

Submerged Aquatic Vegetation Indicator Quantile Report

SEACAR Analysis

Last compiled on 25 November, 2024

Contents

Overview	2
Purpose	2
Relevant file locations	2
Process steps	2
Summary	3
Summary Tables	4
Low Quantile	5
Indicator: Percent Cover	5
Braun Blanquet Score	5
High Quantile	7
Indicator: Percent Cover	7
Braun Blanquet Score	7
Modified Braun Blanquet Score	8
Percent Cover	9
Percent Occurrence	10

Overview

Purpose

The purpose of the indicator quantiles is to flag records that are “unusual” relative to all of the data in the DDI for a given indicator in order to facilitate QA/QC. They are not used to filter any of the data for SEACAR analyses, and the presence of a LowerQuantile or UpperQuantile flag on a DDI record alone does not necessarily indicate there is any issue with the record (neither does the absence of a LowerQuantile or UpperQuantile flag necessarily mean that a data record is correct).

Relevant file locations

Current values can be found in the “LowQuantile” and “HighQuantile” columns of the “Ref_Parameters” worksheet.

The R script described below and the output file can be found in the *FloridaSEACAR IndicatorQuantiles* repository on GitHub:

- <https://github.com/FloridaSEACAR/IndicatorQuantiles>

Process steps

IQ_Report_Render.R & IQ_Report.Rmd

1. The *IQ_Report_Render.R* script lists all files in a given directory and filters it to a list of DDI exports to evaluate considering a list of parameters to skip (user-defined).
2. User sets the desired upper and lower quantile thresholds, as well as a number of standard deviations away from the mean to use for the calculations.
3. User sets the string value(s) in the DDI exports that should be considered as NA values.
4. The remainder of the script loops through the file list, returning the values listed below and binding them together by row into a single Excel spreadsheet that is saved to the User’s working directory.
5. For each habitat included in the User’s working directory a PDF report will be created in the “output” folder using *IQ_Report.Rmd*, which provides an overview of questionable / flagged values.
6. In addition to the PDF reports, each habitat will provide a .txt data output file in the “output/data” folder containing questionable values.

Summary

The following quantile thresholds are used for flagging “questionable” values:

- Lower quantile: **0.001**
- Upper quantile: **0.999**

Included Indicators and Parameters and the files used in this analysis:

All_SAV_Parameters-2024-Sep-19.txt

Indicator: Percent Cover

- Braun Blanquet Score
- Modified Braun Blanquet Score
- Percent Cover
- Percent Occurrence
- Presence/Absence
- Shoot Count

Summary Tables

q_low: Value corresponding to the qval_low quantile for the parameter in the DDI export.

q_high: Value corresponding to the qval_high quantile for the parameter in the DDI export.

mean: Mean value for the parameter in the DDI export.

n_tot: Total number of records in the DDI export for the parameter.

n_q_low: Number of records in the DDI export that are below q_low for the parameter.

n_q_high: Number of records in the DDI export that are above q_high for the parameter.

pct_flagged: Proportion of total records in the DDI export for the parameter which have been flagged as above q_high, or below q_low.

Indicator: **Percent Cover**

Table 1: Indicator Quantile Overview

ParameterName	q low	q high	mean	n tot	n q low	n q high	pct flagged
Braun Blanquet Score	0	5	0.36	1122820	1	4	0.00
Modified Braun Blanquet Score	0	5	2.04	47274	0	1	0.00
Percent Cover	0	100	4.45	528071	0	44	0.01
Percent Cover	0	100	4.76	454831	0	43	0.01
Percent Occurrence	0	100	10.30	623477	0	2	0.00
Percent Occurrence	0	100	10.83	507954	0	2	0.00
Presence/Absence	0	1	0.24	1858487	0	0	0.00

Low Quantile

Indicator: Percent Cover

Braun Blanquet Score

Table 2: Flagged Values - Low Indicator Quantile: **0**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
369	296	276	2020-12-13	Thalassia testudinum	-0.69

Programs containing flagged data:

