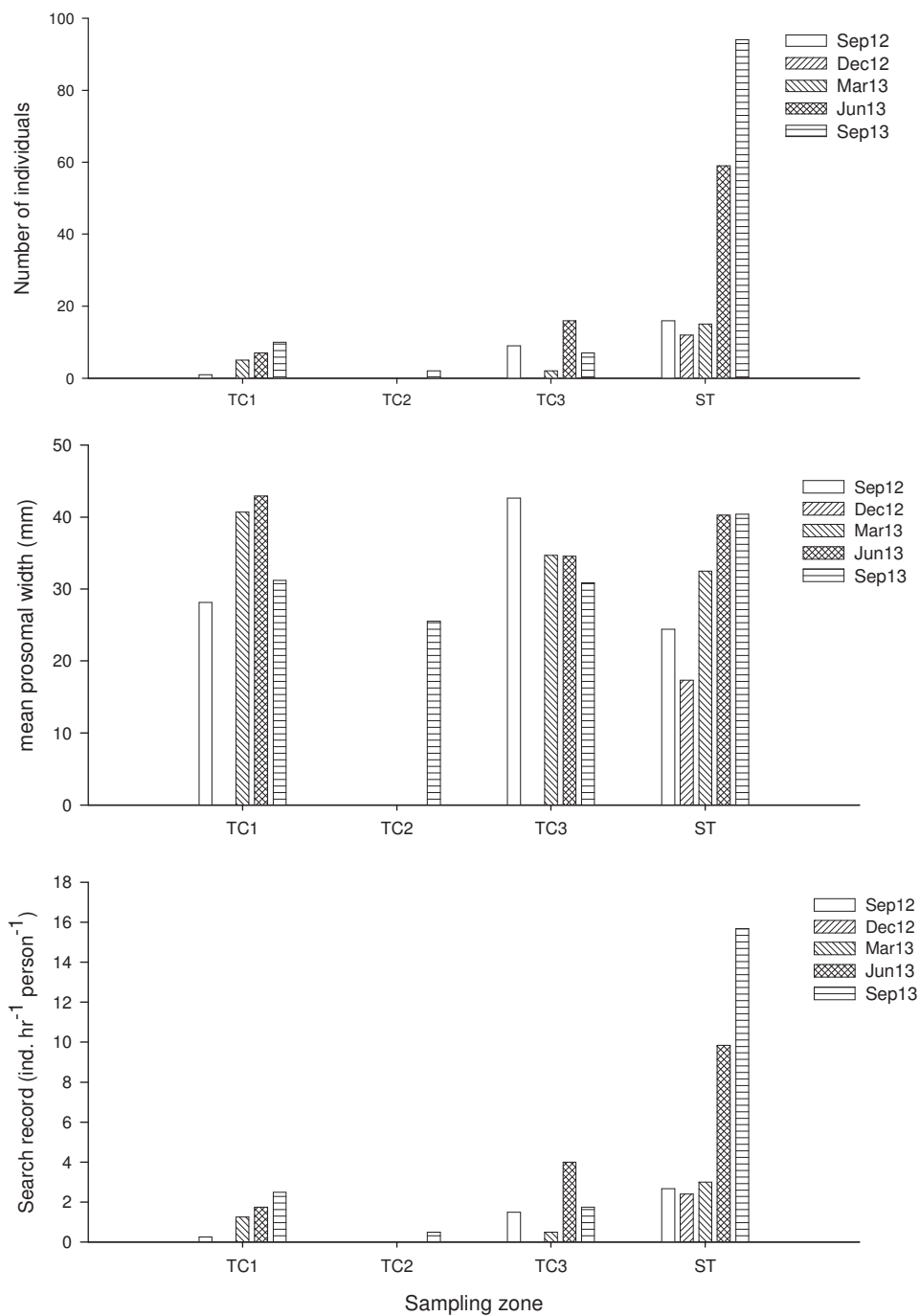


Figure 3.2. Changes of number of individuals, mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* at the four sampling zones along the sampling months

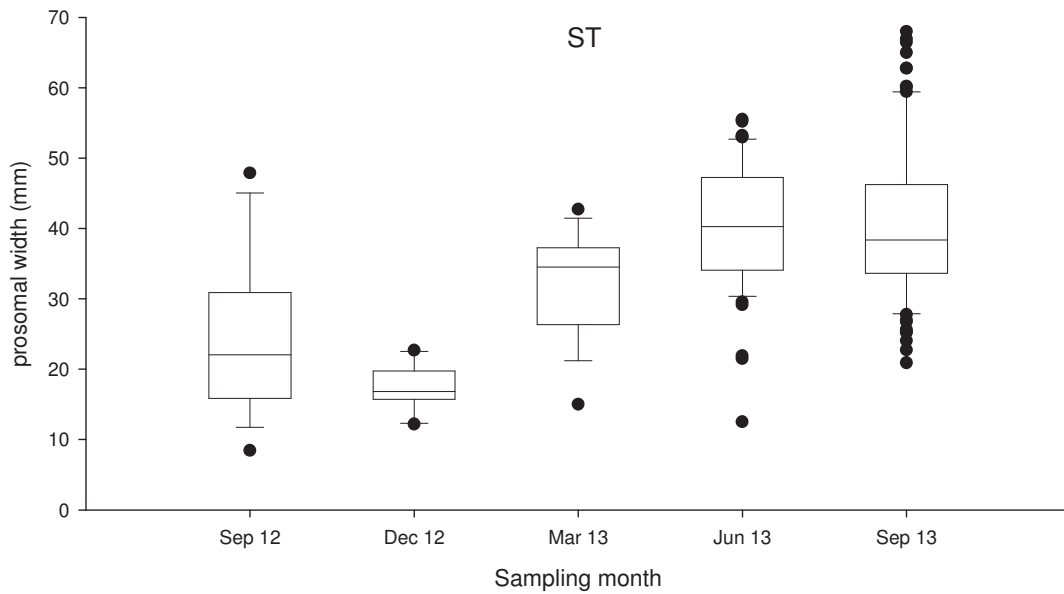


Figure 3.3. Box plot of prosomal width of horseshoe crab *Tachypleus tridentatus* at the sampling zone ST along the sampling months (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and below the lower quartile respectively. The black circle dots showed the data of outlier.)

Table 3.3. Summary of seagrass beds survey at every sampling zone

Species	Estimated area (m ²)	GPS coordinate	Estimated coverage (%)	Remark
TC1 (search hour = 2 hr) & TC2 (search hour = 2 hr) & TC3 (search hour = 2 hr)				
No record				
ST (search hour = 3 hr)				
<i>Halophila ovalis</i>	758.9	22° 17.221' N 113° 55.474' E -- 22° 17.195' N 113° 55.475' E	85-90	A large patch of seagrass bed nearby the seaward side of mangrove area at tidal level 2.0m above C.D.
	1.2	22° 17.130' N 113° 55.538' E	15	
	8.0	22° 17.130' N 113° 55.541' E	30	
	3.8	22° 17.108' N 113° 55.556' E	50	A small patch of seagrass bed on soft mud between 1.0 and 1.5 m above C.D.
	5.0	22° 17.113' N 113° 55.562' E	50	
	7.0	22° 17.105' N 113° 55.571' E	70	
	1.5	22° 17.138' N 113° 55.556' E	50	
no. of patches 7				
Total area (m²)		785.3		
Average area (m²)		112.2		

