# Export Comparison QAQC Report

(SIDBGD) SEACAR Internal Divison for the Betterment and Goodification of Data

## 2024-04-04

This document is intended to provide an overview of newly-exported Combined Tables.

# Discrete WQ

# Overview

Table 1: Comparison of New vs. Old data exports - (Discrete WQ)

parameter	oldFile	newFile	nDataOld	nDataNew	$\it difference$
Ammonia, Un-ionized (NH3)	2024-Feb-22	2024-Mar-27	523	523	0
Chlorophyll a, Corrected for Pheophytin	2024-Feb- $22$	2024-Mar- $27$	42611	42653	42
Chlorophyll a, Uncorrected for Pheophytin	2024-Feb- $22$	2024-Mar- $27$	79170	78662	-508
Colored Dissolved Organic Matter	2024-Feb- $22$	2024-Mar- $27$	21876	21876	0
Dissolved Oxygen	2024 - Feb - 22	2024-Mar- $27$	765911	766754	843
Dissolved Oxygen Saturation	2024 - Feb - 22	2024-Mar- $27$	140858	142189	1331
Light Extinction Coefficient	2024-Feb- $22$	2024-Mar- $27$	15548	15548	0
Ammonium, Filtered (NH4)	2024-Feb- $22$	2024-Mar- $27$	123368	123368	0
Nitrate (NO3)	2024-Feb- $22$	2024-Mar- $27$	19749	19749	0
Nitrite (NO2)	2024-Feb- $22$	2024-Mar- $27$	31643	31643	0
Nitrogen, organic	2024-Feb- $22$	2024-Mar- $27$	7524	7524	0
NO2+3, Filtered	2024-Feb- $22$	2024-Mar- $27$	137185	137185	0
pH	2024-Feb- $22$	2024-Mar- $27$	599548	599666	118
Phosphate, Filtered (PO4)	2024-Feb- $22$	2024-Mar- $27$	61140	61140	0
Salinity	2024-Feb- $22$	2024-Mar- $27$	762919	763682	763
Secchi Depth	2024-Feb- $22$	2024-Mar- $27$	281274	281261	-13
Specific Conductivity	2024-Feb- $22$	2024-Mar- $27$	392313	392379	66
Total Kjeldahl Nitrogen	2024-Feb- $22$	2024-Mar- $27$	94063	94063	0
Total Nitrogen	2024-Feb- $22$	2024-Mar- $27$	126533	126572	39
Total Phosphorus	2024-Feb- $22$	2024-Mar-27	136416	136458	42
Total Suspended Solids	2024-Feb- $22$	2024-Mar-27	70856	70856	0
Turbidity	2024-Feb- $22$	2024-Mar-27	288933	288991	58
Water Temperature	$2024\text{-}\mathrm{Feb}\text{-}22$	2024-Mar-27	814152	814979	827

#### **Program Differences**

Red ProgramIDs are Programs in the Old Exports but not in the New Exports Green ProgramIDs are Programs in the New Exports but not in the Old Exports

There is a difference in Programs between exports for the following parameters:

#### Dissolved Oxygen Saturation

Programs in old export: (n=30)

 $62,\ 95,\ 102,\ 129,\ 297,\ 303,\ 354,\ 355,\ 470,\ 476,\ 477,\ 505,\ 513,\ 537,\ 540,\ 558,\ 572,\ 3001,\ 3013,\ 4042,\ 4044,\ 4054,\ 4064,\ 4067,\ 5002,\ 5008,\ 5014,\ 5026,\ 5028,\ 10000$ 

Programs in new export: (n=31)

60, 62, 95, 102, 129, 297, 303, 354, 355, 470, 476, 477, 505, 513, 537, 540, 558, 572, 3001, 3013, 4042, 4044, 4054, 4067, 5002, 5008, 5014, 5026, 5028, 10000

# Differences in Program data between exports

#### Ammonia, Un-ionized (NH3)

Table 2: Number of data entries by program - Ammonia, Un-ionized (NH3)  $\,$ 

ProgramID	nOld	nNew	difference
5028	523	523	0

#### Chlorophyll a, Corrected for Pheophytin

Table 3: Number of data entries by program - Chlorophyll a, Corrected for Pheophytin

ProgramID	nOld	nNew	$\it difference$
103	1353	1353	0
303	607	607	0
355	5366	5366	0
470	676	676	0
476	1401	1401	0
477	125	125	0
479	287	287	0
505	168	168	0
513	905	905	0
514	1098	1140	42
537	32	32	0
540	468	468	0
4054	5836	5836	0
4063	61	61	0
5002	18470	18470	0
5014	619	619	0
5026	287	287	0
5028	681	681	0
5033	1200	1200	0
10000	2179	2179	0

#### Chlorophyll a, Uncorrected for Pheophytin

Table 4: Number of data entries by program - Chlorophyll a, Uncorrected for Pheophytin

ProgramID	nOld	nNew	difference
3	3879	3879	0
60	876	366	-510
95	1888	1888	0
103	4780	4780	0
115	69	69	0
118	109	109	0
297	15194	15194	0
354	4122	4122	0

355	1737	1737	0
470	534	534	0
476	1316	1316	0
477	127	127	0
479	1835	1835	0
509	6172	6172	0
514	3089	9770	6681
537	223	41	-182
540	458	458	0
4054	4421	4421	0
5002	23017	16520	-6497
5008	10	10	0
5014	677	677	0
5026	410	410	0
5028	250	250	0
5058	268	268	0
10000	2783	2783	0

## Colored Dissolved Organic Matter

Table 5: Number of data entries by program - Colored Dissolved Organic Matter

ProgramID	nOld	nNew	difference
3	467	467	0
103	1294	1294	0
476	1081	1081	0
477	158	158	0
479	3262	3262	0
513	608	608	0
514	3646	3646	0
537	17	17	0
540	374	374	0
4054	1328	1328	0
4063	60	60	0
5002	7032	7032	0
5008	2001	2001	0
5014	7	7	0
10000	462	462	0

## Dissolved Oxygen

Table 6: Number of data entries by program - Dissolved Oxygen

ProgramID	nOld	nNew	difference
60	946	1657	711
62	1182	1182	0
69	224758	224802	44
95	14461	14442	-19
102	46	46	0
103	23938	23938	0

115       322       319       -3         118       546       549       3         119       14       14       0         129       3933       3933       0         297       31133       31133       0         303       68       68       0         354       1224       1224       0         355       2464       2464       0         469       985       985       0         470       232       232       0         476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93				
119       14       14       0         129       3933       3933       0         297       31133       31133       0         303       68       68       0         354       1224       1224       0         355       2464       2464       0         469       985       985       0         470       232       232       0         476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         572       27       27       0         899       93       93       0         3001       12367       12374       7         3013       2283       2283       0         4042       46       46 <td>115</td> <td>322</td> <td>319</td> <td>-3</td>	115	322	319	-3
129       3933       3933       0         297       31133       31133       0         303       68       68       0         354       1224       1224       0         355       2464       2464       0         469       985       985       0         470       232       232       0         476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93       0         3001       12367       12374       7         3013       2283       2283       0         4042       46       46	118	546	549	3
297       31133       31133       0         303       68       68       0         354       1224       1224       0         355       2464       2464       0         469       985       985       0         470       232       232       0         476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93       0         3000       379       386       7         3001       12367       12374       7         3013       2283       2283       0         4042       46       46<				0
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470       232       232       0         476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93       0         3000       379       386       7         3001       12367       12374       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4057       225       225       0         4058       1834 <t< td=""><td></td><td></td><td>2464</td><td></td></t<>			2464	
476       912       912       0         477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93       0         3000       379       386       7         3001       12367       12374       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4058       1834       1834       0         4058       1834				
477       151       151       0         479       19874       19874       0         505       184       184       0         509       12158       12158       0         513       418       418       0         537       266       266       0         540       393       393       0         557       841       841       0         560       2104       2104       0         572       27       27       0         899       93       93       0         3000       379       386       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4065       314       314       0         4065       314       <				
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899       93       93       0         3000       379       386       7         3001       12367       12374       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				0
3000       379       386       7         3001       12367       12374       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				0
3001       12367       12374       7         3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0	899		93	0
3013       2283       2283       0         4042       46       46       0         4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				
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4043       2972       2972       0         4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0	3013	2283	2283	
4044       232       290       58         4049       1089       1152       63         4054       2792       2792       0         4057       225       225       0         4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				
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4058       1834       1834       0         4064       619       619       0         4065       314       314       0         4067       17489       17489       0         5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				
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4065     314     314     0       4067     17489     17489     0       5002     365919     365953     34       5008     2010     2010     0       5014     275     275     0       5026     1008     1008     0       5028     124     124     0       5058     264     266     2       5071     4     4     0				
4067     17489     17489     0       5002     365919     365953     34       5008     2010     2010     0       5014     275     275     0       5026     1008     1008     0       5028     124     124     0       5058     264     266     2       5071     4     4     0				
5002       365919       365953       34         5008       2010       2010       0         5014       275       275       0         5026       1008       1008       0         5028       124       124       0         5058       264       266       2         5071       4       4       0				
5008     2010     2010     0       5014     275     275     0       5026     1008     1008     0       5028     124     124     0       5058     264     266     2       5071     4     4     0				
5014     275     275     0       5026     1008     1008     0       5028     124     124     0       5058     264     266     2       5071     4     4     0				
5026     1008     1008     0       5028     124     124     0       5058     264     266     2       5071     4     4     0				
5028       124       124       0         5058       264       266       2         5071       4       4       0				
5058 $264$ $266$ $2$ $5071$ $4$ $4$ $0$				
5071   4   4   0				
10000 6074 6073 <b>-1</b>				
	10000	6074	6073	-1

# Dissolved Oxygen Saturation

Table 7: Number of data entries by program - Dissolved Oxygen Saturation  $\,$ 

ProgramID	nOld	nNew	difference
62	960	960	0
95	1497	1498	1
102	333	333	0

129	3933	3933	0
297	25419	25419	0
303	462	462	0
354	1118	1118	0
355	2464	2464	0
470	2	2	0
476	767	767	0
477	151	151	0
505	175	175	0
513	388	388	0
537	264	264	0
540	3	3	0
558	37	37	0
572	27	27	0
3001	12279	12290	11
3013	1160	1160	0
4042	37	37	0
4044	232	290	58
4054	4	4	0
4064	619	619	0
4067	17030	17030	0
5002	61491	61516	25
5008	2010	2010	0
5014	254	254	0
5026	417	417	0
5028	138	138	0
10000	5764	5763	-1

## Light Extinction Coefficient

Table 8: Number of data entries by program - Light Extinction Coefficient

ProgramID	nOld	nNew	difference
3	323	323	0
297	10401	10401	0
479	1252	1252	0
509	491	491	0
4064	619	619	0
5002	2328	2328	0
5058	133	133	0

#### Ammonium, Filtered (NH4)

Table 9: Number of data entries by program - Ammonium, Filtered  $(\mathrm{NH4})$ 

ProgramID	nOld	nNew	difference
3	2780	2780	0
103	43	43	0
115	64	64	0

297	24597	24597	0	
303	378	378	0	
354	3811	3811	0	
355	5174	5174	0	
470	171	171	0	
477	159	159	0	
479	3145	3145	0	
505	119	119	0	
509	6193	6193	0	
513	723	723	0	
4054	5727	5727	0	
4063	62	62	0	
5002	57603	57603	0	
5014	592	592	0	
5026	608	608	0	
5028	177	177	0	
5033	8370	8370	0	
5058	268	268	0	
10000	419	419	0	
				_

## Nitrate (NO3)

Table 10: Number of data entries by program - Nitrate (NO3)  $\,$ 

ProgramID	nOld	nNew	difference
303	8	8	0
354	1976	1976	0
513	25	25	0
4063	2	2	0
5002	9235	9235	0
5033	8367	8367	0

#### Nitrite (NO2)

Table 11: Number of data entries by program - Nitrite (NO2)  $\,$ 

ProgramID	nOld	nNew	$\it difference$
297	4380	4380	0
303	7	7	0
354	2180	2180	0
479	301	301	0
513	548	548	0
4054	1646	1646	0
4063	63	63	0
5002	11709	11709	0
5033	8373	8373	0
10000	17	17	0

#### Nitrogen, organic

Table 12: Number of data entries by program - Nitrogen, organic

ProgramID	nOld	nNew	difference
5002	7121	7121	0

## NO2+3, Filtered

Table 13: Number of data entries by program - NO2+3, Filtered

ProgramID	nOld	nNew	difference
3	2521	2521	0
115	61	61	0
297	19207	19207	0
303	405	405	0
354	3081	3081	0
355	4713	4713	0
470	450	450	0
476	4195	4195	0
477	159	159	0
479	3071	3071	0
505	102	102	0
509	6215	6215	0
513	1933	1933	0
540	464	464	0
4054	5422	5422	0
4058	1859	1859	0
4063	58	58	0
5002	65647	65647	0
5014	560	560	0
5026	972	972	0
5028	739	739	0
5033	8371	8371	0
5058	268	268	0
10000	3145	3145	0

