

Data Acquisition Standard Operating Procedures

Florida Keys National Marine Sanctuary Seagrass Monitoring Project (ID# 296)

Last Updated: 5/6/2023

Program Summary

Seagrass distribution and abundance, water quality, water clarity

URLs

- Program - <https://floridakeys.noaa.gov/wqpp/welcome.html> <http://seagrass.fiu.edu/fknms.htm>
- DDI - <https://data.florida-seacar.org/programs/details/296>

Contacts

Contact Name	Organization	Email	Phone
Jim Fourqurean		jim.fourqurean@fiu.edu	(305) 348-4084
Johannes R. Krause, PhD	Postdoctoral Associate at Institute of Environment, Seagrass Ecosystems Research Lab	jkrause@fiu.edu	

Data Tables

- Data_296A_Final
- Data_296A_Load
- Data_296B_Final
- Data_296B_Load

Data Stored Procedures

- usp_Data_296A_Load_insert
- usp_Data_296B_Load_insert
- usp_combined_sav_insert_296A
- usp_combined_wq_wc_nut_insert_296B

Data Acquisition Standard Operating Procedures: ProgramID 296

Date Created: 11/05/2018

Created By: *Claude Kershaw*

Data File Paths:

1. Data: "\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR_FDEP\Data\ID_0296_FKNMS_Seagrass\DataToLoad\seagrassdata_forusf.csv"
2. Data: "\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR_FDEP\Data\ID_0296_FKNMS_Seagrass\DataToLoad\Temp_combined.txt"
3. Spatial Data: "\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR_FDEP\Data\ID_0296_FKNMS_Seagrass\coordinates_all1996_2000.csv"

DDI URL: <http://dev.seacar.waterinstitute.usf.edu/datadiscovery/programs/details/296>

Contact Information:

Contact Name: Jim Fourqurean

Contact Organization: Program - Florida Keys National Marine Sanctuary Seagrass Monitoring Project

Contact Email: jim.fourqurean@fiu.edu

Contact Phone: (305) 348-4084

Procedure Overview:

1. Use SQL Server Import Export Wizard to load "seagrassdata_forusf.csv" into **Data_296A_Load**.
2. Use SQL Server Import Export Wizard to load "Temp_combined.txt" into **Data_296B_Load**.
3. Execute procedure usp_Data_296A_Load_insert to load the data into table **Data_296A_Final**.
4. Execute procedure usp_Data_296_Load_insert to load the data into table **Data_296B_Final**.
5. The Monitoring Location information can be found in the Load table **Data_296A_Load**.
6. Add new Monitoring Locations into the **SampleLocation_Point** table.
7. Add new Monitoring Locations into the **SampleLocation** table. This will generate a LocationID for each Monitoring Location.
8. Update the **SampleLocation_Point** table with the LocationID generated in the **SampleLocation** table. Run procedure usp_SampleLocation_Point_update to do this.
9. Update the LocationID column in table **Data_296A_Final** with the LocationID in the **SampleLocation** table. Join on the [Site] column in **Data_296A_Final** and the ProgramLocationID column in **SampleLocation**.
10. Update the LocationID column in table **Data_296B_Final** with the LocationID in the **SampleLocation** table. Join on the [Station] column in **Data_296B_Final** and the ProgramLocationID column in **SampleLocation**.

Data Tables

1. Data_296A_Load
2. Data_296A_Final
3. Data_296B_Load
4. Data_296B_Final

Data Stored Procedures

1. usp_Data_296A_Load_insert
2. usp_Data_296B_Load_insert
3. usp_SampleLocation_Point_update