Table 3.3 (Cont'd). Summary of seagrass beds survey at every sampling zone

Species	Estimated area (m ²)	GPS coordinate	Estimated coverage (%)	Remark
ST (search hour = 3 hr)				
<i>Zostera japonica</i>	3.7	22° 17.221' N 113° 55.475' E	95	A small patch grown in the long strand of another seagrass species <i>Halophila ovalis</i>
no. of patches	1			
Total area (m²)	3.7			
Average area (m²)	3.7			

Halophila ovalis



Zostera japonica



Figure 3.4. Examples of photographic records of seagrass beds survey at ST (taken on 15/09/2013)

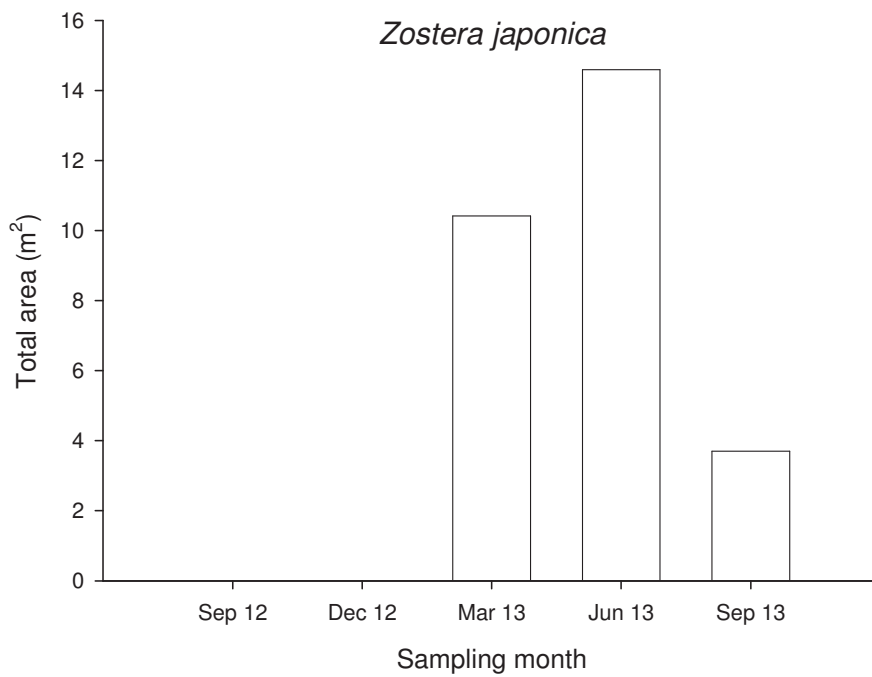
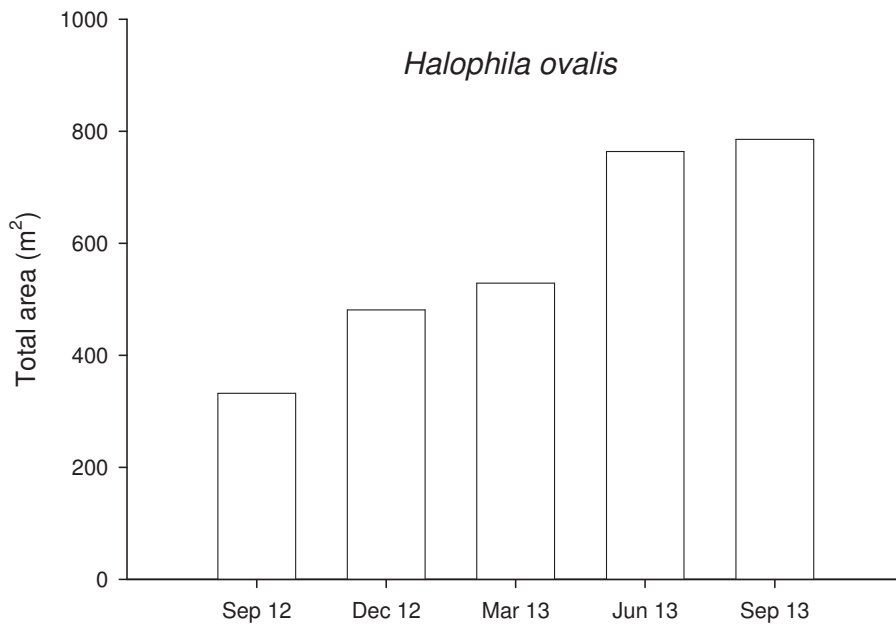


Figure 3.5. Changes of estimated total area of seagrass beds at sampling zone ST along the sampling months

Table 3.4. *Relative distribution (%) of types of substratum along the horizontal transect at every tidal level and sampling zone.*

Sampling zone	Tidal level	Percentage		
		Gravels and Boulders	Sands	Soft mud
TC1	H	40	60	
	M	80	10	10
	L	20	40	40
TC2	H		60	40
	M	20	30	50
	L		30	70
TC3	H		100	
	M		80	20
	L	60	30	10
ST	H	100		
	M	50	50	
	L	20		80

H: 2.0 m above C.D.; M: 1.5 m above C.D.; L: 1.0 m above C.D.