 $\mathbf{pH}$ 

Table 14: Number of data entries by program -  $\mathrm{pH}$ 

Program ID	nOld	nNew	$\it difference$
3	21	21	0
69	223786	223773	-13
95	12206	12217	11
103	13818	13818	0
115	316	319	3
118	340	340	0
129	2201	2201	0
297	36	36	0
303	402	402	0
354	884	884	0
355	1284	1284	0

469	987	987	0
470	234	234	0
476	939	939	0
477	155	155	0
479	17481	17481	0
509	3472	3472	0
513	418	418	0
537	266	266	0
540	345	345	0
557	693	693	0
558	218	218	0
560	1841	1841	0
899	88	88	0
3000	331	331	0
3001	11783	11783	0
3013	2271	2271	0
4042	40	40	0
4044	232	290	58
4049	1202	1265	63
4054	2763	2763	0
4057	228	228	0
4058	1877	1877	0
4065	314	314	0
4067	13653	13653	0
5002	269145	269141	-4
5008	2004	2004	0
5014	283	283	0
5026	1015	1015	0
5028	182	182	0
10000	5828	5828	0

# Phosphate, Filtered (PO4)

Table 15: Number of data entries by program - Phosphate, Filtered (PO4)  $\,$ 

Program ID	nOld	nNew	$\it difference$
3	4006	4006	0
103	48	48	0
115	63	63	0
354	4108	4108	0
355	3175	3176	1
479	2075	2075	0
505	102	102	0
513	1624	1624	0
3000	381	381	0
4054	4171	4171	0
5002	36205	36205	0
10000	1962	1962	0

Salinity

Table 16: Number of data entries by program - Salinity

Program ID	nOld	nNew	$\it difference$
3	4287	4287	0
60	946	1589	643
62	1142	1142	0
69	225612	226532	920
95	25919	25921	2
102	382	383	1
103	196	196	0
115	325	324	-1
118	535	535	0
119	12	14	2
129	3884	3888	4
297	30806	30806	0
303	488	488	0
354	1282	1282	0
355	2478	2501	23
456	134	134	0
469	987	987	0
470	2	2	0
476	965	965	0
477	134	135	1
479	19917	19917	0
505	188	188	0
509	12034	12034	0
513	300	300	0
537	264	264	0
540	424	424	0
557	864	864	0
558	390	390	0
560	2129	2129	0
572	31	31	0
899	82	82	0
965	4157	4157	0
3000	382	388	6
3001	12277	12345	68
3013	2346	2346	0
3016	49	81	32
4042	46	46	0
4043	3040	3042	$\overset{\circ}{2}$
4044	232	290	- 58
4049	1291	1354	63
4054	3256	3307	51
4057	230	230	0
4058	1869	1869	0
4064	619	619	0
4065	314	314	0
4067	12514	12523	9
5002	373770	373901	131
5014	283	283	0
5026	433	434	1
5028	182	182	0
5046	102	102	U

5058	264	266	$^2$	
5071	4	4	0	
10000	5531	5531	0	

## Secchi Depth

Table 17: Number of data entries by program - Secchi Depth

Program ID	nOld	nNew	$\it difference$
60	54	42	-12
69	215520	215520	0
103	2973	2973	0
115	88	88	0
118	70	70	0
129	1966	1966	0
303	4	4	0
355	952	952	0
469	516	516	0
470	298	298	0
476	961	961	0
477	155	155	0
479	8546	8546	0
513	155	155	0
514	9215	9257	42
537	217	217	0
557	508	508	0
558	519	519	0
560	333	333	0
572	9	9	0
3000	143	143	0
3001	8308	8308	0
3013	2265	2265	0
3016	50	50	0
4049	359	317	-42
4054	936	936	0
4065	318	318	0
5002	16146	16145	-1
5008	1005	1005	0
5014	240	240	0
5026	425	425	0
5028	64	64	0
5033	4797	4797	0
10000	2825	2825	0

# Specific Conductivity

Table 18: Number of data entries by program - Specific Conductivity

Program ID	nOld	nNew	difference
69	201662	201682	20
95	2799	2789	-10

102	297	297	0
103	10667	10667	0
115	65	65	0
119	14	14	0
354	425	425	0
355	628	628	0
470	232	232	0
477	312	312	0
479	15142	15142	0
513	418	418	0
514	285	285	0
537	219	219	0
540	5	5	0
558	391	391	0
572	27	27	0
3000	2	2	0
3013	2290	2290	0
4042	37	37	0
4044	230	288	58
4054	955	955	0
4058	1873	1873	0
4067	13400	13400	0
5002	105219	105218	-1
5008	2010	2010	0
5014	283	283	0
5026	574	574	0
5028	5	5	0
10000	6094	6093	-1

# Total Kjeldahl Nitrogen

Table 19: Number of data entries by program - Total Kjeldahl Nitrogen  $\,$ 

ProgramID	nOld	nNew	$\it difference$
103	221	221	0
303	416	416	0
354	170	170	0
355	766	766	0
470	477	477	0
476	1490	1490	0
477	159	159	0
479	2822	2822	0
513	1074	1074	0
540	469	469	0
4054	2315	2315	0
4058	1832	1832	0
4063	61	61	0
5002	65531	65531	0
5014	1234	1234	0
5026	981	981	0
5028	725	725	0
5033	8364	8364	0

# Total Nitrogen

Table 20: Number of data entries by program - Total Nitrogen

ProgramID	nOld	nNew	difference
103	532	532	0
115	64	64	0
118	43	43	0
297	25177	25177	0
303	418	418	0
354	630	630	0
355	584	584	0
470	426	426	0
476	1445	1445	0
477	1	1	0
479	8195	8195	0
505	42	42	0
509	6212	6212	0
513	739	739	0
514	10343	10385	42
537	231	231	0
540	468	468	0
4054	2833	2833	0
4058	1831	1831	0
4063	58	58	0
5002	60277	60269	-8
5008	21	21	0
5014	551	551	0
5026	936	941	5
5028	724	724	0
5058	268	268	0
10000	2079	2079	0

#### **Total Phosphorus**

Table 21: Number of data entries by program - Total Phosphorus

ProgramID	nOld	nNew	$\it difference$
103	5666	5666	0
115	64	64	0
118	15	15	0
297	24990	24990	0
303	403	403	0
354	796	796	0
355	771	771	0
470	437	437	0
476	1723	1723	0
477	159	159	0
479	8183	8183	0

509     6187     6187     0       513     1095     1095     0       514     10366     10408     42       537     223     223     0       540     460     460     0       4054     4235     4235     0       4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0       10000     3157     3157     0	505	39	39	0
513     1095     1095     0       514     10366     10408     42       537     223     223     0       540     460     460     0       4054     4235     4235     0       4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	000			•
514     10366     10408     42       537     223     223     0       540     460     460     0       4054     4235     4235     0       4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	509	6187	6187	0
537     223     223     0       540     460     460     0       4054     4235     4235     0       4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	513	1095	1095	0
540       460       460       0         4054       4235       4235       0         4058       1815       1815       0         4063       61       61       0         5002       52986       52986       0         5008       21       21       0         5014       620       620       0         5026       974       974       0         5028       731       731       0         5033       8365       8365       0         5058       268       268       0	514	10366	10408	42
4054     4235     4235     0       4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	537	223	223	0
4058     1815     1815     0       4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	540	460	460	0
4063     61     61     0       5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	4054	4235	4235	0
5002     52986     52986     0       5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	4058	1815	1815	0
5008     21     21     0       5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	4063	61	61	0
5014     620     620     0       5026     974     974     0       5028     731     731     0       5033     8365     8365     0       5058     268     268     0	5002	52986	52986	0
5026       974       974       0         5028       731       731       0         5033       8365       8365       0         5058       268       268       0	5008	21	21	0
5028     731     731     0       5033     8365     8365     0       5058     268     268     0	5014	620	620	0
5033 8365 8365 0 5058 268 268 0	5026	974	974	0
5058 268 268 0	5028	731	731	0
0000 -00 -00 0	5033	8365	8365	0
10000  3157  3157  0	5058	268	268	0
	10000	3157	3157	0

## **Total Suspended Solids**

Table 22: Number of data entries by program - Total Suspended Solids  $\,$ 

ProgramID	nOld	nNew	difference
3	578	578	0
103	3614	3614	0
354	18	18	0
355	753	753	0
470	230	230	0
476	8	8	0
477	20	20	0
479	3370	3370	0
505	78	78	0
513	1049	1049	0
4054	3551	3551	0
4063	62	62	0
5002	42836	42836	0
5014	139	139	0
5026	1381	1381	0
5033	8993	8993	0
10000	3004	3004	0

## Turbidity

Table 23: Number of data entries by program - Turbidity

ProgramID	nOld	nNew	difference
95	398	398	0
103	19539	19539	0
129	2253	2253	0
297	25746	25746	0

303	473	473	0
354	734	734	0
355	1831	1831	0
469	299	299	0
470	161	161	0
476	1474	1474	0
477	308	308	0
479	4887	4887	0
505	74	74	0
509	6178	6178	0
513	699	699	0
537	263	263	0
540	99	99	0
572	4	4	0
965	2076	2076	0
3000	379	379	0
3013	1699	1699	0
4042	45	45	0
4044	56	114	58
4054	2575	2575	0
4058	1869	1869	0
4063	52	52	0
5002	201835	201835	0
5014	139	139	0
5026	410	410	0
5033	8370	8370	0
5058	264	264	0
10000	3176	3176	0

# Water Temperature

Table 24: Number of data entries by program - Water Temperature  $\,$ 

ProgramID	nOld	nNew	difference
3	655	655	0
60	946	1643	697
62	1182	1182	0
69	226864	226902	38
95	25144	25120	-24
102	366	366	0
103	25242	25242	0
115	325	322	-3
118	377	377	0
119	13	13	0
129	3887	3887	0
297	30766	30766	0
303	473	473	0
354	1281	1281	0
355	2484	2484	0
456	133	133	0
469	988	988	0
470	235	235	0
476	986	986	0

477	156	156	0
479	18398	18398	0
505	188	188	0
509	12044	12044	0
513	418	418	0
537	266	266	0
540	434	434	0
557	866	866	0
558	416	416	0
560	2129	2129	0
572	30	30	0
899	85	85	0
965	4157	4157	0
982	916	916	0
3000	379	379	0
3001	12404	12404	0
3013	2336	2336	0
3016	49	49	0
4042	46	46	0
4043	3036	3036	0
4044	224	282	58
4049	1291	1354	63
4054	2877	2877	0
4057	227	227	0
4058	1866	1866	0
4064	619	619	0
4065	314	314	0
4067	16093	16093	0
5002	398415	398413	-2
5008	2010	2010	0
5014	283	283	0
5026	1016	1016	0
5028	171	171	0
5058	264	264	0
5071	4	4	0
10000	4010	4010	0

## Overview of SEACAR flag codes

#### Ammonia, Un-ionized (NH3)

Table 25: Overview of SEACAR Flag Codes for Ammonia, Unionized (NH3)

ProgramID	Parameter Name	n total prog	16Q	17Q	7Q
5028	Ammonia, Un-ionized (NH3)	523	1	1	523

#### Chlorophyll a, Corrected for Pheophytin

Table 26: Overview of SEACAR Flag Codes for Chlorophyll a, Corrected for Pheophytin

ProgramID	ParameterName	n total prog	9Q	17Q	7Q	11Q	12Q	16Q
103	Chlorophyll a, Corrected for Pheophytin	1353	1118	4	1353	79	0	0
303	Chlorophyll a, Corrected for Pheophytin	607	607	1	607	0	0	0
355	Chlorophyll a, Corrected for Pheophytin	5366	0	0	5366	5366	0	0
470	Chlorophyll a, Corrected for Pheophytin	676	676	0	676	0	0	0
476	Chlorophyll a, Corrected for Pheophytin	1401	1398	1	1401	1	485	0
477	Chlorophyll a, Corrected for Pheophytin	125	125	0	125	0	49	0
479	Chlorophyll a, Corrected for Pheophytin	287	287	0	287	0	0	0
505	Chlorophyll a, Corrected for Pheophytin	168	112	0	168	0	0	0
513	Chlorophyll a, Corrected for Pheophytin	905	613	0	905	0	4	0
514	Chlorophyll a, Corrected for Pheophytin	1140	1098	4	1140	42	0	25
537	Chlorophyll a, Corrected for Pheophytin	32	32	0	32	0	0	0
540	Chlorophyll a, Corrected for Pheophytin	468	461	3	468	0	0	0
4054	Chlorophyll a, Corrected for Pheophytin	5836	802	0	5836	20	0	0
4063	Chlorophyll a, Corrected for Pheophytin	61	60	0	61	0	0	0
5002	Chlorophyll a, Corrected for Pheophytin	18470	16735	26	18470	0	1434	1
5014	Chlorophyll a, Corrected for Pheophytin	619	619	3	619	0	87	0
5026	Chlorophyll a, Corrected for Pheophytin	287	0	0	287	0	0	0
5028	Chlorophyll a, Corrected for Pheophytin	681	64	0	681	4	181	0
5033	Chlorophyll a, Corrected for Pheophytin	1200	662	0	1200	0	542	0
10000	Chlorophyll a, Corrected for Pheophytin	2179	468	1	2179	0	0	0

#### Chlorophyll a, Uncorrected for Pheophytin

Table 27: Overview of SEACAR Flag Codes for Chlorophyll a, Uncorrected for Pheophytin