296 - Florida Keys National Marine Sanctuary Seagrass Monitoring Project

There are no *Low* Quantile Flagged Values for Modified Braun Blanquet Score

There are no *Low* Quantile Flagged Values for Percent Cover

There are no *Low* Quantile Flagged Values for Percent Occurrence

There are no *Low* Quantile Flagged Values for Presence/Absence

There are no *Low* Quantile Flagged Values for Shoot Count

High Quantile

Indicator: Percent Cover

Braun Blanquet Score

Table 3: Flagged Values - High Indicator Quantile: **5**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
4037641	4018	13M	2018-07-19	Anadyomene stellata	15
4037849	4018	13M	2018-07-19	Anadyomene stellata	10
4038454	4018	13M	2018-07-19	Anadyomene stellata	7
4037821	4018	9P	2018-07-23	Anadyomene stellata	6

Programs containing flagged data:

4018 - Miami-Dade County DERM Benthic Habitat Monitoring Program

Modified Braun Blanquet Score

Table 4: Flagged Values - High Indicator Quantile: **5**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
527394	559	KB06-2016	2016-06-30	Laurencia spp.	5.3

Programs containing flagged data:

559 - Northern Big Bend Seagrass Monitoring

Percent Cover

Table 5: Flagged Values - High Indicator Quantile: **100**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
491597	564	W1-06-12	2012-09-26	Total SAV	105
491233	564	W1-12-11	2011-10-05	Total SAV	105
500269	564	W1-16-17	2017-10-06	Total SAV	101
491424	564	W1-17-11	2011-09-30	Total SAV	105
493451	564	W1-18-14	2014-10-10	Total SAV	101
505791	564	W1-22-19	2019-11-10	Total SAV	150
506087	564	W1-22-19	2019-11-10	Total SAV	104
491261	564	W1-23-11	2011-10-03	Total SAV	101
491274	564	W1-24-11	2011-10-05	Total SAV	105
494279	564	W1-25-15	2015-10-02	Total SAV	105
491394	564	W1-26-12	2012-09-26	Total SAV	101
491221	564	W1-27-11	2011-10-04	Total SAV	140
491326	564	W1-27-11	2011-10-04	Total SAV	101
491621	564	W1-28-12	2012-09-26	Total SAV	105
491992	564	W1-28-12	2012-09-26	Total SAV	105
506336	564	W1-28-19	2019-12-31	Total SAV	101
494446	564	W1-31-15	2015-10-07	Total SAV	110
494495	564	W1-31-15	2015-10-07	Total SAV	110
494742	564	W1-31-15	2015-10-07	Total SAV	110
506305	564	W1-31-19	2019-12-31	Total SAV	180
493850	564	W1-34-15	2015-10-02	Total SAV	125
505176	564	W1-35-19	2019-12-31	Total SAV	110
505334	564	W1-35-19	2019-12-31	Total SAV	105
505578	564	W1-35-19	2019-12-31	Total SAV	105
505579	564	W1-35-19	2019-12-31	Total SAV	105
506306	564	W1-35-19	2019-12-31	Total SAV	105
506340	564	W1-35-19	2019-12-31	Total SAV	110
506156	564	W1-40-19	2019-12-31	Total SAV	120
492246	564	W2-01-12	2012-09-14	Total SAV	105
491646	564	W2-04-11	2011-09-29	Total SAV	120
492024	564	W2-04-12	2012-09-13	Total SAV	140
494824	564	W2-04-15	2015-10-21	Total SAV	120
504444	564	W2-2-19	2019-03-10	Total SAV	130
504530	564	W2-2-19	2019-03-10	Total SAV	110
503721	564	W2-5-19	2019-12-31	Total SAV	180
503899	564	W2-5-19	2019-12-31	Total SAV	120
504199	564	W2-9-19	2019-03-10	Total SAV	122
499707	564	W2-ALT-01-17	2017-09-29	Total SAV	105
494268	564	W3-03-15	2015-10-05	Total SAV	115
494269	564	W3-03-15	2015-10-05	Total SAV	135
494343	564	W3-03-15	2015-10-05	Total SAV	106
494393	564	W3-03-15	2015-10-05	Total SAV	125
494394	564	W3-03-15	2015-10-05	Total SAV	110

Programs containing flagged data:

564 - Western Pinellas County Seagrass Monitoring

Percent Occurrence

Table 6: Flagged Values - High Indicator Quantile: **100**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
2301923	3013	IRLSG045	2021-08-12 09:15:00	Total seagrass	161
2303083	3013	IRLSG045	2021-08-12 09:15:00	Total seagrass	139

Programs containing flagged data:

3013 - Seagrass (SJRWMD)

There are no *High* Quantile Flagged Values for Presence/Absence

There are no *High* Quantile Flagged Values for Shoot Count