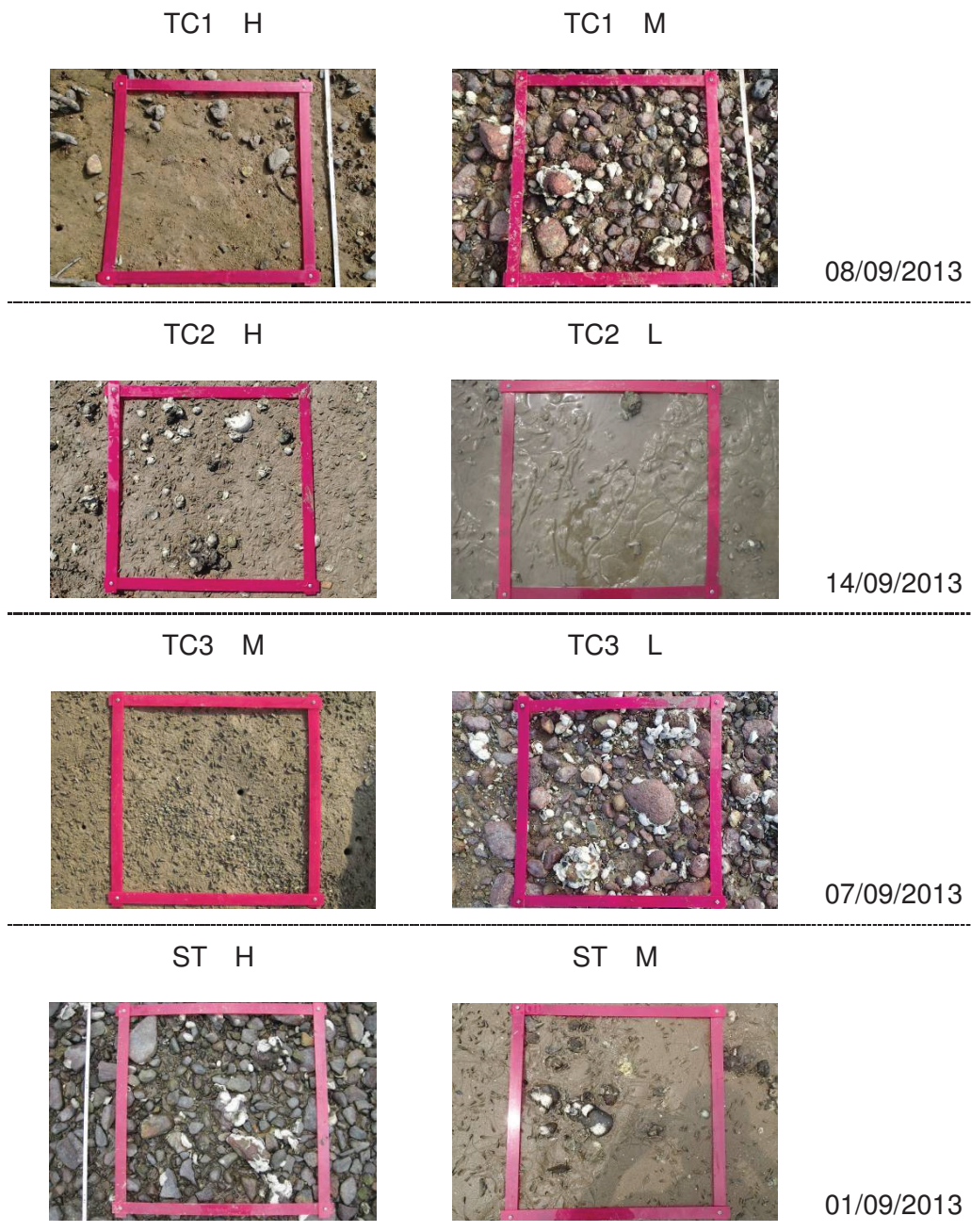


Figure 3.6. *Examples of photographic records of quadrat for intertidal soft shore community survey (H: 2.0 m above C.D.; M: 1.5 m above C.D.; L: 1.0 m above C.D.)*

Table 3.5. Total abundance, density and number of taxon of every phylum

Phylum	Total Abundance	%	Density (ind. m ⁻²)	Number of taxon
<i>Sep 2013</i>				
Mollusca	18738	96.9	625	37
Arthropoda	421	2.2	14	13
Annelida	116	0.6	4	8
Sipuncula	33	0.2	1	1
Echinodermata	9	0.0	0	1
Chordata	5	0.0	0	1
Cnidaria	4	0.0	0	1
Nemertea	3	0.0	0	1
Total	19329			

0.0 %: Total abundance of the phylum is less than 0.1% of relative abundance.

0 ind. m⁻²: Density of the phylum is less than 1 ind. m⁻².

Table 3.6. The number of individuals, relative abundance (percentage) and density of each phylum at every sampling zone.

Phylum	TC1	%	Density (ind. m ⁻²)	TC2	%	Density (ind. m ⁻²)	TC3	%	Density (ind. m ⁻²)	ST	%	Density (ind. m ⁻²)
Mollusca	4303	97.8	574	3806	93.7	507	7510	98.8	1001	3119	95.6	416
Arthropoda	76	1.7	10	185	4.6	25	49	0.6	7	111	3.4	15
Annelida	12	0.3	2	57	1.4	8	33	0.4	4	14	0.4	2
Sipuncula	8	0.2	1	6	0.1	1	6	0.1	1	13	0.4	2
Chordata	2	0.0	0	1	0.0	0	1	0.0	0	1	0.0	0
Nemertea				2	0.0	0				1	0.0	0
Cnidaria												
Echinodermata				3	0.1	0	6	0.1	1	4	0.1	1
Sub-total	4401			4060			7605			3263		

0.0 %: Total abundance of the phylum is less than 0.1% of relative abundance of the sampling zone.

0 ind. m⁻²: Density of the phylum is less than 1 ind. m⁻² of the sampling zone.

Table 3.7. The abundant species (relative abundance >10%) at every sampling zone.

Sampling zone	TC1	Group	Species	mean density (ind. m ⁻²)	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Batillaria multiformis</i>	403	64	64	
	G	<i>Cerithidea djadjariensis</i>	111	18	82	
Mid	G	<i>Batillaria multiformis</i>	406	51	51	
	G	<i>Monodonta labio</i>	135	17	68	
	Bi	<i>Saccostrea cucullata</i>	96	12	80	
Low	G	<i>Cerithidea djadjariensis</i>	98	29	29	
	Bi	<i>Saccostrea cucullata</i>	61	18	48	
	G	<i>Batillaria multiformis</i>	32	10	57	

Bi = Bivalve, G = Gastropod

Table 3.7(Cont'd). The abundant species (relative abundance > 10%) at every sampling zone.

Sampling zone TC2	Group	Species	mean density (ind. m ⁻²)	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Cerithidea cingulata</i>	412	50	50
	G	<i>Cerithidea djadjariensis</i>	271	33	83
Mid	G	<i>Cerithidea djadjariensis</i>	182	38	38
	Bi	<i>Saccostrea cucullata</i>	72	15	53
	G	<i>Cerithidea cingulata</i>	61	13	66
Low	G	<i>Cerithidea djadjariensis</i>	167	52	52
	G	<i>Batillaria zonalis</i>	42	13	66

Bi = Bivalve, G = Gastropod

Table 3.7(Cont'd). The abundant species at every sampling zone.

Sampling zone TC3	Group	Species	mean density (ind. m ⁻²)	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Batillaria multiformis</i>	526	49	49
	G	<i>Cerithidea djadjariensis</i>	310	29	77
	G	<i>Cerithidea cingulata</i>	206	19	96
Mid	G	<i>Batillaria multiformis</i>	857	63	63
	G	<i>Cerithidea djadjariensis</i>	244	18	80
	G	<i>Cerithidea cingulata</i>	191	14	94
Low	G	<i>Monodonta labio</i>	196	33	33
	Bi	<i>Saccostrea cucullata</i>	158	27	60
	G	<i>Batillaria multiformis</i>	91	15	76

Bi = Bivalve, G = Gastropod

Table 3.7(Cont'd). The abundant species at every sampling zone.

Sampling zone	ST	Group	Species	mean density (ind. m ⁻²)	relative abundance (%)	cumulative relative abundance (%)
High		G	<i>Batillaria multiformis</i>	329	55	55
		G	<i>Monodonta labio</i>	108	18	72
Mid		G	<i>Cerithidea djadjariensis</i>	88	18	18
		Bi	<i>Saccostrea cucullata</i>	88	18	36
		G	<i>Batillaria multiformis</i>	58	12	48
		G	<i>Cerithidea cingulata</i>	58	12	60
		G	<i>Lunella coronata</i>	56	12	72
Low		G	<i>Cerithidea djadjariensis</i>	95	44	44
		G	<i>Batillaria zonalis</i>	24	11	55

Bi = Bivalve, G = Gastropod

Table 3.8. Mean values of number of species, density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) at every tidal level and sampling zone

Sampling zone	Tidal level	Mean number of species (spp. 0.25 m ⁻²)	Mean density (ind. m ⁻²)	Mean H'	Mean H' across tidal level	Mean J	Mean J across tidal level
TC1	H	7	628	1.00		0.55	
	M	10	800	1.36	1.36	0.60	0.62
	L	11	332	1.73		0.72	
TC2	H	7	827	1.06		0.57	
	M	13	478	1.70	1.40	0.67	0.63
	L	9	320	1.45		0.67	
TC3	H	7	1080	1.03		0.54	
	M	10	1371	1.12	1.22	0.51	0.58
	L	11	590	1.52		0.68	
ST	H	12	602	1.43		0.58	
	M	15	485	2.07	1.56	0.76	0.66
	L	8	218	1.19		0.63	

Figure 3.7. Temporal changes of number of species, density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean \pm SD) at every tidal level and sampling zone