ProgramID	ParameterName	n total prog	9Q	17Q	7Q	11Q	16Q	12Q
3	Chlorophyll a, Uncorrected for Pheophytin	3879	0	0	3879	0	0	0
60	Chlorophyll a, Uncorrected for Pheophytin	366	82	0	366	0	0	79
95	Chlorophyll a, Uncorrected for Pheophytin	1888	1616	12	1888	0	0	141
103	Chlorophyll a, Uncorrected for Pheophytin	4780	3632	0	4780	190	26	0
115	Chlorophyll a, Uncorrected for Pheophytin	69	0	0	69	0	0	0
118	Chlorophyll a, Uncorrected for Pheophytin	109	0	0	109	42	0	0
297	Chlorophyll a, Uncorrected for Pheophytin	15194	3017	0	15194	0	0	0
354	Chlorophyll a, Uncorrected for Pheophytin	4122	0	0	4122	4122	0	0

355	Chlorophyll a, Uncorrected for Pheophytin	1737	0	0	1737	1737	0	0
470	Chlorophyll a, Uncorrected for Pheophytin	534	534	0	534	0	0	0
476	Chlorophyll a, Uncorrected for Pheophytin	1316	1315	0	1316	1	0	485
477	Chlorophyll a, Uncorrected for Pheophytin	127	127	0	127	0	0	50
479	Chlorophyll a, Uncorrected for Pheophytin	1835	1803	2	1835	0	0	51
509	Chlorophyll a, Uncorrected for Pheophytin	6172	557	0	6172	0	0	0
514	Chlorophyll a, Uncorrected for Pheophytin	9770	1687	24	9770	0	0	0
537	Chlorophyll a, Uncorrected for Pheophytin	41	41	0	41	0	0	0
540	Chlorophyll a, Uncorrected for Pheophytin	458	453	3	458	0	0	0
4054	Chlorophyll a, Uncorrected for Pheophytin	4421	809	1	4421	19	0	0
5002	Chlorophyll a, Uncorrected for Pheophytin	16520	11641	31	16520	0	0	1154
5008	Chlorophyll a, Uncorrected for Pheophytin	10	10	0	10	0	0	0
5014	Chlorophyll a, Uncorrected for Pheophytin	677	618	4	677	0	0	87
5026	Chlorophyll a, Uncorrected for Pheophytin	410	288	0	410	0	0	0
5028	Chlorophyll a, Uncorrected for Pheophytin	250	14	0	250	0	0	95
5058	Chlorophyll a, Uncorrected for Pheophytin	268	0	0	268	0	0	0
10000	Chlorophyll a, Uncorrected for Pheophytin	2783	467	1	2783	0	0	0

## Colored Dissolved Organic Matter

Table 28: Overview of SEACAR Flag Codes for Colored Dissolved Organic Matter

ProgramID	Parameter Name	n total prog	7Q	9Q	17Q	11Q	12Q
3	Colored Dissolved Organic Matter	467	467	0	0	0	0
103	Colored Dissolved Organic Matter	1294	1294	1167	0	0	0
476	Colored Dissolved Organic Matter	1081	1081	1080	0	1	488
477	Colored Dissolved Organic Matter	158	158	158	0	0	69
479	Colored Dissolved Organic Matter	3262	3262	3262	0	0	0
513	Colored Dissolved Organic Matter	608	608	398	0	0	34
514	Colored Dissolved Organic Matter	3646	3646	286	0	0	0
537	Colored Dissolved Organic Matter	17	17	17	0	0	0
540	Colored Dissolved Organic Matter	374	374	369	0	0	0
4054	Colored Dissolved Organic Matter	1328	1328	0	17	0	0
4063	Colored Dissolved Organic Matter	60	60	59	0	0	0
5002	Colored Dissolved Organic Matter	7032	7032	6425	5	0	883
5008	Colored Dissolved Organic Matter	2001	2001	2001	0	0	551
5014	Colored Dissolved Organic Matter	7	7	7	0	0	4
10000	Colored Dissolved Organic Matter	462	462	462	0	0	0

## Dissolved Oxygen

Table 29: Overview of SEACAR Flag Codes for Dissolved Oxygen

Program ID	Parameter Name	n total prog	16Q	6Q	9Q	11Q	12Q	17Q
60	Dissolved Oxygen	1657	0	1657	83	1264	91	0
62	Dissolved Oxygen	1182	0	1182	0	0	0	0
69	Dissolved Oxygen	224802	42	224802	164850	0	0	386
95	Dissolved Oxygen	14442	9	14442	13367	0	2019	32
102	Dissolved Oxygen	46	0	46	0	0	0	0
103	Dissolved Oxygen	23938	0	23938	4103	17682	2	1

115	D: 1 10	910	0	010	1.40	0	0	0
115	Dissolved Oxygen	319	0	319	143	0	0	0
118	Dissolved Oxygen	549	4	549	0	486	0	0
119	Dissolved Oxygen	14	0	14	1	0	0	0
129	Dissolved Oxygen	3933	0	3933	0	0	0	0
297	Dissolved Oxygen	31133	1	31133	3709	0	0	2
303	Dissolved Oxygen	68	0	68	68	0	0	0
354	Dissolved Oxygen	1224	0	1224	0	1224	0	0
355	Dissolved Oxygen	2464	2	2464	0	1274	0	0
469	Dissolved Oxygen	985	0	985	0	985	0	0
470	Dissolved Oxygen	232	0	232	232	0	0	1
476	Dissolved Oxygen	912	0	912	912	0	419	0
477	Dissolved Oxygen	151	0	151	151	0	66	0
479	Dissolved Oxygen	19874	36	19874	14649	0	422	5
505	Dissolved Oxygen	184	0	184	128	0	0	0
509	Dissolved Oxygen	12158	1	12158	1031	0	0	1
513	Dissolved Oxygen	418	2	418	272	0	196	0
537	Dissolved Oxygen	266	1	266	133	0	104	0
540	Dissolved Oxygen	393	0	393	388	0	0	1
557	Dissolved Oxygen	841	0	841	0	0	0	1
560	Dissolved Oxygen	2104	0	2104	0	2104	0	5
572	Dissolved Oxygen	27	0	27	0	0	0	0
899	Dissolved Oxygen	93	0	93	0	0	93	0
3000	Dissolved Oxygen	386	8	386	0	0	0	0
3001	Dissolved Oxygen	12374	8	12374	0	0	0	5
3013	Dissolved Oxygen	2283	0	2283	2116	166	382	1
4042	Dissolved Oxygen	46	0	46	0	0	0	0
4043	Dissolved Oxygen	2972	4	2972	217	0	2917	0
4044	Dissolved Oxygen	290	0	290	0	8	0	0
4049	Dissolved Oxygen	1152	0	1152	0	0	0	0
4054	Dissolved Oxygen	2792	0	2792	717	3	0	4
4057	Dissolved Oxygen	225	0	225	0	0	0	0
4058	Dissolved Oxygen	1834	1	1834	0	1834	0	3
4064	Dissolved Oxygen	619	0	619	0	0	0	0
4065	Dissolved Oxygen	314	0	314	0	314	0	0
4067	Dissolved Oxygen	17489	38	17489	6001	0	0	8
5002	Dissolved Oxygen	365953	632	365953	230312	0	25461	174
5008	Dissolved Oxygen	2010	0	2010	2010	0	554	0
5014	Dissolved Oxygen	275	3	275	196	0	100	0
5026	Dissolved Oxygen	1008	0	1008	617	0	0	0
5028	Dissolved Oxygen	124	0	124	54	0	123	0
5058	Dissolved Oxygen	266	2	266	0	0	0	0
5071	Dissolved Oxygen	4	0	4	0	0	0	0
10000	Dissolved Oxygen	6073	5	6073	1564	0	0	0

# Dissolved Oxygen Saturation

Table 30: Overview of SEACAR Flag Codes for Dissolved Oxygen Saturation  $\,$ 

ProgramID	Parameter Name	n total prog	6Q	9Q	17Q	16Q	11Q	12Q
60	Dissolved Oxygen Saturation	1273	1273	0	0	0	1273	0
62	Dissolved Oxygen Saturation	960	960	0	0	0	0	0
95	Dissolved Oxygen Saturation	1498	1498	1223	1	1	0	596

102	Dissolved Oxygen Saturation	333	333	1	0	0	0	0
129	Dissolved Oxygen Saturation	3933	3933	0	1	0	0	0
297	Dissolved Oxygen Saturation	25419	25419	858	12	0	0	0
303	Dissolved Oxygen Saturation	462	462	462	2	0	0	0
354	Dissolved Oxygen Saturation	1118	1118	0	0	0	1118	0
355	Dissolved Oxygen Saturation	2464	2464	0	0	0	1274	0
470	Dissolved Oxygen Saturation	2	2	2	0	0	0	0
476	Dissolved Oxygen Saturation	767	767	767	0	0	0	400
477	Dissolved Oxygen Saturation	151	151	151	0	0	0	66
505	Dissolved Oxygen Saturation	175	175	123	0	0	0	0
513	Dissolved Oxygen Saturation	388	388	256	0	0	0	196
537	Dissolved Oxygen Saturation	264	264	132	0	0	0	103
540	Dissolved Oxygen Saturation	3	3	3	0	0	0	0
558	Dissolved Oxygen Saturation	37	37	0	0	0	0	0
572	Dissolved Oxygen Saturation	27	27	0	1	0	0	0
3001	Dissolved Oxygen Saturation	12290	12290	0	18	103	0	0
3013	Dissolved Oxygen Saturation	1160	1160	1037	3	0	123	331
4042	Dissolved Oxygen Saturation	37	37	0	0	0	0	0
4044	Dissolved Oxygen Saturation	290	290	0	0	0	8	0
4054	Dissolved Oxygen Saturation	4	4	2	0	0	0	0
4064	Dissolved Oxygen Saturation	619	619	0	1	0	0	0
4067	Dissolved Oxygen Saturation	17030	17030	5888	28	0	0	0
5002	Dissolved Oxygen Saturation	61516	61516	36590	62	28	0	16523
5008	Dissolved Oxygen Saturation	2010	2010	2010	0	0	0	554
5014	Dissolved Oxygen Saturation	254	254	180	0	0	0	100
5026	Dissolved Oxygen Saturation	417	417	292	0	0	0	0
5028	Dissolved Oxygen Saturation	138	138	40	0	0	0	137
10000	Dissolved Oxygen Saturation	5763	5763	1564	0	0	0	0

#### Light Extinction Coefficient

Table 31: Overview of SEACAR Flag Codes for Light Extinction Coefficient

ProgramID	Parameter Name	n total prog	16Q	7Q	17Q	9Q	12Q
3	Light Extinction Coefficient	323	0	323	0	0	0
297	Light Extinction Coefficient	10401	16	10401	13	306	0
479	Light Extinction Coefficient	1252	0	1252	0	1252	0
509	Light Extinction Coefficient	491	0	491	0	56	0
4064	Light Extinction Coefficient	619	1	619	0	0	0
5002	Light Extinction Coefficient	2328	0	2328	3	2203	2
5058	Light Extinction Coefficient	133	1	133	0	0	0

#### Ammonium, Filtered (NH4)

Table 32: Overview of SEACAR Flag Codes for Ammonium, Filtered (NH4)  $\,$ 

ProgramID	Parameter Name	n total prog	7Q	9Q	11Q	17Q	12Q	16Q
3	Ammonium, Filtered (NH4)	2780	2780	0	0	101	0	0
103	Ammonium, Filtered (NH4)	43	43	0	43	0	0	0

115	Ammonium, Filtered (NH4)	64	64	0	0	0	0	0
297	Ammonium, Filtered (NH4)	24597	24597	3175	0	0	0	0
303	Ammonium, Filtered (NH4)	378	378	378	0	0	0	0
354	Ammonium, Filtered (NH4)	3811	3811	0	3811	0	0	0
355	Ammonium, Filtered (NH4)	5174	5174	0	5174	0	0	0
470	Ammonium, Filtered (NH4)	171	171	171	0	0	0	0
477	Ammonium, Filtered (NH4)	159	159	159	0	0	70	0
479	Ammonium, Filtered (NH4)	3145	3145	3077	0	0	128	0
505	Ammonium, Filtered (NH4)	119	119	71	0	0	0	0
509	Ammonium, Filtered (NH4)	6193	6193	559	0	0	0	0
513	Ammonium, Filtered (NH4)	723	723	514	0	0	109	0
4054	Ammonium, Filtered (NH4)	5727	5727	689	17	0	0	0
4063	Ammonium, Filtered (NH4)	62	62	61	0	0	0	0
5002	Ammonium, Filtered (NH4)	57603	57603	48557	0	20	1767	118
5014	Ammonium, Filtered (NH4)	592	592	592	0	0	87	0
5026	Ammonium, Filtered (NH4)	608	608	337	0	0	0	0
5028	Ammonium, Filtered (NH4)	177	177	62	4	0	161	0
5033	Ammonium, Filtered (NH4)	8370	8370	4619	0	0	3776	0
5058	Ammonium, Filtered (NH4)	268	268	0	0	0	0	0
10000	Ammonium, Filtered (NH4)	419	419	419	0	0	0	0

## Nitrate (NO3)

Table 33: Overview of SEACAR Flag Codes for Nitrate (NO3)

