Discrete QAQC Report

SIDQCACBGD - SEACAR Internal Divison of Quality Control and Assurance
Analytical Center for the Betterment and Goodification of Data

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

The following *Combined_WQ_WC_NUT_* files are included in the analysis:

Comparison of Current and Previous Exports - Overview

Table 1: Comparison of New vs. Old data exports

parameter	oldFile	newFile	nDataOld	nDataNew	difference
Ammonia- Un-ionized (NH3)	2023-Oct-11	2024-Jan-10	523	523	0
Chlorophyll a corrected for pheophytin	2023-Oct-11	2024-Jan-10	70192	54065	-16127
Chlorophyll a uncorrected for pheophytin	2023-Oct-11	2024-Jan-10	74306	92791	18485
Colored dissolved organic matter, CDOM	2023-Oct-11	2024-Jan-10	22029	22662	633
Dissolved Oxygen	2023-Oct-11	2024-Jan-10	862879	864543	1664
Dissolved Oxygen Saturation	2023-Oct-11	2024-Jan-10	154647	156082	1435
Light Extinction Coefficient	2023-Oct-11	2024-Jan-10	16333	16333	0
NH4 Filtered	2023-Oct-11	2024-Jan-10	144477	145237	760
Nitrate (N)	2023-Oct-11	2024-Jan-10	21654	21654	0
Nitrite (N)	2023-Oct-11	2024-Jan-10	36421	36569	148
Nitrogen, organic	2023-Oct-11	2024-Jan-10	7559	7559	0
NO2+3 Filtered	2023-Oct-11	2024-Jan-10	158982	159829	847
pH	2023-Oct-11	2024-Jan-10	672459	676509	4050
PO4 Filtered	2023-Oct-11	2024-Jan-10	77957	77957	0
Salinity	2023-Oct-11	2024-Jan-10	869048	871932	2884
Secchi Depth	2023-Oct-11	2024-Jan-10	310317	311780	1463
Specific Conductivity	2023-Oct-11	2024-Jan-10	429036	460764	31728
Total Kjeldahl Nitrogen TKN	2023-Oct-11	2024-Jan-10	102086	102839	753
Total Nitrogen	2023-Oct-11	2024-Jan-10	138551	139074	523
Total Phosphorus	2023-Oct-11	2024-Jan-10	149688	150741	1053
Total Suspended Solids, TSS	2023-Oct-11	2024-Jan-10	78124	78655	531
Turbidity	2023-Oct-11	2024-Jan-10	328839	329810	971
Water Temperature	2023-Oct-11	2024-Jan-10	923626	928493	4867

```
colorize <- function(x, color) {sprintf("\\textcolor{%s}{%s}", color, x)}

if(length(names(data_directory[['program_compare']]))>0){
  programs_differ <- TRUE
```

```
}
if(length(names(data_directory[['column_compare']]))>0){
  columns_differ <- TRUE
}

if(programs_differ == TRUE){
  cat("\\newpage")
  cat("  \n")
  cat("# Program Differences")
  cat("  \n")
  cat(paste0(colorize("Red", "red")," ProgramIDs are Programs in the Old Exports but not in the New Expo
  cat(paste0(colorize("Green", "green")," ProgramIDs are Programs in the New Exports but not in the Old
  cat("There is a difference in Programs between exports for the following parameters:")
  cat("    \n")
  cat("  \n")
  for(par in names(data_directory[['program_compare']])){
    cat("  \n")
    cat(glue("## {par}"))
    cat("  \n")
    cat("Programs in old export: ")
    cat("  \n")
    cat(data_directory[['program_compare']][[par]]$old_programs)
    cat("  \n")
    cat("Programs in new export: ")
    cat("  \n")
    cat(data_directory[['program_compare']][[par]]$new_programs)
    cat("  \n")
    cat("Differences: ")
    diff_df <- data_directory[['program_compare']][[par]]$diff_df
    for(i in 1:nrow(diff_df)){
      cat(colorize(diff_df[i]$pid, diff_df[i]$color_code))
      cat(", ")
    }
    cat("  \n")
  }
  cat("  \n")
}
```

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:

Chlorophyll a corrected for pheophytin

Programs in old export:
103 297 303 355 470 476 477 479 505 513 514 537 540 4054 4063 5002 5014 5026 5028 5033 10000
Programs in new export:
103 303 355 470 476 477 479 505 513 514 537 540 4054 4063 5002 5014 5026 5028 5033 10000
Differences: 297,

Chlorophyll a uncorrected for pheophytin

Programs in old export:
3 60 95 103 115 118 297 354 355 470 476 479 509 514 4054 5002 5014 5026 5028 5058 10000
Programs in new export:
3 60 95 103 115 118 297 354 355 470 476 477 479 509 514 537 540 4054 5002 5014 5026 5028 5058 10000
Differences: 477, 537, 540,

Secchi Depth

Programs in old export:
60 69 103 115 118 129 303 355 470 476 477 479 513 514 537 557 558 572 3000 3001 3013 3016 4049 4054 4065 5002 5014 5026 5028 5033 10000
Programs in new export:
60 69 103 115 118 129 303 355 469 470 476 477 479 513 514 537 557 558 572 3000 3001 3013 3016 4049 4054 4065 5002 5014 5026 5028 5033 10000
Differences: 469,

```r
if(columns_differ == TRUE){
  cat("  \n")
  cat("# Column Differences")
  cat("There is a difference in Columns between exports for the following parameters:")
  cat("  \n")
  for(par in names(data_directory[['column_compare']])){
    cat(glue("## {par}  \n"))
    make_kable(data_directory[['column_compare']][[par]], "Column Comparison")
    cat("  \n")
  }
  cat("  \n")
}
```

Detailed Comparison

```r
for(p in names(data_directory)){
  cat("  \n")
  cat(glue("## {p}"))
  cat("  \n")
  print(summary(data_directory[[p]][["comparison"]]))
  cat("  \n")
}
```