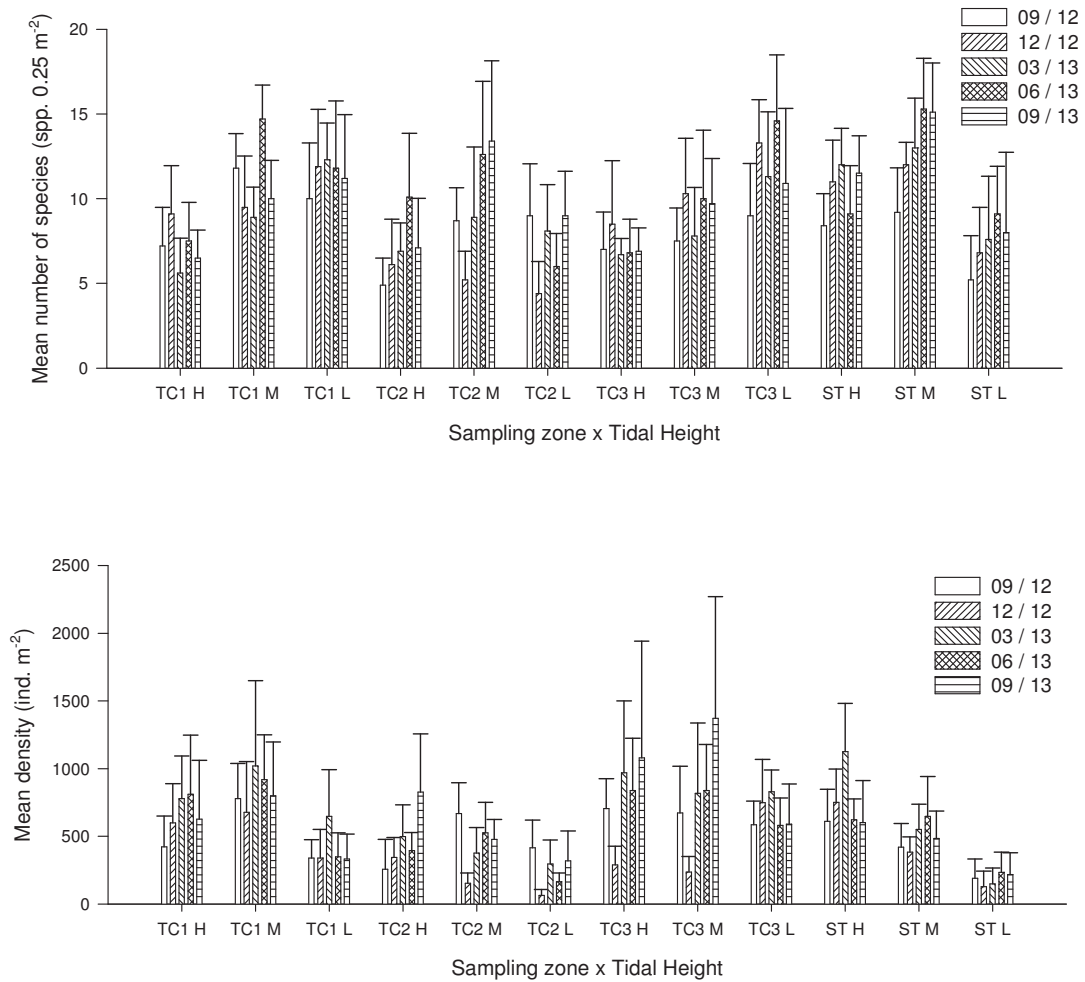
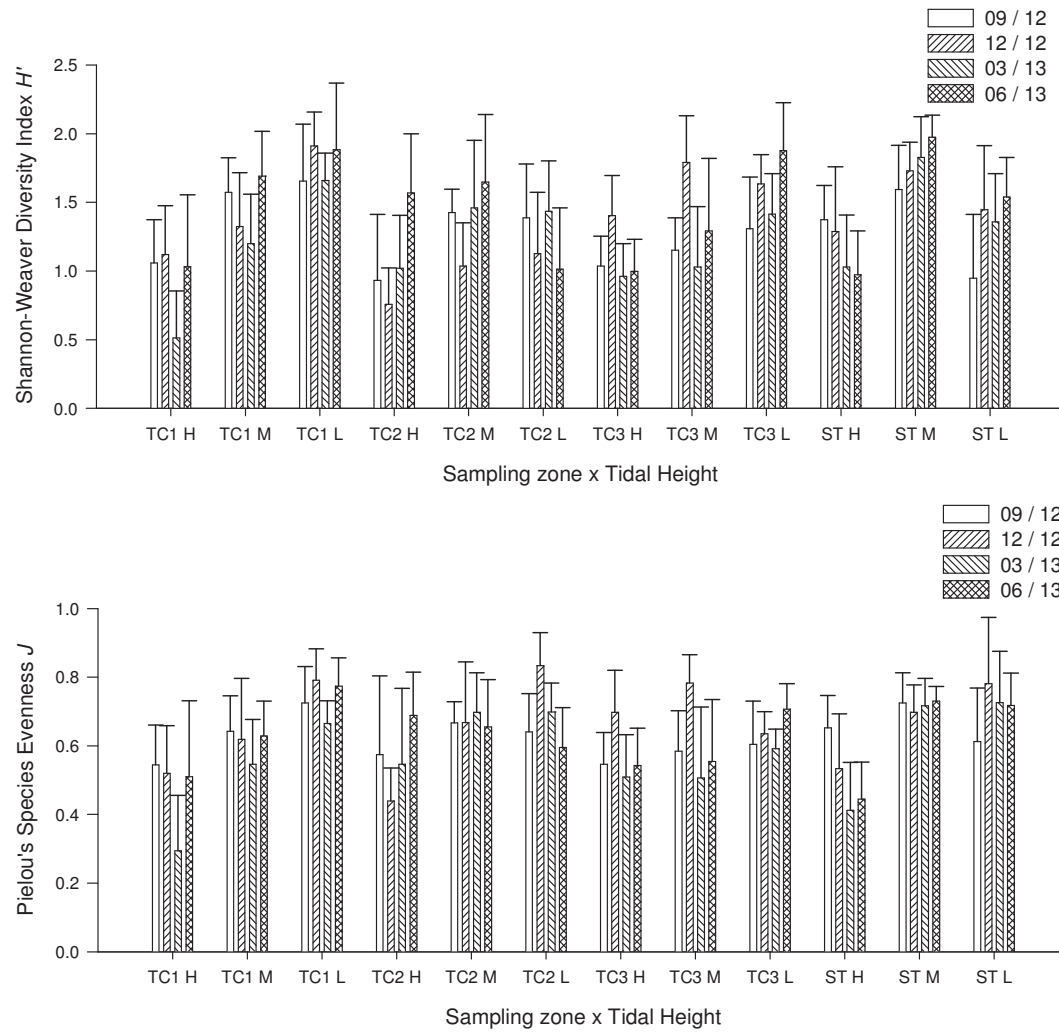
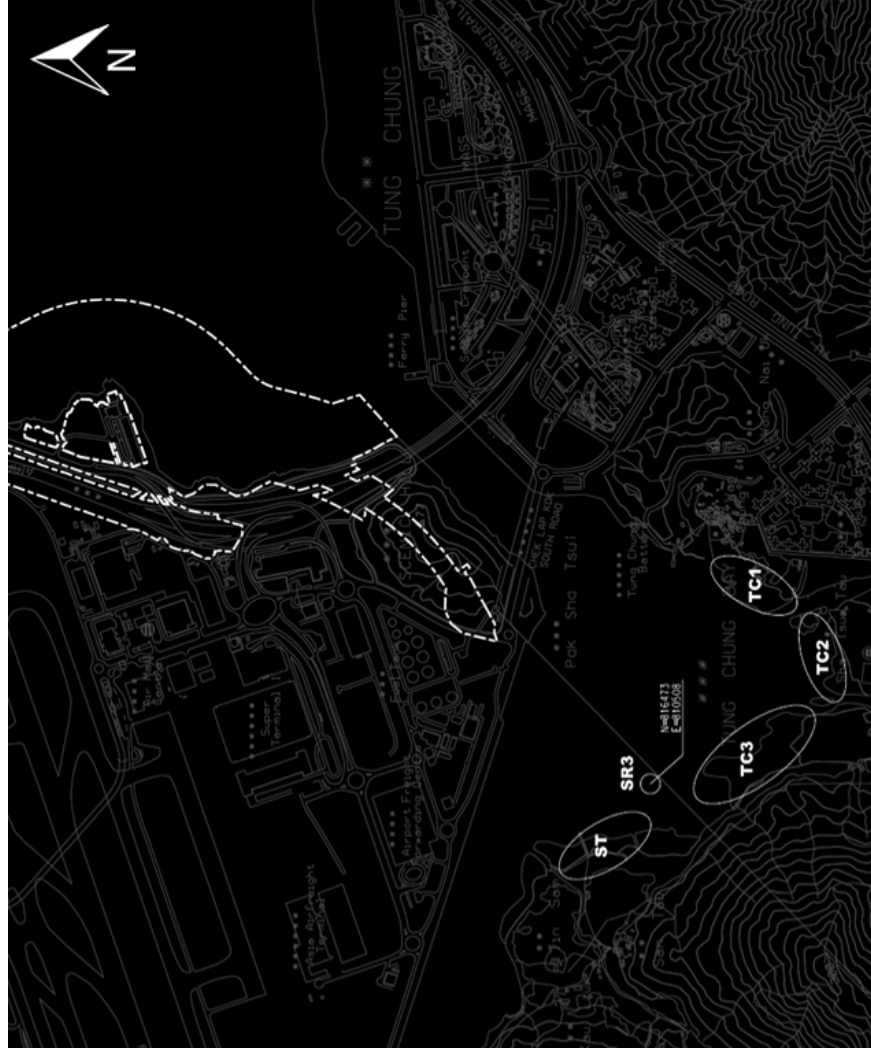