ProgramID	Parameter Name	n total prog	7Q	9Q	11Q	17Q	12Q
303	Nitrate (NO3)	8	8	8	0	0	0
354	Nitrate (NO3)	1976	1976	0	1976	0	0
513	Nitrate (NO3)	25	25	15	0	0	0
4063	Nitrate (NO3)	2	2	2	0	0	0
5002	Nitrate (NO3)	9235	9235	8465	0	20	0
5033	Nitrate (NO3)	8367	8367	4617	0	0	3774

# Nitrite (NO2)

Table 34: Overview of SEACAR Flag Codes for Nitrite (NO2)

Program ID	Parameter Name	$n\ total\ prog$	7Q	9Q	11Q	17Q	12Q
297	Nitrite (NO2)	4380	4380	2688	0	0	0
303	Nitrite (NO2)	7	7	7	0	0	0
354	Nitrite (NO2)	2180	2180	0	2180	0	0
479	Nitrite (NO2)	301	301	301	0	0	0
513	Nitrite (NO2)	548	548	342	0	0	0
4054	Nitrite (NO2)	1646	1646	648	17	11	0
4063	Nitrite (NO2)	63	63	62	0	0	0
5002	Nitrite (NO2)	11709	11709	10881	0	17	196
5033	Nitrite (NO2)	8373	8373	4621	0	3	3776
10000	Nitrite (NO2)	17	17	17	0	0	0

#### Nitrogen, organic

Table 35: Overview of SEACAR Flag Codes for Nitrogen, organic

Program ID	Parameter Name	$n\ total\ prog$	16Q	17Q	7Q	9Q
5002	Nitrogen, organic	7121	16	9	7121	4037

# NO2+3, Filtered

Table 36: Overview of SEACAR Flag Codes for NO2+3, Filtered

ProgramID	Parameter Name	n total prog	7Q	9Q	17Q	11Q	12Q	16Q
3	NO2+3, Filtered	2521	2521	0	129	0	0	0
115	NO2+3, Filtered	61	61	0	0	0	0	0
297	NO2+3, Filtered	19207	19207	2733	0	0	0	0
303	NO2+3, Filtered	405	405	405	0	0	0	0
354	NO2+3, Filtered	3081	3081	0	0	3081	0	0
355	NO2+3, Filtered	4713	4713	0	0	4713	0	0
470	NO2+3, Filtered	450	450	450	0	0	0	0
476	NO2+3, Filtered	4195	4195	4185	1	1	490	0
477	NO2+3, Filtered	159	159	159	0	0	70	0
479	NO2+3, Filtered	3071	3071	3002	0	0	130	0
505	NO2+3, Filtered	102	102	56	0	0	0	0
509	NO2+3, Filtered	6215	6215	560	0	0	0	0
513	NO2+3, Filtered	1933	1933	1381	0	0	0	0
540	NO2+3, Filtered	464	464	457	0	0	0	0
4054	NO2+3, Filtered	5422	5422	807	0	17	0	0
4058	NO2+3, Filtered	1859	1859	0	1	1859	0	0
4063	NO2+3, Filtered	58	58	57	0	0	0	0
5002	NO2+3, Filtered	65647	65647	55017	2	0	1982	176
5014	NO2+3, Filtered	560	560	501	0	0	87	0
5026	NO2+3, Filtered	972	972	337	0	0	0	0
5028	NO2+3, Filtered	739	739	68	0	4	188	0
5033	NO2+3, Filtered	8371	8371	4619	0	0	3776	0
5058	NO2+3, Filtered	268	268	0	0	0	0	0
10000	NO2+3, Filtered	3145	3145	485	0	0	0	0

 $\mathbf{pH}$ 

Table 37: Overview of SEACAR Flag Codes for pH

Program ID	Parameter Name	$n\ total\ prog$	6Q	9Q	11Q	17Q	12Q
3	рН	21	21	0	0	0	0
69	pН	223773	223773	164184	0	213	0
95	pН	12217	12217	11123	0	45	2029
103	pН	13818	13818	3891	8125	1	2
115	pН	319	319	147	0	0	0
118	pН	340	340	0	340	0	0
129	pН	2201	2201	0	0	3	0
297	pН	36	36	9	0	0	0
303	pН	402	402	402	0	16	0
354	pН	884	884	0	884	10	0
355	pН	1284	1284	0	353	7	0

469	рΗ	987	987	0	987	13	0
470	pH	234	234	234	0	1	0
476	pH	939	939	939	0	1	454
477	pH	155	155	155	0	0	69
479	pH	17481	17481	12578	0	9	421
509	pH	3472	3472	346	0	0	0
513	pH	418	418	272	0	0	196
537	рΗ	266	266	133	0	0	104
540	рΗ	345	345	340	0	0	0
557	рΗ	693	693	0	0	0	0
558	рΗ	218	218	0	0	0	0
560	рΗ	1841	1841	0	1841	0	0
899	рΗ	88	88	0	0	0	88
3000	рΗ	331	331	0	0	2	0
3001	рΗ	11783	11783	0	0	2	0
3013	рΗ	2271	2271	2114	156	1	385
4042	рΗ	40	40	0	0	0	0
4044	рΗ	290	290	0	8	0	0
4049	pH	1265	1265	0	0	0	0
4054	pH	2763	2763	708	3	0	0
4057	pH	228	228	0	0	0	0
4058	рΗ	1877	1877	0	1877	1	0
4065	рΗ	314	314	0	314	1	0
4067	рΗ	13653	13653	5176	0	9	0
5002	рΗ	269141	269141	211654	0	202	21166
5008	рΗ	2004	2004	2004	0	0	551
5014	рН	283	283	203	0	0	100
5026	pH	1015	1015	621	0	0	0
5028	рΗ	182	182	59	0	0	176
10000	pH	5828	5828	1557	0	0	0

# Phosphate, Filtered (PO4)

Table 38: Overview of SEACAR Flag Codes for Phosphate, Filtered  $(\mathrm{PO4})$ 

ProgramID	Parameter Name	n total prog	7Q	11Q	9Q	17Q	12Q	16Q
3	Phosphate, Filtered (PO4)	4006	4006	0	0	15	0	0
103	Phosphate, Filtered (PO4)	48	48	44	4	0	0	0
115	Phosphate, Filtered (PO4)	63	63	0	0	0	0	0
354	Phosphate, Filtered (PO4)	4108	4108	4108	0	0	0	0
355	Phosphate, Filtered (PO4)	3176	3176	3176	0	7	0	0
479	Phosphate, Filtered (PO4)	2075	2075	0	2075	0	0	0
505	Phosphate, Filtered (PO4)	102	102	0	56	0	0	0
513	Phosphate, Filtered (PO4)	1624	1624	0	1425	2	0	0
3000	Phosphate, Filtered (PO4)	381	381	0	0	0	0	0
4054	Phosphate, Filtered (PO4)	4171	4171	0	0	0	0	0
5002	Phosphate, Filtered (PO4)	36205	36205	0	29978	34	119	71
10000	Phosphate, Filtered (PO4)	1962	1962	0	0	0	0	0

Salinity

Table 39: Overview of SEACAR Flag Codes for Salinity

12Q	11Q	17Q	9Q	6Q	n total prog	Parameter Name	Program ID
0	0	16	0	4287	4287	Salinity	3
91	1196	0	83	1589	1589	Salinity	60
0	0	0	0	1142	1142	Salinity	62
0	0	118	166354	226532	226532	Salinity	69
2068	0	127	23158	25921	25921	Salinity	95
0	0	0	1	383	383	Salinity	102
0	0	0	78	196	196	Salinity	103
0	0	2	145	324	324	Salinity	115
0	535	16	0	535	535	Salinity	118
0	0	0	1	14	14	Salinity	119
0	0	0	0	3888	3888	Salinity	129
0	0	33	3444	30806	30806	Salinity	297
0	0	0	488	488	488	Salinity	303
0	1282	6	0	1282	1282	Salinity	354
0	1302	0	0	2501	2501	Salinity	355
0	0	6	0	134	134	Salinity	456
0	987	0	0	987	987	Salinity	469
0	0	0	$\overset{\circ}{2}$	2	2	Salinity	470
468	0	1	965	965	965	Salinity	476
54	0	0	135	135	135	Salinity	477
456	0	0	14795	19917	19917	Salinity	479
0	0	0	132	188	188	Salinity	505
0	0	21	997	12034	12034	Salinity	509
196	0	0	206	300	300	Salinity	513
103	0	0	132	$\frac{366}{264}$	$\frac{360}{264}$	Salinity	537
0	0	0	419	424	424	Salinity	540
0	0	0	0	864	864	Salinity	557
0	0	0	0	390	390	Salinity	558
0	2129	1	0	2129	2129		560
0	0	0	0	31	31	Salinity	572
						Salinity	
82	0	0	0	82	82	Salinity	899
0	0	9	0	4157	4157	Salinity	965
0	0	4	0	388	388	Salinity	3000
0	0	14	0	12345	12345	Salinity	3001
388	208	4	2137	2346	2346	Salinity	3013
0	0	0	0	81	81	Salinity	3016
0	0	0	0	46	46	Salinity	4042
2987	0	1	221	3042	3042	Salinity	4043
0	8	0	0	290	290	Salinity	4044
0	0	27	0	1354	1354	Salinity	4049
0	3	0	169	3307	3307	Salinity	4054
0	0	3	0	230	230	Salinity	4057
0	1869	3	0	1869	1869	Salinity	4058
0	0	0	0	619	619	Salinity	4064
	~	0	0	314	314	Salinity	4065
0	314						
0	0	3	4727	12523	12523	Salinity	4067
$0\\24486$		$\begin{array}{c} 3 \\ 296 \end{array}$	$4727 \\ 234319$	$\frac{12523}{373901}$	373901	Salinity	5002
0	0	3 296 0	4727 234319 203	12523 373901 283	373901 $283$	Salinity Salinity	$5002 \\ 5014$
$0\\24486$	0	$\begin{array}{c} 3 \\ 296 \end{array}$	$4727 \\ 234319$	$\frac{12523}{373901}$	373901	Salinity	5002

5058	Salinity	266	266	0	0	0	0
5071	Salinity	4	4	0	0	0	0
10000	Salinity	5531	5531	1567	0	0	0

## Secchi Depth

Table 40: Overview of SEACAR Flag Codes for Secchi Depth

ProgramID	Parameter Name	n total prog	6Q	gQ	11Q	17Q	12Q
60	Secchi Depth	42	42	0	0	25	0
69	Secchi Depth	215520	215520	159086	0	0	0
103	Secchi Depth	2973	2973	2630	48	71	0
115	Secchi Depth	88	88	18	0	0	0
118	Secchi Depth	70	70	0	70	0	0
129	Secchi Depth	1966	1966	0	1966	0	0
303	Secchi Depth	4	4	4	0	0	0
355	Secchi Depth	952	952	0	365	0	0
469	Secchi Depth	516	516	0	516	0	0
470	Secchi Depth	298	298	298	0	1	21
476	Secchi Depth	961	961	960	0	0	479
477	Secchi Depth	155	155	155	0	0	69
479	Secchi Depth	8546	8546	6315	0	4	240
513	Secchi Depth	155	155	154	0	0	97
514	Secchi Depth	9257	9257	0	1991	1	0
537	Secchi Depth	217	217	0	50	1	0
557	Secchi Depth	508	508	0	0	0	0
558	Secchi Depth	519	519	0	0	0	0
560	Secchi Depth	333	333	0	333	0	0
572	Secchi Depth	9	9	0	0	0	0
3000	Secchi Depth	143	143	0	0	0	0
3001	Secchi Depth	8308	8308	0	0	0	0
3013	Secchi Depth	2265	2265	2112	152	0	386
3016	Secchi Depth	50	50	0	0	0	0
4049	Secchi Depth	317	317	0	0	0	0
4054	Secchi Depth	936	936	0	0	0	0
4065	Secchi Depth	318	318	0	318	0	0
5002	Secchi Depth	16145	16145	11290	1881	2	5249
5008	Secchi Depth	1005	1005	1005	0	0	298
5014	Secchi Depth	240	240	181	0	0	70
5026	Secchi Depth	425	425	287	0	0	0
5028	Secchi Depth	64	64	25	0	0	64
5033	Secchi Depth	4797	4797	0	4797	206	0
10000	Secchi Depth	2825	2825	423	0	0	0

# Specific Conductivity

Table 41: Overview of SEACAR Flag Codes for Specific Conductivity  $\,$ 

ProgramID	Parameter Name	n total prog	17Q	6Q	9Q	11Q	12Q
69	Specific Conductivity	201682	0	201682	148856	0	0