Figure 3.7 (Cont'd). Temporal changes of number of species, density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean \pm SD) at every tidal level and sampling zone



Annex I Location of sampling zones (map from ATKINS China Ltd.)



Annex II Taxonomic resolution of every recorded species of intertidal soft shore community survey

Kingdom	Phylum	Class	Order	Family	Species
Animalia	Annelida	Clitellata			Marine oligochaete spp.
Animalia	Annelida	Polychaeta	Eunicida	Onuphidae	Onuphidae spp.
Animalia	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae spp.
Animalia	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae spp.
Animalia	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae spp.
Animalia	Annelida	Polychaeta	Sabellida	Oweniidae	Oweniidae spp.
Animalia	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae spp.
Animalia	Annelida	Polychaeta		Maldanidae	Maldanidae spp.
Animalia	Arthropoda	Malacostraca	Decapoda	Diogenidae	<i>Clibanarius</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Diogenidae	<i>Diogenes</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Grapsidae	<i>Metopograpsus latifrons</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Macrophthalmus erato</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Macrophthalmus</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Uca lactea</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Uca vocans</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Paguridae	<i>Pagurus dubius</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Penaeidae	<i>Penaeus</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Sesarmidae	<i>Nanosesarma minutum</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Hemigrapsus penicillatus</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Xanthidae	<i>Etisus laevimanus</i>
Animalia	Arthropoda	Maxillopoda	Sessilia	Balanidae	<i>Balanus amphitrite</i>
Animalia	Chordata	Actinopterygii	Perciformes	Gobiidae	<i>Periophthalmus cantonensis</i>
Animalia	Cnidaria				Sea anemone spp.
Animalia	Echinodermata	Holothuroidea			Holothuroidea spp.
Animalia	Mollusca	Bivalvia	Anomalodesmata	Laternulidae	<i>Laternula anatina</i>
Animalia	Mollusca	Bivalvia	Arcoida	Arcidae	<i>Barbatia signata</i>
Animalia	Mollusca	Bivalvia	Arcoida	Arcidae	<i>Barbatia virescens</i>
Animalia	Mollusca	Bivalvia	Mytiloidea	Mytilidae	<i>Xenostrobus atrata</i>
Animalia	Mollusca	Bivalvia	Ostreoida	Ostreidae	<i>Saccostrea cucullata</i>
Animalia	Mollusca	Bivalvia	Veneroida	Mesodesmatidae	<i>Caecella chinensis</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Anomalocardia squamosa</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Cyclina sinesis</i>

Annex II (Cont'd) *Taxonomic resolution of every recorded species of intertidal soft shore community survey*

Kingdom	Phylum	Class	Order	Family	Species
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Dosinia japonica</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Meretrix meretrix</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Ruditapes philippinarum</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria bornii</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria multiformis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria zonalis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea cingulata</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea djadjariensis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea rhizophorarum</i>
Animalia	Mollusca	Gastropoda	Cephalaspidea	Philinidae	<i>Philine vitrea</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon faba</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon oualaniensis</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita polita</i>
Animalia	Mollusca	Gastropoda	Littorinimorpha	Littorinidae	<i>Littoraria articulata</i>
Animalia	Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Peasiella spp.
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius festivus</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius hepaticus</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius</i> sp.
Animalia	Mollusca	Gastropoda	Systemmatophora	Onchidiidae	<i>Onchidium</i> sp.
Animalia	Mollusca	Gastropoda		Lottiidae	<i>Nipponacmea concinna</i>
Animalia	Mollusca	Gastropoda		Lottiidae	<i>Patelloida pygmaea</i>
Animalia	Mollusca	Gastropoda		Nacellidae	<i>Cellana grata</i>
Animalia	Mollusca	Gastropoda		Nacellidae	<i>Cellana toreuma</i>
Animalia	Mollusca	Gastropoda		Trochidae	<i>Euchelus scaber</i>
Animalia	Mollusca	Gastropoda		Trochidae	<i>Monodonta labio</i>
Animalia	Mollusca	Gastropoda		Turbinidae	<i>Chlorostoma argyrostoma</i>
Animalia	Mollusca	Gastropoda		Turbinidae	<i>Lunella coronata</i>
Animalia	Mollusca	Polyplacophora	Chitonida	Ischnochitonidae	<i>Lepidozona</i> sp.
Animalia	Mollusca	Scaphopoda	Dentaliida	Dentaliidae	<i>Dentalium sinuosum</i>
Animalia	Nemertea				Nemertea spp.
Animalia	Sipuncula	Sipunculidea	Golfingiida	Sipunculidae	<i>Sipunculus nudus</i>

Annex III List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	High tidal level (2.0 m above C.D.)										sub-total			
		1	2	3	4	5	6	7	8	9	10				
Bi	<i>Saccostrea cucullata</i>	3	2	5											10
Bi	<i>Xenostrobus atrata</i>			4											4
C	<i>Hemigrapsus penicillatus</i>		4					1				1			7
C	<i>Uca lactea</i>		7		5	1	13	1				1			28
G	<i>Batillaria multiformis</i>	16	2	63	178	1	3	41	57	19	320	190			1007
G	<i>Batillaria zonalis</i>	5													5
G	<i>Cerithidea cingulata</i>	56	1	7				5	60	1	6				136
G	<i>Cerithidea djadjariensis</i>	89	2	6		46	21	19	46	2	41	6			278
G	<i>Cerithidea rhizophorarum</i>	7		3	3	2	3	7	10	2	13				53
G	<i>Ciithon faba</i>	4				1		2	1			2			10
G	<i>Littoraria articulata</i>			4											4
G	<i>Monodonta labio</i>		5	1	1	8			2			3			20
G	<i>Nassarius hepaticus</i>		1												1
G	<i>Onchidium</i> sp.				1										1
G	<i>Patelloida pygmaea</i>			1											1
P	Ampharetidae spp.										1				1
P	Maldanidae spp.		2												2
P	Polynoidae spp.			2											2

Total 1570

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013 Sampling zone TC 1 Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1	2	3	4	5	6	7	8	9	10	C	sub-total
Bi	<i>Barbatia signata</i>	1							1				1
Bi	<i>Barbatia virescens</i>								3				3
Bi	<i>Cyclina sinensis</i>	1											1
Bi	<i>Ruditapes philippinarum</i>					1							1
Bi	<i>Saccostrea cucullata</i>	2		52	42	9	27	3	22	40	44		241
Bi	<i>Xenostrobus atrata</i>			10	23		15		12	5			65
C	<i>Hemigrapsus penicillatus</i>			1		1	1	1	1	3	1		9
C	<i>Metopograpsus latifrons</i>			1				1					2
C	<i>Nanosesarma minutum</i>			2	1		1		1				5
C	<i>Uca lactea</i>					2							3
G	<i>Batillaria bornii</i>	1											1
G	<i>Batillaria multiformis</i>	10	1	93	69	141	51	126	100	313	111		1015
G	<i>Batillaria zonalis</i>	1	12										13
G	<i>Cellana toreuma</i>	1		2	1		2		1				7
G	<i>Cerithidea cingulata</i>	17	15	2		17		3	5				59
G	<i>Cerithidea djadjariensis</i>	45	33	4	7	55		1	11	4	10		170
G	<i>Cerithidea rhizophorarum</i>	7	2		1	5			6		1		22
G	<i>Clithon faba</i>	1				1			5				7
G	<i>Littoraria articulata</i>				3		1	8	7	5			24

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Mid tidal level (1.5 m above C.D.)										sub-total				
		1	2	3	4	5	6	7	8	9	10					
G	<i>Lunella coronata</i>	1														1
G	<i>Monodonta labio</i>	1		58	48	3	35	75	25	52	40					337
G	<i>Nassarius festivus</i>		1						1							2
G	<i>Nerita polita</i>			1						1						2
G	<i>Nipponacmea concinna</i>				1				2							3
G	<i>Patelloida pygmaea</i>									1						1
OI	Marine oligochaete spp.							2								2
P	Maldanidae spp.										2					2
P	Oweniidae spp.										1					1
Total																2000

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Low tidal level (1.0 m above C.D.)										sub-total	
		1	2	3	4	5	6	7	8	9	10		
Ba	<i>Balanus amphitrite</i>	4	2				3	3			2	10	14
Bi	<i>Barbatia signata</i>			1			5		11		1		18
Bi	<i>Barbatia virescens</i>	5	1				5	2	4		7		24
Bi	<i>Caecella chinensis</i>					1							1
Bi	<i>Ruditapes philippinarum</i>		2										2
Bi	<i>Saccostrea cucullata</i>	15	66			13	5	30		23			152
Bi	<i>Xenostrobus atrata</i>	3	13				5	2		6			29
C	<i>Hemigrapsus penicillatus</i>	1	1				1	2					5
C	<i>Macrophthalmus erato</i>					1							1
C	<i>Nanosesarma minutum</i>							2					2
F	<i>Periophthalmus cantonensis</i>				1			1					2
G	<i>Batillaria multiformis</i>	22	5	14	1	9	2	5	18				79
G	<i>Batillaria zonalis</i>	5	1	13	1	18	1						60
G	<i>Cellana toreuma</i>		3						2		3		8
G	<i>Cerithidea cingulata</i>	16	1	2	1	1	2	1					29
G	<i>Cerithidea djađariensis</i>	65	4	22	1	37	1	43	4	13			244
G	<i>Cerithidea rhizophorarum</i>	5		1			2	1	3	1			13
G	<i>Clithon faba</i>						2						2
G	<i>Clithon oualaniensis</i>					1							1

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013	Sampling zone TC 1	Low tidal level (1.0 m above C.D.)										sub-total	
		1	2	3	4	5	6	7	8	9	10		
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C
G	<i>Euchelus scaber</i>								1				
G	<i>Lepidozona</i> sp.				1			1				1	
G	<i>Lunella coronata</i>	13		1				3		9		3	
G	<i>Monodonta labio</i>		10				15	4		30		3	
G	<i>Nassarius festivus</i>					1				1			
G	<i>Nassarius hepaticus</i>												
G	<i>Nerita polita</i>	1		1				1		1			
G	<i>Nipponacmea concinna</i>							1				3	
G	<i>Patelloida pygmaea</i>							1		2			
P	Maldanidae spp.								1				
P	Onuphidae spp.					1							
Sp	<i>Sipunculus nudus</i>											1	
												Total	831

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	High tidal level (2.0 m above C.D.)										sub-total									
		1	2	3	4	5	6	7	8	9	10										
Ba	<i>Balanus amphitrite</i>		12				3								15						
Bi	<i>Barbatia signata</i>			1											1						
Bi	<i>Barbatia virescens</i>					1									1						
Bi	<i>Cyclina sinensis</i>								3						3						
Bi	<i>Saccostrea cucullata</i>		25		3		29	24		1					82						
Bi	<i>Xenostrobus atrata</i>							1							1						
C	<i>Hemigrapsus penicillatus</i>						1			1					2						
C	<i>Nanosesarma minutum</i>				1	1									2						
C	<i>Uca lactea</i>											12			12						
F	<i>Periophthalmus cantonensis</i>	1													1						
G	<i>Batillaria multiformis</i>				13	3	7	10	3	11	10	5	25	3	16	4	162				
G	<i>Batillaria zonalis</i>						1	1	1		1	1	4	11	1	21					
G	<i>Cerithidea cingulata</i>	3	21	1	25	1	163	7	49	198	9	139	1	184	18	134	3	69	5	1030	
G	<i>Cerithidea djadjariensis</i>	18	30	2	104	6	74	7	89	6	83	5	124	2	47	3	49	6	18	4	677
G	<i>Cerithidea rhizophorarum</i>					1				2	6			1							11
G	<i>Clithon oualaniensis</i>					1							1								2
G	<i>Littoraria articulata</i>							2													2
G	<i>Lunella coronata</i>				1			4	9												16
G	<i>Monodonta labio</i>		1		1			10	6												18

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013	Sampling zone	TC 2	High tidal level (2.0 m above C.D.)										sub-total									
Gp	Taxon	1	2	3	4	5	6	7	8	9	10	C	C	C	C	C	C	C	C	C	C	sub-total
G	<i>Patelloida pygmaea</i>	Q	C	C	C	Q	Q	C	C	Q	Q	C	C	C	Q	Q	C	C	C	Q	Q	1
Hc	<i>Clibanarius</i> sp.		1																			1
Hc	<i>Pagurus dubius</i>					1																1
OI	Marine oligochaete spp.					1																1
P	Ampharetidae spp.				1										3							4
Total																					2067	