95	Specific Conductivity	2789	0	2789	2238	0	350
102	Specific Conductivity	297	0	297	1	0	0
103	Specific Conductivity	10667	1	10667	1524	8230	2
115	Specific Conductivity	65	0	65	21	0	0
119	Specific Conductivity	14	0	14	1	0	0
354	Specific Conductivity	425	11	425	0	425	0
355	Specific Conductivity	628	1	628	0	0	0
470	Specific Conductivity	232	0	232	232	0	0
477	Specific Conductivity	312	0	312	312	0	139
479	Specific Conductivity	15142	0	15142	10103	0	457
513	Specific Conductivity	418	0	418	272	0	196
514	Specific Conductivity	285	0	285	285	0	0
537	Specific Conductivity	219	0	219	118	0	72
540	Specific Conductivity	5	0	5	5	0	0
558	Specific Conductivity	391	0	391	0	0	0
572	Specific Conductivity	27	1	27	0	0	0
3000	Specific Conductivity	2	0	2	0	0	0
3013	Specific Conductivity	2290	5	2290	2140	149	387
4042	Specific Conductivity	37	0	37	0	0	0
4044	Specific Conductivity	288	0	288	0	8	0
4054	Specific Conductivity	955	0	955	594	0	0
4058	Specific Conductivity	1873	10	1873	0	1873	0
4067	Specific Conductivity	13400	4	13400	4661	0	0
5002	Specific Conductivity	105218	336	105218	65289	0	21185
5008	Specific Conductivity	2010	0	2010	2010	0	554
5014	Specific Conductivity	283	0	283	203	0	100
5026	Specific Conductivity	574	0	574	312	0	0
5028	Specific Conductivity	5	0	5	0	0	5
10000	Specific Conductivity	6093	1	6093	1565	0	0

# Total Kjeldahl Nitrogen

Table 42: Overview of SEACAR Flag Codes for Total Kjeldahl Nitrogen

ProgramID	Parameter Name	n total prog	7Q	9Q	11Q	17Q	12Q	16Q
103	Total Kjeldahl Nitrogen	221	221	131	62	0	0	0
303	Total Kjeldahl Nitrogen	416	416	416	0	3	0	0
354	Total Kjeldahl Nitrogen	170	170	0	170	0	0	0
355	Total Kjeldahl Nitrogen	766	766	0	766	0	0	0
470	Total Kjeldahl Nitrogen	477	477	477	0	0	0	0
476	Total Kjeldahl Nitrogen	1490	1490	1487	1	0	484	0
477	Total Kjeldahl Nitrogen	159	159	159	0	0	70	0
479	Total Kjeldahl Nitrogen	2822	2822	2757	0	0	122	0
513	Total Kjeldahl Nitrogen	1074	1074	800	0	1	105	0
540	Total Kjeldahl Nitrogen	469	469	462	0	0	0	0
4054	Total Kjeldahl Nitrogen	2315	2315	850	17	0	0	0
4058	Total Kjeldahl Nitrogen	1832	1832	0	1832	0	0	0
4063	Total Kjeldahl Nitrogen	61	61	60	0	0	0	0
5002	Total Kjeldahl Nitrogen	65531	65531	53867	0	84	1984	23
5014	Total Kjeldahl Nitrogen	1234	1234	1175	0	3	166	0
5026	Total Kjeldahl Nitrogen	981	981	336	0	0	0	0
5028	Total Kjeldahl Nitrogen	725	725	60	4	0	175	0

5033	Total Kjeldahl Nitrogen	8364	8364	4614	0	0	3774	0
10000	Total Kjeldahl Nitrogen	2494	2494	481	0	0	0	0

# Total Nitrogen

Table 43: Overview of SEACAR Flag Codes for Total Nitrogen

ProgramID	Parameter Name	n total prog	1Q	9Q	17Q	7Q	11Q	12Q	16Q
103	Total Nitrogen	532	0	39	0	532	469	0	0
115	Total Nitrogen	64	0	0	0	64	0	0	0
118	Total Nitrogen	43	0	0	0	43	43	0	0
297	Total Nitrogen	25177	0	3235	1	25177	0	0	0
303	Total Nitrogen	418	2	418	12	418	0	0	0
354	Total Nitrogen	630	0	0	0	630	630	0	0
355	Total Nitrogen	584	0	0	0	584	584	0	0
470	Total Nitrogen	426	426	426	0	426	0	0	0
476	Total Nitrogen	1445	1445	1442	1	1445	1	484	0
477	Total Nitrogen	1	1	1	0	1	0	1	0
479	Total Nitrogen	8195	50	8127	6	8195	0	127	0
505	Total Nitrogen	42	0	20	0	42	0	0	0
509	Total Nitrogen	6212	0	560	1	6212	0	0	0
513	Total Nitrogen	739	600	483	2	739	0	0	0
514	Total Nitrogen	10385	0	1683	1	10385	42	0	0
537	Total Nitrogen	231	0	48	0	231	0	0	0
540	Total Nitrogen	468	468	461	0	468	0	0	0
4054	Total Nitrogen	2833	613	170	0	2833	0	0	0
4058	Total Nitrogen	1831	1831	0	2	1831	1831	0	0
4063	Total Nitrogen	58	58	57	0	58	0	0	0
5002	Total Nitrogen	60269	37995	43256	155	60269	0	1820	17
5008	Total Nitrogen	21	0	21	0	21	0	0	0
5014	Total Nitrogen	551	551	492	2	551	0	87	0
5026	Total Nitrogen	941	941	336	0	941	0	0	0
5028	Total Nitrogen	724	724	59	0	724	4	174	0
5058	Total Nitrogen	268	0	0	1	268	0	0	0
10000	Total Nitrogen	2079	17	17	6	2079	0	0	0

## **Total Phosphorus**

Table 44: Overview of SEACAR Flag Codes for Total Phosphorus

ProgramID	Parameter Name	$n\ total\ prog$	7Q	9Q	11Q	17Q	12Q	16Q
103	Total Phosphorus	5666	5666	4138	382	7	0	0
115	Total Phosphorus	64	64	0	0	0	0	0
118	Total Phosphorus	15	15	0	15	0	0	0
297	Total Phosphorus	24990	24990	3146	0	0	0	0
303	Total Phosphorus	403	403	403	0	0	0	0
354	Total Phosphorus	796	796	0	796	0	0	0
355	Total Phosphorus	771	771	0	771	3	0	0
470	Total Phosphorus	437	437	437	0	0	0	0
476	Total Phosphorus	1723	1723	1722	1	0	486	0
477	Total Phosphorus	159	159	159	0	0	70	0

479	Total Phosphorus	8183	8183	8114	0	2	129	0
505	Total Phosphorus	39	39	18	0	0	0	0
509	Total Phosphorus	6187	6187	555	0	0	0	0
513	Total Phosphorus	1095	1095	796	0	6	116	0
514	Total Phosphorus	10408	10408	1704	42	0	0	0
537	Total Phosphorus	223	223	40	0	0	0	0
540	Total Phosphorus	460	460	453	0	0	0	0
4054	Total Phosphorus	4235	4235	786	17	0	0	0
4058	Total Phosphorus	1815	1815	0	1815	0	0	0
4063	Total Phosphorus	61	61	60	0	0	0	0
5002	Total Phosphorus	52986	52986	43572	0	116	2199	85
5008	Total Phosphorus	21	21	21	0	0	0	0
5014	Total Phosphorus	620	620	620	0	3	87	0
5026	Total Phosphorus	974	974	337	0	0	0	0
5028	Total Phosphorus	731	731	65	4	0	181	0
5033	Total Phosphorus	8365	8365	4618	0	0	3770	17
5058	Total Phosphorus	268	268	0	0	0	0	0
10000	Total Phosphorus	3157	3157	490	0	0	0	0

# Total Suspended Solids

Table 45: Overview of SEACAR Flag Codes for Total Suspended Solids

Program ID	Parameter Name	$n\ total\ prog$	7Q	9Q	11Q	17Q	12Q	16Q
3	Total Suspended Solids	578	578	0	0	0	0	0
103	Total Suspended Solids	3614	3614	2575	86	3	0	0
354	Total Suspended Solids	18	18	0	18	0	0	0
355	Total Suspended Solids	753	753	0	753	0	0	0
470	Total Suspended Solids	230	230	230	0	0	0	0
476	Total Suspended Solids	8	8	7	0	0	0	0
477	Total Suspended Solids	20	20	20	0	0	15	0
479	Total Suspended Solids	3370	3370	3301	0	0	130	0
505	Total Suspended Solids	78	78	56	0	0	0	0
513	Total Suspended Solids	1049	1049	770	0	3	108	0
4054	Total Suspended Solids	3551	3551	682	19	8	0	0
4063	Total Suspended Solids	62	62	61	0	0	0	0
5002	Total Suspended Solids	42836	42836	38303	0	50	1329	18
5014	Total Suspended Solids	139	139	139	0	0	76	0
5026	Total Suspended Solids	1381	1381	626	0	0	0	0
5033	Total Suspended Solids	8993	8993	4967	0	6	4052	2
10000	Total Suspended Solids	3004	3004	475	0	0	0	0

## Turbidity

Table 46: Overview of SEACAR Flag Codes for Turbidity

ProgramID	Parameter Name	n total prog	7Q	9Q	11Q	17Q	16Q	12Q
95	Turbidity	398	398	351	0	1	0	0
103	Turbidity	19539	19539	3422	14987	224	11	0
129	Turbidity	2253	2253	0	0	0	0	0

297	Turbidity	25746	25746	3397	0	0	29	0
303	Turbidity	473	473	473	0	23	11	0
354	Turbidity	734	734	0	734	14	0	0
355	Turbidity	1831	1831	0	1170	0	0	0
469	Turbidity	299	299	0	299	0	5	0
470	Turbidity	161	161	161	0	0	0	0
476	Turbidity	1474	1474	1471	1	0	0	489
477	Turbidity	308	308	308	0	0	0	139
479	Turbidity	4887	4887	4818	0	0	0	130
505	Turbidity	74	74	72	0	0	2	0
509	Turbidity	6178	6178	556	0	0	0	0
513	Turbidity	699	699	487	0	0	0	72
537	Turbidity	263	263	132	0	0	0	102
540	Turbidity	99	99	97	0	0	0	0
572	Turbidity	4	4	0	0	0	0	0
965	Turbidity	2076	2076	0	0	0	0	0
3000	Turbidity	379	379	0	0	0	0	0
3013	Turbidity	1699	1699	1685	14	0	0	257
4042	Turbidity	45	45	0	0	0	0	0
4044	Turbidity	114	114	0	0	0	0	0
4054	Turbidity	2575	2575	92	0	0	0	0
4058	Turbidity	1869	1869	0	1869	1	0	0
4063	Turbidity	52	52	51	0	0	0	0
5002	Turbidity	201835	201835	191918	0	25	0	2194
5014	Turbidity	139	139	139	0	0	0	76
5026	Turbidity	410	410	288	0	1	9	0
5033	Turbidity	8370	8370	4619	0	0	0	3775
5058	Turbidity	264	264	0	0	0	0	0
10000	Turbidity	3176	3176	490	0	0	0	0

# Water Temperature

Table 47: Overview of SEACAR Flag Codes for Water Temperature  $\,$ 

Program ID	Parameter Name	$n\ total\ prog$	6Q	9Q	17Q	11Q	12Q
3	Water Temperature	655	655	0	0	0	0
60	Water Temperature	1643	1643	83	0	1250	91
62	Water Temperature	1182	1182	0	0	0	0
69	Water Temperature	226902	226902	166624	288	0	0
95	Water Temperature	25120	25120	22235	82	0	2150
102	Water Temperature	366	366	1	0	0	0
103	Water Temperature	25242	25242	3815	5	19109	2
115	Water Temperature	322	322	144	0	0	0
118	Water Temperature	377	377	0	0	377	0
119	Water Temperature	13	13	0	0	0	0
129	Water Temperature	3887	3887	0	1	0	0
297	Water Temperature	30766	30766	3423	31	0	0
303	Water Temperature	473	473	473	1	0	0
354	Water Temperature	1281	1281	0	7	1281	0
355	Water Temperature	2484	2484	0	0	1295	0
456	Water Temperature	133	133	0	0	0	0
469	Water Temperature	988	988	0	0	988	0
470	Water Temperature	235	235	235	0	0	0
	_						

476	Water Temperature	986	986	986	0	0	474
477	Water Temperature	156	156	156	0	0	69
479	Water Temperature	18398	18398	13224	5	0	456
505	Water Temperature	188	188	132	0	0	0
509	Water Temperature	12044	12044	995	9	0	0
513	Water Temperature	418	418	272	0	0	196
537	Water Temperature	266	266	133	1	0	104
540	Water Temperature	434	434	429	2	0	0
557	Water Temperature	866	866	0	1	0	0
558	Water Temperature	416	416	0	1	0	0
560	Water Temperature	2129	2129	0	3	2129	0
572	Water Temperature	30	30	0	0	0	0
899	Water Temperature	85	85	0	0	0	85
965	Water Temperature	4157	4157	0	6	0	0
982	Water Temperature	916	916	0	0	0	0
3000	Water Temperature	379	379	0	13	0	0
3001	Water Temperature	12404	12404	0	69	0	0
3013	Water Temperature	2336	2336	2133	11	202	386
3016	Water Temperature	49	49	0	0	0	0
4042	Water Temperature	46	46	0	0	0	0
4043	Water Temperature	3036	3036	220	3	0	2981
4044	Water Temperature	282	282	0	0	0	0
4049	Water Temperature	1354	1354	0	0	0	0
4054	Water Temperature	2877	2877	735	6	3	0
4057	Water Temperature	227	227	0	1	0	0
4058	Water Temperature	1866	1866	0	2	1866	0
4064	Water Temperature	619	619	0	4	0	0
4065	Water Temperature	314	314	0	0	314	0
4067	Water Temperature	16093	16093	5899	5	0	0
5002	Water Temperature	398413	398413	250314	259	0	26224
5008	Water Temperature	2010	2010	2010	1	0	554
5014	Water Temperature	283	283	203	0	0	100
5026	Water Temperature	1016	1016	622	0	0	0
5028	Water Temperature	171	171	57	0	0	169
5058	Water Temperature	264	264	0	0	0	0
5071	Water Temperature	4	4	0	0	0	0
10000	Water Temperature	4010	4010	0	0	0	0

# Continuous WQ

# Overview

Table 48: Comparison of New vs. Old data exports - (Continuous  $\mathrm{WQ})$ 

parameter	region	oldFile	newFile	nDataOld	nDataNew	difference	pctChange
Dissolved Oxygen	NW	2024-Feb-22	2024-Mar-23	4244381	4251730	7349	0.17
Dissolved Oxygen	NE	2024-Feb- $22$	2024-Mar- $23$	2873427	2874036	609	0.02
Dissolved Oxygen	SW	2024 - Feb - 23	2024-Mar- $23$	5582473	5584165	1692	0.03
Dissolved Oxygen	SE	2024-Feb- $22$	2024-Mar- $23$	613852	613852	0	0.00
Dissolved Oxygen Saturation	NW	2024-Feb- $22$	2024-Mar- $23$	4271834	4272271	437	0.01
Dissolved Oxygen Saturation	NE	2024 - Feb - 22	2024-Mar- $23$	2899035	2899067	32	0.00
Dissolved Oxygen Saturation	SW	2024-Feb- $22$	2024-Mar- $23$	5620419	5620446	27	0.00
Dissolved Oxygen Saturation	SE	2024-Feb- $22$	2024-Mar- $23$	617484	617484	0	0.00
pН	NW	2024-Feb- $22$	2024-Mar- $23$	4480608	4484896	4288	0.10
pН	NE	2024-Feb- $22$	2024-Mar- $23$	2824312	2824312	0	0.00
pН	SW	2024 - Feb - 23	2024-Mar- $23$	5986568	5987578	1010	0.02
pН	SE	2024 - Feb - 22	2024-Mar- $23$	615939	615939	0	0.00
Salinity	NW	2024 - Feb - 22	2024-Mar- $23$	4817388	4841665	24277	0.50
Salinity	NE	2024-Feb- $22$	2024-Mar- $23$	2907497	2922861	15364	0.53
Salinity	SW	2024 - Feb - 23	2024-Mar- $23$	6280894	6308474	27580	0.44
Salinity	SE	2024-Feb- $22$	2024-Mar- $23$	694311	695491	1180	0.17
Turbidity	NW	2024 - Feb - 22	2024-Mar- $23$	4262308	4276280	13972	0.33
Turbidity	NE	2024 - Feb - 22	2024-Mar- $23$	2775161	2784663	9502	0.34
Turbidity	SW	2024 - Feb - 22	2024-Mar- $23$	5568132	5581599	13467	0.24
Turbidity	SE	2024 - Feb - 22	2024-Mar- $23$	622713	622713	0	0.00
Water Temperature	NW	2024 - Feb - 22	2024-Mar- $23$	6276525	6295910	19385	0.31
Water Temperature	NE	2024-Feb- $22$	2024-Mar- $23$	3039731	3057038	17307	0.57
Water Temperature	SW	2024-Feb- $23$	2024-Mar- $23$	7906815	7938189	31374	0.40
Water Temperature	SE	2024-Feb-22	2024 mar-23	19502995	19504308	1313	0.01

# Differences in Program data between exports Dissolved Oxygen

Table 49: Number of data entries by program - Dissolved Oxygen

ProgramID	nOld	nNew	difference
7	4862	9132	4270
7	120	689	569
7	188	1302	1114
354	2571740	2572318	578
355	3058205	3061283	3078
467	221521	221521	0
468	177846	177846	0
471	778154	778154	0
473	8153	8153	0
474	1429985	1429985	0
505	3793	3794	1
512	1572407	1572407	0
4054	2345903	2345905	2
5005	39746	39746	0
5006	283080	283080	0
5061	164086	164124	38
5077	613852	613852	0
10003	40492	40492	0

## Dissolved Oxygen Saturation

Table 50: Number of data entries by program - Dissolved Oxygen Saturation  $\,$ 

ProgramID	nOld	nNew	difference
354	2597069	2597096	27
355	3066206	3066642	436
467	227789	227789	0
468	193941	193941	0
471	780151	780151	0
473	8153	8153	0
474	1443830	1443830	0
505	3747	3748	1
512	1571367	1571367	0
4054	2364299	2364299	0
5005	39746	39746	0
5006	283113	283113	0
5061	171385	171417	32
5077	617484	617484	0
10003	40492	40492	0

pH

Table 51: Number of data entries by program -  $\mathrm{pH}$ 

Program ID	nOld	nNew	$\it difference$
7	4521	8809	4288
7	154	1164	1010
354	2827053	2827053	0
355	3100533	3100533	0
467	236519	236519	0
468	199162	199162	0
471	938733	938733	0
473	8306	8306	0
474	1678153	1678153	0
505	1140	1140	0
512	1472902	1472902	0
4054	2294634	2294634	0
5005	38184	38184	0
5006	286234	286234	0
5061	163886	163886	0
5077	615939	615939	0
10003	41374	41374	0

## Salinity

Table 52: Number of data entries by program - Salinity

ProgramID	nOld	nNew	difference
2	86204	86204	0
7	123	634	511
7	3339	17692	14353
7	6502	33978	27476
7	330	1510	1180
354	2933198	2933302	104
355	3188823	3212589	23766
467	238173	238173	0
468	196061	196061	0
471	1190339	1190339	0
473	8304	8304	0
474	1707013	1707013	0
505	3869	3869	0
512	1625877	1625877	0
4054	2330458	2331460	1002
5005	43791	43791	0
5006	294941	294941	0
5061	158685	158685	0
5062	34909	34918	9
5077	607777	607777	0
10003	41374	41374	0

# Turbidity

Table 53: Number of data entries by program - Turbidity

ProgramID	nOld	nNew	difference
7	142	1174	1032
354	2754489	2766924	12435
355	2980279	2994251	13972
467	250273	250273	0
468	156660	156660	0
471	872754	872754	0
473	8263	8263	0
474	1426676	1426676	0
505	2342	2342	0
512	1378562	1378562	0
4054	2264950	2274403	9453
5005	39124	39124	0
5006	286204	286204	0
5061	143714	143763	49
5077	622713	622713	0
10003	41169	41169	0

## Water Temperature

Table 54: Number of data entries by program - Water Temperature

ProgramID	nOld	nNew	difference
2	86204	86204	0
5	1266969	1266969	0
5	1345937	1345937	0
5	3345612	3345612	0
7	5705	25090	19385
7	3949	21256	17307
7	7422	38796	31374
7	331	1644	1313
296	3987025	3987025	0
354	3017764	3017764	0
355	3304501	3304501	0
467	262942	262942	0
468	217594	217594	0
471	1214944	1214944	0
473	8305	8305	0
474	1848151	1848151	0
505	3870	3870	0
512	1679236	1679236	0
899	922737	922737	0
986	8692018	8692018	0
989	1824357	1824357	0
4054	2455570	2455570	0
5005	43791	43791	0
5006	294991	294991	0
5061	164583	164583	0
5062	35473	35473	0
5077	644711	644711	0

10003 41374 41374 0

## Overview of SEACAR flag codes

#### Dissolved Oxygen

Table 55: Overview of SEACAR Flag Codes for Dissolved Oxygen

ProgramID	Parameter Name	n total prog	16Q	17Q	6Q
5077	Dissolved Oxygen	613852	1286	301	613852

## Dissolved Oxygen Saturation

Table 56: Overview of SEACAR Flag Codes for Dissolved Oxygen Saturation  $\,$ 

ProgramID	Parameter Name	n total prog	16Q	17Q	6Q
5077	Dissolved Oxygen Saturation	617484	826	4666	617484

#### pH

Table 57: Overview of SEACAR Flag Codes for pH

ProgramID	Parameter Name	n total prog	6Q
5077	рН	615939	615939

#### Salinity

Table 58: Overview of SEACAR Flag Codes for Salinity

ProgramID	Parameter Name	n total prog	6Q
	Salinity	86204	86204
	Salinity Salinity	$   \begin{array}{c}     1510 \\     607777   \end{array} $	$   \begin{array}{c}     1510 \\     607777   \end{array} $

#### Turbidity

Table 59: Overview of SEACAR Flag Codes for Turbidity

ProgramID	Parameter Name	n total prog	17Q	6Q
5077	Turbidity	622713	5	622713

#### Water Temperature

Table 60: Overview of SEACAR Flag Codes for Water Temperature

Program ID	Parameter Name	n total prog	6Q	16Q	11Q
2	Water Temperature	86204	86204	0	0
5	Water Temperature	3345612	3345612	1	0

7	Water Temperature	1644	1644	0	0
296	Water Temperature	3987025	3987025	0	0
899	Water Temperature	922737	922737	0	0
986	Water Temperature	8692018	8692018	0	8692018
989	Water Temperature	1824357	1824357	1	0
5077	Water Temperature	644711	644711	46	0

# Species

# Overview

Table 61: Comparison of New vs. Old data exports - (Species)

habitat	oldFile	newFile	nDataOld	nDataNew	difference
Coral	2024-Feb-23	2024-Mar-28	8460697	8467008	6311
CW	2024-Feb- $23$	2024-Mar- $27$	23508	23508	0
Nekton	2024 - Feb - 23	2024-Mar- $27$	2981245	2981245	0
Oyster	2024 - Feb - 23	2024-Mar- $27$	571216	574603	3387
SAV	$2024\text{-}\mathrm{Feb}\text{-}23$	2024-Mar-29	4321684	4361842	40158

# Differences in Program data between exports Coral

Table 62: Number of data entries by program - Colony Height

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
136	Colony Height	15000	16258	1258	NA
169	Colony Height	72588	72657	69	NA
981	Colony Height	135707	135707	0	NA
3022	Colony Height	36857	36860	3	NA
4019	Colony Height	5589	5589	0	NA
5040	Colony Height	1341	1342	1	NA

Table 63: Number of data entries by program - Colony Length

Program ID	Parameter Name	nOld	nNew	difference	$QuadSize\ m2$
136	Colony Length	15013	16271	1258	NA
5040	Colony Length	1342	1342	0	NA

Table 64: Number of data entries by program - Colony Width

ProgramID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
136	Colony Width	15000	16259	1259	NA
981	Colony Width	135740	135740	0	NA
3022	Colony Width	36823	36824	1	NA
4019	Colony Width	5589	5589	0	NA
5040	Colony Width	1342	1342	0	NA

Table 65: Number of data entries by program - Count

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
136	Count	13910	47791	33881	NA
3021	Count	214	384	170	NA
3022	Count	168	1687	1519	NA
3024	Count	72358	210163	137805	NA

Table 66: Number of data entries by program - Percent Live Tissue

ProgramID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
136	Percent Live Tissue	14963	17388	2425	NA
5040	Percent Live Tissue	1341	1341	0	NA

Table 67: Number of data entries by program - Presence/Absence

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
136	Presence/Absence	13910	13676	-234	NA
295	Presence/Absence	95	95	0	NA
379	Presence/Absence	4113	4113	0	NA
915	Presence/Absence	5779270	5779270	0	NA
965	Presence/Absence	918359	918359	0	NA
981	Presence/Absence	135743	135743	0	NA
3021	Presence/Absence	384	384	0	NA
3024	Presence/Absence	249403	249403	0	NA
4018	Presence/Absence	42923	42923	0	NA
4019	Presence/Absence	5589	5589	0	NA
5027	Presence/Absence	8942	8942	0	NA
5042	Presence/Absence	2394	2394	0	NA

Table 68: Number of data entries by program - Colony Density

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
169	Colony Density	7475	34045	26570	NA
4019	Colony Density	540	540	0	NA
5042	Colony Density	886	2394	1508	NA

Table 69: Number of data entries by program - Colony Diameter

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
169	Colony Diameter	79707	80043	336	NA
3022	Colony Diameter	37151	37151	0	NA

Table 70: Number of data entries by program - Percent Cover

ProgramID	Parameter Name	nOld	nNew	${\it difference}$	$QuadSize\ m2$
169	Percent Cover	9013	145775	136762	NA
295	Percent Cover	33627	183362	149735	NA
3022	Percent Cover	17789	17789	0	NA
3024	Percent Cover	350	12100	11750	NA
4018	Percent Cover	1476	1477	1	NA
5027	Percent Cover	7793	13847	6054	NA

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Table 71: Number of data entries by program - Percent Cover

Programi	ID	Parameter Name	nOld	nNew	${\it difference}$	$QuadSize\ m2$
65	20	Percent Cover	32	32	0	NA
6	51	Percent Cover	2567	2567	0	NA
90	06	Percent Cover	810	810	0	NA
303	29	Percent Cover	43	67	24	NA
40	17	Percent Cover	6365	13812	7447	NA