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Mid tidal level (1.5 m above C.D.)										sub-total		
		1	2	3	4	5	6	7	8	9	10			
Ba	<i>Balanus amphitrite</i>			2	33		1	20	1	2				59
Bi	<i>Barbatia signata</i>				1			1						2
Bi	<i>Barbatia virescens</i>		1	1	7	5	1	5	2					23
Bi	<i>Cyclina sinensis</i>						3		1					4
Bi	<i>Ruditapes philippinarum</i>						1		1					2
Bi	<i>Saccostrea cucullata</i>	12	43	5	38	17	7	16	15	2				181
Bi	<i>Xenostrobus atrata</i>	12	9			2	2	7						34
C	<i>Hemigrapsus penicillatus</i>		5			4			3					12
C	<i>Macrophthalmus erato</i>							1						1
C	<i>Metopograpsus latifrons</i>		1		1									2
C	<i>Nanosesarma minutum</i>		1			2		2						5
Ec	Holothuroidea spp.		3											3
G	<i>Batillaria bornii</i>						1	1	1	1				8
G	<i>Batillaria multiformis</i>		10	1	2	4	4	1	6	2	4	6	5	72
G	<i>Batillaria zonalis</i>			1	6	2	2	1	1	1	8	2	4	30
G	<i>Cerithidea cingulata</i>	1	16	14	9	21	16	1	7	21	31	1		152
G	<i>Cerithidea djarjariensis</i>	1	5	74	2	44	74	1	27	55	87	2		456
G	<i>Cerithidea rhizophorarum</i>			1	1				1					3
G	<i>Euchelus scaber</i>						1							1

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Mid tidal level (1.5 m above C.D.)										sub-total			
		1	2	3	4	5	6	7	8	9	10				
G	<i>Lunella coronata</i>	1	1	2	2	6	2	10	7	7					37
G	<i>Monodonta labio</i>	7	45		1	2	1	9	5	1	1				72
G	<i>Nassarius festivus</i>								1		1				2
G	<i>Nerita polita</i>		1			1		1				1			4
G	<i>Patelloida pygmaea</i>			1			1	1	1						3
Hc	<i>Pagurus dubius</i>				4			2							6
Ne	Nemertea spp.								1						1
P	Ampharetidae spp.										2				2
P	Maldanidae spp.					1	2	1	2	1	1				8
P	Nereidae spp.		1												1
P	Onuphidae spp.									1					1
P	Oweniidae spp.							1				1			2
Sp	<i>Sipunculus nudus</i>					1		3			1				5
Total											1194				

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013 Sampling zone TC 2 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
G	<i>Nassarius festivus</i>														1						1	2
G	<i>Nassarius hepaticus</i>					1		2							1							4
Hc	<i>Diogenes</i> sp.	1																				1
Hc	<i>Pagurus dubius</i>																1		1			2
Ne	Nemertea spp.																				1	1
Ol	Marine oligochaete spp.							1														1
P	Maldanidae spp.			1	2	3	3	2			4	7	1									20
P	Onuphidae spp.			1		1				2	2	2	3	1							4	14
P	Oweniidae spp.							1														3
Sp	<i>Sipunculus nudus</i>																			1		1
Total																					799	

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013 Sampling zone TC 3 High tidal level (2.0 m above C.D.)

Gp	Taxon	1	2	3	4	5	6	7	8	9	10	sub-total							
		Q	C	Q	C	Q	C	Q	C	Q	C								
Bi	<i>Cyclina sinensis</i>			1		1	2	1		1	1	7							
Bi	<i>Dosinia japonica</i>		1				4					5							
Bi	<i>Laternula anatina</i>						1					1							
Bi	<i>Saccostrea cucullata</i>				7				2			9							
C	<i>Macrophthalmus</i> sp.								1			1							
C	<i>Nanosesarma minutum</i>									1		1							
G	<i>Batillaria multiformis</i>	96	2	37	7	10	1	22	3	754	2	39	11	66	2	15	245	3	1315
G	<i>Batillaria zonalis</i>							1											1
G	<i>Cerithidea cingulata</i>	90	1	56	2	15		104	5	31	96	41	17	32	23	1			514
G	<i>Cerithidea djadjariensis</i>	80		69	2	156		102	5	52	16	50	92	64	86				774
G	<i>Cerithidea rhizophorarum</i>	5				5	1	5	1	1	4	4	5	9	10				50
G	<i>Clithon faba</i>	1								1									2
G	<i>Clithon oualaniensis</i>	2						1			1								4
G	<i>Lunella coronata</i>							1											1
G	<i>Monodonta labio</i>	1								1									2
G	<i>Nassarius festivus</i>																		1
P	Ampharetidae spp.								1							2			4

Annex III (Cont'd) *List of recorded fauna of intertidal soft shore community survey at every sampling zone*

Sep 2013 Sampling zone TC 3 High tidal level (2.0 m above C.D.)

Gp	Taxon	1	2	3	4	5	6	7	8	9	10	sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	
P	Maldanidae spp.		2									8
P	Onuphidae spp.					5			1			1
Total											2701	

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Mid tidal level (1.5 m above C.D.)										sub-total							
		1	2	3	4	5	6	7	8	9	10								
Ba	<i>Balanus amphitrite</i>	1			1											2			
Bi	<i>Cyclina sinensis</i>			1	1	1										3			
Bi	<i>Dosinia japonica</i>							1								1			
Bi	<i>Ruditapes philippinarum</i>			1		1										2			
Bi	<i>Saccostrea cucullata</i>	1		10	7								2			20			
C	<i>Hemigrapsus penicillatus</i>			1												1			
C	<i>Nanosesarma minutum</i>				1				1							2			
C	<i>Uca lactea</i>									2	1					3			
C	<i>Uca vocans</i>			1												1			
F	<i>Periopthalmus cantonensis</i>											1				1			
G	<i>Batillaria bornii</i>			1												1			
G	<i>Batillaria multiformis</i>	49	2	191	6	304	10	407	133	1	29	6	11	1	377	15	585	16	2143
G	<i>Batillaria zonalis</i>	20	7	2	2	2	2	5	3	18	16				1	1			77
G	<i>Cerithidea cingulata</i>	36	59	4	93	2	114	4	57	3	14	4	9	1	48	1	31	2	478
G	<i>Cerithidea djadjariensis</i>	59	50	52	74	93	1	78	93	1	78	39	63	1	49	50	2	2	611
G	<i>Cerithidea rhizophorarum</i>		2	4	2	2	2	2	2	3	3	2	2	2	3	3			23
G	<i>Clithon faba</i>	2	1	2	2										1				8
G	<i>Clithon oualaniensis</i>	1	1												1	1			4
G	<i>Littoraria articulata</i>					1													1

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Mid tidal level (1.5 m above C.D.)										sub-total			
		1	2	3	4	5	6	7	8	9	10				
G	<i>Lunella coronata</i>			3	3										6
G	<i>Monodonta labio</i>			1	1				1						3
G	<i>Nassarius festivus</i>	1	1	1	6	2				2					14
G	<i>Nassarius hepaticus</i>					2	2	1							5
Hc	<i>Pagurus dubius</i>				1										1
P	Ampharetidae spp.							1							1
P	Maldanidae spp.	2				2	4	1	5						14
P	Nereididae spp.					1									1
P	Oweniidae spp.								1						1
											Total	3428			