5009	Percent Cover	2911	2913	2	NA
5015	Percent Cover	70	70	0	NA

Table 72: Number of data entries by program - Stem Density

ProgramID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
651	Stem Density	19	19	0	NA
906	Stem Density	71	71	0	NA
3029	Stem Density	142	151	9	NA
4017	Stem Density	644	1457	813	NA
5009	Stem Density	1113	1175	62	NA
5015	Stem Density	73	214	141	NA

Table 73: Number of data entries by program - Total/Canopy Percent Cover

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
3029	Total/Canopy Percent Cover	118	150	32	NA

### Nekton

Table 74: Number of data entries by program - Count

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
69	Count	90326	90457	131	NA
129	Count	82731	82812	81	NA
4043	Count	29255	296540	267285	NA

Table 75: Number of data entries by program - Presence/Absence

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
69	Presence/Absence	90457	90457	0	NA
129	Presence/Absence	82659	82659	0	NA
4043	Presence/Absence	295777	295777	0	NA

Table 76: Number of data entries by program - Standard Length

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
69	Standard Length	2042542	2042542	0	NA

### Oyster

Table 77: Number of data entries by program - Shell Height

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
4000	Shell Height	60458	60458	0	0.06
4012	Shell Height	2994	3811	817	0.06
4012	Shell Height	1607	1608	1	0.25
4012	Shell Height	41	45	4	1.00
4014	Shell Height	6813	6813	0	0.25
4016	Shell Height	2783	2790	7	0.06
4020	Shell Height	2500	2500	0	0.06
4042	Shell Height	4960	4961	1	NA
4044	Shell Height	20431	21724	1293	0.25
5007	Shell Height	56825	56840	15	0.25
5017	Shell Height	10275	10276	1	0.06
5035	Shell Height	28895	28895	0	0.06
5063	Shell Height	1060	1060	0	0.10
5070	Shell Height	3527	3527	0	0.25
5071	Shell Height	102	102	0	0.25
5072	Shell Height	1673	1673	0	NA
5073	Shell Height	595	595	0	1.00
5074	Shell Height	150	150	0	0.25
5075	Shell Height	403	403	0	0.06
10002	Shell Height	335854	335854	0	0.25

Table 78: Number of data entries by program - Density

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
972	Density	385	396	11	0.06
4000	Density	785	785	0	0.06
4012	Density	90	189	99	1.00
4014	Density	160	161	1	0.25
4020	Density	39	40	1	0.06
4042	Density	52	52	0	0.06
4042	Density	8	10	2	0.33
4042	Density	1	3	2	1.00
4044	Density	1213	2175	962	0.25
5007	Density	1066	1170	104	0.25
5017	Density	311	327	16	0.06
5063	Density	59	161	102	0.10
5073	Density	17	27	10	0.25
5073	Density	108	176	68	1.00
5074	Density	6	6	0	0.25
5075	Density	11	12	1	0.06

Table 79: Number of data entries by program - Number of Oysters Counted - Total

Program ID	Parameter Name	nOld	nNew	difference	$QuadSize\ m2$
4000	Number of Oysters Counted - Total	785	785	0	0.06
4012	Number of Oysters Counted - Total	50	91	41	0.06
4012	Number of Oysters Counted - Total	10	20	10	0.25
4012	Number of Oysters Counted - Total	37	10	-27	NA

4014	Number of Oysters Counted - Total	13	13	0	0.25
4016	Number of Oysters Counted - Total	593	593	0	0.06
4042	Number of Oysters Counted - Total	193	193	0	0.06
4044	Number of Oysters Counted - Total	1372	2175	803	0.25
5007	Number of Oysters Counted - Total	1083	1170	87	0.25
5063	Number of Oysters Counted - Total	73	161	88	0.10
5073	Number of Oysters Counted - Total	11	11	0	0.25
5073	Number of Oysters Counted - Total	70	74	4	1.00
5074	Number of Oysters Counted - Total	12	12	0	0.25
5075	Number of Oysters Counted - Total	12	12	0	0.06

Table 80: Number of data entries by program - Percent Live

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
972	Percent Live	383	387	4	0.25
4000	Percent Live	1624	1628	4	1.00
4012	Percent Live	49	87	38	0.06
4012	Percent Live	9	11	2	0.25
4014	Percent Live	173	174	1	0.25
4016	Percent Live	497	593	96	1.00
4020	Percent Live	39	40	1	1.00
4042	Percent Live	49	49	0	1.00
4044	Percent Live	1213	1367	154	0.25
5007	Percent Live	1066	1066	0	0.25
5010	Percent Live	148	237	89	1.00
5017	Percent Live	343	358	15	1.00
5035	Percent Live	7	8	1	0.06
5074	Percent Live	12	12	0	0.25

Table 81: Number of data entries by program - Reef Height

Program ID	Parameter Name	nOld	nNew	$\it difference$	$QuadSize\ m2$
4000	Reef Height	1254	1254	0	NA
4012	Reef Height	185	185	0	NA
4016	Reef Height	136	136	0	0.06
4020	Reef Height	60	60	0	0.25
4042	Reef Height	50	50	0	0.06
5010	Reef Height	56	56	0	1.00
5017	Reef Height	334	337	3	0.06
5035	Reef Height	8	8	0	0.06
5075	Reef Height	17	18	1	NA

Table 82: Number of data entries by program - Number of Oysters Counted - Dead

Program ID	Parameter Name	nOld	nNew	difference	$QuadSize\ m2$
4012	Number of Oysters Counted - Dead	49	91	42	0.06
4012	Number of Oysters Counted - Dead	10	20	10	0.25
4012	Number of Oysters Counted - Dead	35	10	-25	NA

4014	Number of Oysters Counted - Dead	13	13	0	0.25
4016	Number of Oysters Counted - Dead	593	593	0	0.06
4042	Number of Oysters Counted - Dead	193	193	0	0.06
4044	Number of Oysters Counted - Dead	938	2175	1237	0.25
5007	Number of Oysters Counted - Dead	932	1170	238	0.25
5063	Number of Oysters Counted - Dead	68	161	93	0.10
5073	Number of Oysters Counted - Dead	22	25	3	0.25
5073	Number of Oysters Counted - Dead	85	148	63	1.00
5074	Number of Oysters Counted - Dead	6	6	0	0.25
5075	Number of Oysters Counted - Dead	11	12	1	0.06

Table 83: Number of data entries by program - Number of Oysters Counted - Live

Program ID	Parameter Name	nOld	nNew	difference	QuadSize m2
4012	Number of Oysters Counted - Live	92	522	430	0.06
4012	Number of Oysters Counted - Live	13	30	17	0.25
4012	Number of Oysters Counted - Live	9	25	16	1.00
4012	Number of Oysters Counted - Live	425	10	-415	NA
4014	Number of Oysters Counted - Live	13	14	1	0.25
4016	Number of Oysters Counted - Live	497	593	96	0.06
4042	Number of Oysters Counted - Live	185	193	8	0.06
4044	Number of Oysters Counted - Live	1213	2175	962	0.25
5007	Number of Oysters Counted - Live	1066	1170	104	0.25
5017	Number of Oysters Counted - Live	311	327	16	0.06
5063	Number of Oysters Counted - Live	59	161	102	0.10
5073	Number of Oysters Counted - Live	17	27	10	0.25
5073	Number of Oysters Counted - Live	108	176	68	1.00
5074	Number of Oysters Counted - Live	6	6	0	0.25
5075	Number of Oysters Counted - Live	11	12	1	0.06

### SAV

Table 84: Number of data entries by program - Percent Occurrence

ProgramID	Parameter Name	nOld	nNew	$\it difference$	QuadSize m2
3013	Percent Occurrence	107531	542419	434888	NA
3015	Percent Occurrence	1879	3724	1845	NA
3017	Percent Occurrence	28321	72839	44518	NA
10001	Percent Occurrence	3625	9672	6047	NA

Table 85: Number of data entries by program - Presence/Absence

Program ID	Parameter Name	nOld	nNew	difference	$QuadSize\ m2$
296	Presence/Absence	10964	10964	0	NA
556	Presence/Absence	1652	1652	0	NA
557	Presence/Absence	2485	2485	0	NA
558	Presence/Absence	4485	4485	0	NA
559	Presence/Absence	665	665	0	NA

560	Presence/Absence	30072	33140	3068	NA
564	Presence/Absence	10065	10065	0	NA
565	Presence/Absence	27180	27180	0	NA
568	Presence/Absence	1768	1768	0	NA
570	Presence/Absence	19398	19398	0	NA
571	Presence/Absence	4495	4495	0	NA
572	Presence/Absence	1442	1442	0	NA
965	Presence/Absence	747950	747950	0	NA
978	Presence/Absence	60	60	0	NA
997	Presence/Absence	514	514	0	NA
3013	Presence/Absence	602335	602335	0	NA
3015	Presence/Absence	3724	3724	0	NA
3016	Presence/Absence	574	574	0	NA
3017	Presence/Absence	72838	72838	0	NA
4018	Presence/Absence	49202	49202	0	NA
4049	Presence/Absence	286964	301972	15008	NA
4065	Presence/Absence	4923	4923	0	NA
5027	Presence/Absence	37434	37434	0	NA
10001	Presence/Absence	9672	9672	0	NA

Table 86: Number of data entries by program - Braun Blanquet Score  $\,$ 

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
296	Braun Blanquet Score	10972	10972	0	NA
557	Braun Blanquet Score	2493	2493	0	NA
565	Braun Blanquet Score	27205	27205	0	NA
570	Braun Blanquet Score	19374	19374	0	NA
571	Braun Blanquet Score	4492	4492	0	NA
965	Braun Blanquet Score	756816	756816	0	NA
997	Braun Blanquet Score	496	496	0	NA
3016	Braun Blanquet Score	574	574	0	NA
4018	Braun Blanquet Score	41551	41551	0	NA
4049	Braun Blanquet Score	286964	302823	15859	NA
4065	Braun Blanquet Score	5139	5139	0	NA
5027	Braun Blanquet Score	37707	37707	0	NA

Table 87: Number of data entries by program - Percent Cover

ProgramID	Parameter Name	nOld	nNew	difference	QuadSize m2
556	Percent Cover	770	1652	882	NA
558	Percent Cover	2064	4485	2421	NA
560	Percent Cover	3986	9750	5764	NA
564	Percent Cover	4789	10118	5329	NA
568	Percent Cover	664	1768	1104	NA
572	Percent Cover	436	1442	1006	NA
997	Percent Cover	477	516	39	NA
3013	Percent Cover	85059	463145	378086	NA
4018	Percent Cover	1476	1477	1	NA
5027	Percent Cover	9181	35275	26094	NA

Table 88: Number of data entries by program - Modified Braun Blanquet Score

ProgramID	ParameterName	nOld	nNew	difference	QuadSize m2
559	Modified Braun Blanquet Score	665	665	0	NA
560	Modified Braun Blanquet Score	43215	44201	986	NA
978	Modified Braun Blanquet Score	115	115	0	NA

# Overview of SEACAR flag codes Coral

Table 89: Overview of SEACAR Flag Codes for Coral

$\frac{7Q}{0}$	16Q	100	110			
0	100	19Q	17Q	n total prog	Parameter Name	ProgramID
0	0	16258	59	16258	Colony Height	136
0	25	16271	17	16271	Colony Length	136
0	286	16259	74	16259	Colony Width	136
0	0	47791	0	47791	Count	136
0	0	17388	3527	17388	Percent Live Tissue	136
13676	0	0	13676	13676	Presence/Absence	136
0	0	34045	0	34045	Colony Density	169
0	0	80043	88	80043	Colony Diameter	169
0	0	72657	77	72657	Colony Height	169
0	0	145775	488	145775	Percent Cover	169
0	0	183362	5554	183362	Percent Cover	295
95	0	0	0	95	Presence/Absence	295
4113	0	0	4113	4113	Presence/Absence	379
5779270	0	0	5779270	5779270	Presence/Absence	915
918359	0	0	95109	918359	Presence/Absence	965
0	0	135707	110	135707	Colony Height	981
0	37	135740	95	135740	Colony Width	981
135743	0	0	135743	135743	Presence/Absence	981
0	0	384	0	384	Count	3021
384	0	0	214	384	Presence/Absence	3021
0	0	37151	35	37151	Colony Diameter	3022
0	0	36860	59	36860	Colony Height	3022
0	538	36824	14	36824	Colony Width	3022
0	0	1687	0	1687	Count	3022
0	0	17789	1312	17789	Percent Cover	3022
0	0	210163	126	210163	Count	3024
0	0	12100	93	12100	Percent Cover	3024
249403	0	0	27489	249403	Presence/Absence	3024
0	0	1477	539	1477	Percent Cover	4018
	0	0	12100	42923	Presence/Absence	4018
0	0	540	37	540	Colony Density	4019
	0	5589	10	5589	Colony Height	4019
0	6	5589	11	5589	Colony Width	4019
5589	0	0	5589	5589	Presence/Absence	4019
0	0	13847	695	13847	Percent Cover	5027
	0	0	2888	8942	Presence/Absence	5027
	0	1342	0	1342	Colony Height	5040
	$\overset{\circ}{2}$	1342	0	1342	Colony Length	5040
	$\frac{2}{4}$	1342	0	1342	Colony Width	5040
	0	1341	438	1341	Percent Live Tissue	5040
	0	2394	0	2394	Colony Density	5042
	0	0	886	2394	Presence/Absence	5042