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Low tidal level (1.0 m above C.D.)										sub-total				
		1	2	3	4	5	6	7	8	9	10					
Ba	<i>Balanus amphitrite</i>			3												3
Bi	<i>Barbatia signata</i>	7	12	17		1										37
Bi	<i>Barbatia virescens</i>	8	6			1	2									17
Bi	<i>Saccostrea cucullata</i>	71	78	9		74	48	50	35	4						396
Bi	<i>Xenostrobus atrata</i>	5	10	6		3	16	9	5							57
C	<i>Etisus laevimanus</i>					2										2
C	<i>Hemigrapsus penicillatus</i>	1		5				3	2	5						20
C	<i>Metopograpsus latifrons</i>						1	1								3
C	<i>Nanosesarma minutum</i>	2		1		5										8
Ec	Holothuroidea spp.						1		2	1				2	1	6
G	<i>Batillaria multiformis</i>	10	2			11	31	23	76	46						228
G	<i>Batillaria zonalis</i>								2							2
G	<i>Cellana toreuma</i>	1	14					1								16
G	<i>Cerithidea cingulata</i>			1				1	8	1						11
G	<i>Cerithidea djadjariensis</i>	1		4		1	1	2	21	8						38
G	<i>Cerithidea rhizophorarum</i>							1	11	4						16
G	<i>Euchelus scaber</i>			2												2
G	<i>Lepidozona</i> sp.			1												1
G	<i>Littoraria articulata</i>					2	1	1	4	1						17

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	Low tidal level (1.0 m above C.D.)										sub-total			
		1	2	3	4	5	6	7	8	9	10				
G	<i>Lunella coronata</i>	18	16	16		7	3						3	5	68
G	<i>Monodonta labio</i>	95	30	4		91	80	50	63	63	15				491
G	<i>Nerita polita</i>	3	2	1		8			2	2			2		18
G	<i>Patelloida pygmaea</i>		2	4									3		9
Hc	<i>Glibanarius</i> sp.					1									1
P	Polynoidae spp.			1		1					1				3
Sp	<i>Sipunculus nudus</i>	2	1	3											6
											Total	1476			

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	High tidal level (2.0 m above C.D.)										sub-total			
		1	2	3	4	5	6	7	8	9	10				
Bi	<i>Barbatia signata</i>	1			1			2	1						4
Bi	<i>Barbatia virescens</i>								2			1			3
Bi	<i>Ruditapes philippinarum</i>												1		1
Bi	<i>Saccostrea cucullata</i>	21	15	4	5	6	13	25	21	8	18				136
Bi	<i>Xenostrobus atrata</i>		1		1	3		2	4	2					13
C	<i>Hemigrapsus penicillatus</i>	2	2	6	1	3		8							22
C	<i>Macrophthalmus erato</i>						1								1
C	<i>Metopograpsus latifrons</i>						1								1
C	<i>Nanosesarma minutum</i>	2		3		1									6
Cn	Sea anemone spp.					1		1	1						3
G	<i>Batillaria bornii</i>	1	1	3		4							2		11
G	<i>Batillaria multiformis</i>	130	39	186	95	23	28	94	5	143	79				822
G	<i>Batillaria zonalis</i>	3	1												4
G	<i>Cellana toreuma</i>					1		3					1		5
G	<i>Cerithidea cingulata</i>	16	16			1	2		6	1	7				49
G	<i>Cerithidea djadjariensis</i>	10	3	2		31	1		7	14	15				83
G	<i>Cerithidea rhizophorarum</i>	3			1				2	2	6				14
G	<i>Clithon faba</i>	1	2		3						5				11
G	<i>Lepidozona</i> sp.	1		2				5	2		1				11

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Gp	Taxon	High tidal level (2.0 m above C.D.)										sub-total				
		1	2	3	4	5	6	7	8	9	10					
G	<i>Littoraria articulata</i>	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	1
G	<i>Lunella coronata</i>		1			1	5	2		4	4		5			22
G	<i>Monodonta labio</i>	24	9	66	7	28	12	114	2	2	1	6	6			269
G	<i>Nerita polita</i>						1	1	1	1		1	1			4
G	<i>Nipponacmea concinna</i>								2							2
G	<i>Patelloida pygmaea</i>			1				1								2
G	<i>Philine vitrea</i>		1													1
Hc	<i>Clibanarius</i> sp.												1			1
Ne	Nemertea spp.		1													1
P	Maldanidae spp.					2										2
S	<i>Penaeus</i> sp.				1											1
														Total	1506	

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013	Sampling zone ST	Mid tidal level (1.5 m above C.D.)										sub-total		
		1	2	3	4	5	6	7	8	9	10			
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
G	<i>Cerithidea rhizophorarum</i>	6	16	9	5	11	1	2	2	1		4		57
G	<i>Chlorostoma argyrostoma</i>							1						1
G	<i>Clithon faba</i>				1									1
G	<i>Clithon ovalaniensis</i>		1											1
G	<i>Euchelus scaber</i>					1		2	2		4			7
G	<i>Lepidozona</i> sp.		1					1	1					3
G	<i>Lunella coronata</i>	9	9	9	4	5	10	22	20	37	16			141
G	<i>Monodonta labio</i>	33	4	10	1		1	15	7	9	5			85
G	<i>Nassarius festivus</i>					2								2
G	<i>Nassarius</i> sp.						1	1						2
G	<i>Nerita polita</i>	4		3			1		1		1			10
G	<i>Patelloida pygmaea</i>	3		4										7
Hc	<i>Pagurus dubius</i>	13	3	4		2	1	4			1			28
Ol	Marine oligochaete spp.									1				1
P	Glyceridae spp.											1		2
P	Maldanidae spp.							1						1
P	Onuphidae spp.									1				1
Sp	<i>Sipunculus nudus</i>		1				6	2				1		10

Total 1213

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013 Sampling zone ST Low tidal level (1.0 m above C.D.)

Gp	Taxon	1	2	3	4	5	6	7	8	9	10	sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>	23				1						24
Bi	<i>Barbatia signata</i>	1							3			4
Bi	<i>Barbatia virescens</i>	4	2									6
Bi	<i>Caecella chinensis</i>					1						1
Bi	<i>Dosinia japonica</i>			1				1				3
Bi	<i>Saccostrea cucullata</i>	12	20			12			2			46
Bi	<i>Xenostrobus atrata</i>	2	2			5			1			10
C	<i>Hemigrapsus penicillatus</i>					1						1
C	<i>Nanosesarma minutum</i>		1									2
G	<i>Batillaria bornii</i>	6						1				7
G	<i>Batillaria multiformis</i>	5	8		3	4	2	1			4	27
G	<i>Batillaria zonalis</i>	12	14	4	22	2	4	1			1	60
G	<i>Cerithidea cingulata</i>	9					8	5		3	1	28
G	<i>Cerithidea djaadjariensis</i>	49	14			21	1	40	2	11	1	238
G	<i>Cerithidea rhizophorarum</i>	7	1					1	2			12
G	<i>Chlorostoma argyrostoma</i>	1										1
G	<i>Dentalium sinuosum</i>										1	1
G	<i>Euchelus scaber</i>	1								3		4
G	<i>Lepidozona</i> sp.	1	1									2

Annex III (Cont'd) List of recorded fauna of intertidal soft shore community survey at every sampling zone

Sep 2013	Sampling zone ST	Low tidal level (1.0 m above C.D.)										sub-total		
		1	2	3	4	5	6	7	8	9	10			
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
G	<i>Lunella coronata</i>	23	17			1				1		7		49
G	<i>Nassarius festivus</i>					1			1					3
G	<i>Nassarius</i> sp.											1		1
G	<i>Nipponacmea concinna</i>													1
G	<i>Patelloida pygmaea</i>	1												1
G	<i>Peasiella</i> spp.	1												1
P	Glyceridae spp.	2												2
P	Maldanidae spp.												1	1
P	Onuphidae spp.					2				1				4
S	<i>Penaeus</i> sp.												1	1
Sp	<i>Sipunculus nudus</i>													3
													Total	544