 $\mathbf{C}\mathbf{W}$ 

Table 90: Overview of SEACAR Flag Codes for CW

ProgramID	ParameterName	n total prog	19Q	17Q
620	Percent Cover	32	32	0
651	Percent Cover	2567	2567	0
651	Stem Density	19	19	0
906	Percent Cover	810	810	0
906	Stem Density	71	71	0
3029	Percent Cover	67	67	0
3029	Stem Density	151	151	0
3029	Total/Canopy Percent Cover	150	150	2
4017	Percent Cover	13812	13812	61
4017	Stem Density	1457	1457	0
5009	Percent Cover	2913	2913	74
5009	Stem Density	1175	1175	9
5015	Percent Cover	70	70	0
5015	Stem Density	214	214	0

### Nekton

Table 91: Overview of SEACAR Flag Codes for Nekton

Program ID	Parameter Name	$n\ total\ prog$	17Q	19Q	7Q	16Q
69	Count	90457	276	90457	0	0
69	Presence/Absence	90457	90326	0	90457	0
69	Standard Length	2042542	2046	2042542	0	2886
129	Count	82812	389	82812	0	0
129	Presence/Absence	82659	82578	0	82659	0
4043	Count	296540	35	296540	0	0
4043	Presence/Absence	295777	28492	0	295777	0

### Oyster

Table 92: Overview of SEACAR Flag Codes for Oyster

Program ID	Parameter Name	$n\ total\ prog$	19Q	17Q	16Q
972	Density	396	396	0	0
972	Number of Oysters Counted - Dead	396	396	0	0
972	Number of Oysters Counted - Live	396	396	0	0
972	Number of Oysters Counted - Total	396	396	0	0
972	Percent Live	387	387	0	0
4000	Density	785	785	6	0
4000	Number of Oysters Counted - Total	785	785	2	0
4000	Percent Live	1628	1628	0	0
4000	Reef Height	1254	1254	0	0
4000	Shell Height	60458	60458	74	62
4012	Density	199	199	0	0
4012	Number of Oysters Counted - Dead	126	126	0	0
4012	Number of Oysters Counted - Live	587	587	1	0
4012	Number of Oysters Counted - Total	126	126	0	0

4012	Percent Live	98	98	3	0
4012	Reef Height	185	185	0	0
4012	Shell Height	5464	5464	0	29
4014	Density	161	161	0	0
4014	Number of Oysters Counted - Dead	13	13	2	0
4014	Number of Oysters Counted - Live	14	14	2	0
4014	Number of Oysters Counted - Total	13	13	2	0
4014	Percent Live	174	174	8	0
4014	Shell Height	6813	6813	27	1
4016	Density	105	105	0	0
4016	Number of Oysters Counted - Dead	593	593	0	0
4016	Number of Oysters Counted - Live	593	593	0	0
4016	Number of Oysters Counted - Total	593	593	0	0
4016	Percent Live	593	593	0	0
4016	Reef Height	136	136	0	0
4016	Shell Height	2790	2790	0	7
4020	Density	40	40	0	0
4020	Percent Live	40	40	0	0
4020	Reef Height	60	60	0	0
4020	Shell Height	2500	2500	0	0
4042	Density	65	65	0	0
4042	Number of Oysters Counted - Dead	193	193	2	0
4042	Number of Oysters Counted - Live	193	193	0	0
4042	Number of Oysters Counted - Total	193	193	0	0
4042	Percent Live	49	49	0	0
4042	Reef Height	50	50	0	0
4042	Shell Height	4961	4961	0	163
4044	Density	2175	2175	0	0
4044	Number of Oysters Counted - Dead	2175	2175	0	0
4044	Number of Oysters Counted - Live	2175	2175	0	0
4044	Number of Oysters Counted - Total	2175	2175	0	0
4044	Percent Live	1367	1367	518	0
4044	Shell Height	21724	21724	39	230
5007	Density	1170	1170	0	0
5007	Number of Oysters Counted - Dead	1170	1170	0	0
5007	Number of Oysters Counted - Live	1170	1170	0	0
5007	Number of Oysters Counted - Total	1170	1170	0	0
5007	Percent Live	1066	1066	151	0
5007	Shell Height	56840	56840	17	473
5010	Percent Live	237	237	0	0
5010	Reef Height	56	56	0	0
5017	Density	327	327	0	0
5017	Number of Oysters Counted - Live	327	327	0	0
5017	Percent Live	358	358	0	0
5017	Reef Height	337	337	0	0
5017	Shell Height	10276	10276	10	29
5035	Percent Live	8	8	0	0
5035	Reef Height	8	8	0	0
5035	Shell Height	28895	28895	31	0
5063	Density	161	161	0	0
5063	Number of Oysters Counted - Dead	161	161	1	0
5063	Number of Oysters Counted - Live	161	161	1	0
5063	Number of Oysters Counted - Total	161	161	1	0
5063	Shell Height	1060	1060	2	$\overset{\circ}{2}$
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5070	Shell Height	3527	3527	6	0
5071	Shell Height	102	102	0	0
5072	Shell Height	1673	1673	26	1
5073	Density	203	203	0	0
5073	Number of Oysters Counted - Dead	173	173	2	0
5073	Number of Oysters Counted - Live	203	203	1	0
5073	Number of Oysters Counted - Total	85	85	2	0
5073	Shell Height	595	595	1	0
5074	Density	6	6	0	0
5074	Number of Oysters Counted - Dead	6	6	0	0
5074	Number of Oysters Counted - Live	6	6	0	0
5074	Number of Oysters Counted - Total	12	12	0	0
5074	Percent Live	12	12	0	0
5074	Shell Height	150	150	4	0
5075	Density	12	12	0	0
5075	Number of Oysters Counted - Dead	12	12	1	0
5075	Number of Oysters Counted - Live	12	12	0	0
5075	Number of Oysters Counted - Total	12	12	0	0
5075	Percent Live	12	12	0	0
5075	Reef Height	18	18	3	0
5075	Shell Height	403	403	0	0
10002	Shell Height	335854	335854	2678	81

 $\mathbf{SAV}$ 

Table 93: Overview of SEACAR Flag Codes for SAV

ProgramID	Parameter Name	n total prog	17Q	19Q	7Q	15Q	16Q
296	Braun Blanquet Score	10972	0	0	10972	6221	1
296	Presence/Absence	10964	6902	0	10964	0	0
556	Percent Cover	1652	508	1652	0	0	0
556	Presence/Absence	1652	770	0	1652	0	0
557	Braun Blanquet Score	2493	0	0	2493	0	0
557	Presence/Absence	2485	2412	0	2485	0	0
558	Percent Cover	4485	18	4485	0	0	0
558	Presence/Absence	4485	2064	0	4485	0	0
559	Modified Braun Blanquet Score	665	1	0	665	345	24
559	Presence/Absence	665	665	0	665	0	0
560	Modified Braun Blanquet Score	44201	4979	0	44201	0	5150
560	Percent Cover	9750	112	9750	0	0	0
560	Presence/Absence	33140	32764	0	33140	0	0
564	Percent Cover	10118	1127	10118	0	0	0
564	Presence/Absence	10065	4754	0	10065	0	0
565	Braun Blanquet Score	27205	0	0	27205	0	0
565	Presence/Absence	27180	18797	0	27180	0	0
568	Percent Cover	1768	10	1768	0	0	0
568	Presence/Absence	1768	664	0	1768	0	0
570	Braun Blanquet Score	19374	0	0	19374	0	0
570	Presence/Absence	19398	16934	0	19398	0	0
571	Braun Blanquet Score	4492	0	0	4492	0	0
571	Presence/Absence	4495	4130	0	4495	0	0
572	Percent Cover	1442	35	1442	0	0	0
572	Presence/Absence	1442	436	0	1442	0	0

965	Braun Blanquet Score	756816	0	0	756816	2081	0
965	Presence/Absence	747950	68340	0	747950	0	0
978	Modified Braun Blanquet Score	115	8	0	115	0	23
978	Presence/Absence	60	60	0	60	0	0
997	Braun Blanquet Score	496	0	0	496	0	0
997	Percent Cover	516	115	516	0	0	0
997	Presence/Absence	514	476	0	514	0	0
3013	Percent Cover	463145	1489	463145	0	0	0
3013	Percent Occurrence	542419	10911	542419	0	0	0
3013	Presence/Absence	602335	145561	0	602335	0	0
3015	Percent Occurrence	3724	358	3724	0	0	0
3015	Presence/Absence	3724	1879	0	3724	0	0
3016	Braun Blanquet Score	574	0	0	574	0	0
3016	Presence/Absence	574	182	0	574	0	0
3017	Percent Occurrence	72839	12061	72839	0	0	0
3017	Presence/Absence	72838	28321	0	72838	0	0
4018	Braun Blanquet Score	41551	0	0	41551	743	0
4018	Percent Cover	1477	21	1477	0	0	0
4018	Presence/Absence	49202	14300	0	49202	0	0
4049	Braun Blanquet Score	302823	0	0	302823	0	0
4049	Presence/Absence	301972	77670	0	301972	0	0
4065	Braun Blanquet Score	5139	0	0	5139	0	0
4065	Presence/Absence	4923	3739	0	4923	0	0
5027	Braun Blanquet Score	37707	0	0	37707	4	0
5027	Percent Cover	35275	1	35275	0	0	0
5027	Presence/Absence	37434	9018	0	37434	0	0
10001	Percent Occurrence	9672	1832	9672	0	0	0
10001	Presence/Absence	9672	3625	0	9672	0	0

# QAQC Flag Check

# Discrete WQ

## Quantile Check

ParameterName	n high	n high flagged	n low	n low flagged
Dissolved Oxygen	590	590	728	728
Dissolved Oxygen Saturation	129	129	131	131
Light Extinction Coefficient	16	16	13	13
Nitrogen, organic	7	7	6	6
рН	524	524	0	0
Salinity	683	683	0	0
Secchi Depth	271	271	0	0
Specific Conductivity	369	369	0	0
Total Nitrogen	125	125	17	17
Total Phosphorus	134	134	102	102
Turbidity	287	287	67	67
Water Temperature	813	813	0	0

51

### Threshold Check

ParameterName	n high	n high flagged	n low	n low flagged	n included
Dissolved Oxygen	194	194	7	7	0
Dissolved Oxygen Saturation	11	11	6	6	0
pH	70	70	2202	2202	0
Salinity	60	60	2	2	0
Secchi Depth	15	15	300	300	0
Specific Conductivity	21	21	24780	24780	0
Water Temperature	9	9	2968	2968	0

 $Entries\ where\ Result Value\ is\ above\ or\ below\ quantile,\ but\ expected\ SEACAR\_QAQCF lagCode\ is\ not\ being\ applied$ 

## Continuous WQ

## Quantile Check

ParameterName	n high	n high flagged	n low	n low flagged
Dissolved Oxygen	263	263	1003	1003
Dissolved Oxygen Saturation	4627	4627	750	750
Turbidity	5	5	0	0
Water Temperature	0	0	7	7

### Threshold Check

No threshold values detected

 $\label{eq:Species} \mbox{Quantile Check}$ 

ParameterName	habitat	n high	n high flagged	n low	n low flagged
Colony Diameter	Coral	122	122	0	0
Colony Height	Coral	278	278	0	0
Colony Width	Coral	179	179	121	121
Count	Coral	8	0	0	0
Percent Cover	Coral	8458	8458	0	0
Colony Length	Coral	17	17	0	0
Colony Density	Coral	37	37	0	0
Stem Density	CW	9	9	0	0
Standard Length	Nekton	1990	1990	1423	1423
Count	Nekton	695	695	0	0
Number of Oysters Counted - Total	Oyster	7	7	0	0
Number of Oysters Counted - Live	Oyster	5	5	0	0
Number of Oysters Counted - Dead	Oyster	6	6	0	0
Shell Height	Oyster	574	574	493	493
Density	Oyster	6	6	0	0
Reef Height	Oyster	3	3	0	0
Percent Cover	SAV	44	44	0	0
Modified Braun Blanquet Score	SAV	1	1	5178	5178
Braun Blanquet Score	SAV	0	0	1	1
Percent Occurrence	SAV	2	2	0	0

 $Entries\ where\ Result Value\ is\ above\ or\ below\ quantile,\ but\ expected\ SEACAR\_QAQCF lag Code\ is\ not\ being\ applied$ 

Table 94: SEACAR QAQC Flag Code discrepancies

RowID	Program ID	Parameter Name	Result Value	$SEACAR\ QAQCF lagCode$	$q\ subset$
7914986	3021	Count	226	19Q	high
7915303	3021	Count	132	19Q	high
7916016	3021	Count	166	19Q	high
7916910	3021	Count	145	19Q	high
7917194	3021	Count	201	19Q	high
7919003	3021	Count	205	19Q	high
7919968	3021	Count	252	19Q	high
7924754	3021	Count	118	19Q	high

### Threshold Check

ParameterName	habitat	n high	n high flagged	n low	n low flagged
Colony Diameter	Coral	0	0	4558	4558
Colony Height	Coral	0	0	12501	12501
Percent Live Tissue	Coral	0	0	1	1
Standard Length	Nekton	0	0	1	1
Reef Height	Oyster	0	0	4	4