GIS Procedures

1. The Monitoring Location information can be found in the Load table **Data_296A_Load**.
2. Complete steps 5 through 10 in the "Procedure Overview" section of this document.

```

SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROC [dbo].[usp_combined_sav_insert_296A]
AS
BEGIN
SET NOCOUNT ON;
SET XACT_ABORT ON;

-- MISSING SPECIES IN THE LOOKUP TABLE!!

-- Delete existing data
exec usp_delete_combined 17, 'Combined_SAV'

-- Constants - PLEASE SET NOW!!
DECLARE @dataLoadCode varchar(10) = '296A';
DECLARE @combinedTable varchar(50) = 'Combined_SAV'
DECLARE @parameterID int

-- Setup data load
DECLARE @runBy varchar(50) = SYSTEM_USER;
DECLARE @programID int, @dataStreamID int;

SELECT @dataStreamID = DataStreamID,
@programID = ProgramID
FROM DataStreamProcedure
WHERE DataLoadCode = @dataLoadCode;
ÿ
-- Insert data
SET @parameterID = 21

INSERT INTO Combined_SAV (ProgramID, DataStreamID, ParameterID, LocationID, GISUniqueID, SampleDate,
SpeciesID, SpeciesGroup1, SpeciesGroup2, SamplingMethod1, SamplingMethod2, ReportingLevel, QuadSize,
Grid, ResultValue, Depth_M, Description, DateAdded, QAQCFlag, SiteIdentifier)
SELECT @programID, @dataStreamID, @parameterID, a.LocationID, NULL,
DATEFROMPARTS(a.YEAR, a.MONTH, a.DAY), b.SpeciesID, b.Group1, b.Group2, 'Fixed', 'Natural', 'Transect',
0.25, NULL, a.Tt_d, NULL, NULL, GETDATE(), NULL, Site
FROM Data_296A_Final a --a.Thalassia_Density
INNER JOIN ref_species b on b.CommonIdentifier = 'Thalassia testudinum'
WHERE a.Tt_d IS NOT NULL
AND a.Tt_d <> ''
--a.Thalassia_Density

exec usp_combined_data_tracking_insert @parameterID = @parameterID, @ProgramID = @programID,
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
@LastUpdateBy = @runBy

-- Insert data
SET @parameterID = 21

INSERT INTO Combined_SAV (ProgramID, DataStreamID, ParameterID, LocationID, GISUniqueID, SampleDate,
SpeciesID, SpeciesGroup1, SpeciesGroup2, SamplingMethod1, SamplingMethod2, ReportingLevel, QuadSize,
Grid, ResultValue, Depth_M, Description, DateAdded, QAQCFlag, SiteIdentifier)
SELECT @programID, @dataStreamID, @parameterID, a.LocationID, NULL,
DATEFROMPARTS(a.YEAR, a.MONTH, a.DAY), b.SpeciesID, b.Group1, b.Group2, 'Fixed', 'Natural', 'Transect',
0.25, NULL, a.Sf_d, NULL, NULL, GETDATE(), NULL, Site
FROM Data_296A_Final a --a.Syngodium_Density
INNER JOIN ref_species b on b.CommonIdentifier = 'Syngodium filiforme'
WHERE a.Sf_d IS NOT NULL
AND a.Sf_d <> ''
--a.Syngodium_Density

exec usp_combined_data_tracking_insert @parameterID = @parameterID, @ProgramID = @programID,
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
@LastUpdateBy = @runBy

```

```
-- Insert data
SET @parameterID = 21
```

```
INSERT INTO Combined_SAV (ProgramID, DataStreamID, ParameterID, LocationID, GISUniqueID, SampleDate, SpeciesID, SpeciesGroup1, SpeciesGroup2, SamplingMethod1, SamplingMethod2, ReportingLevel, QuadSize, Grid, ResultValue, Depth_M, Description, DateAdded, QAQCFlag, SiteIdentifier)
SELECT @programID, @dataStreamID, @parameterID, a.LocationID, NULL,
DATEFROMPARTS(a.YEAR, a.MONTH, a.DAY), b.SpeciesID, b.Group1, b.Group2, 'Fixed', 'Natural', 'Transect',
0.25, NULL, a.Hw_d, NULL, NULL, GETDATE(), NULL, Site
FROM Data_296A_Final a --a.Halodule_Density
INNER JOIN ref_species b on b.CommonIdentifier = 'Halodule wrightii'
WHERE a.Hw_d IS NOT NULL
AND a.Hw_d <> ''
--a.Halodule_Density
```

```
exec usp_combined_data_tracking_insert @parameterID = @parameterID, @ProgramID = @programID,
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
@LastUpdateBy = @runBy
```

```
-- Insert data
SET @parameterID = 21
```

```
INSERT INTO Combined_SAV (ProgramID, DataStreamID, ParameterID, LocationID, GISUniqueID, SampleDate, SpeciesID, SpeciesGroup1, SpeciesGroup2, SamplingMethod1, SamplingMethod2, ReportingLevel, QuadSize, Grid, ResultValue, Depth_M, Description, DateAdded, QAQCFlag, SiteIdentifier)
SELECT @programID, @dataStreamID, @parameterID, a.LocationID, NULL,
DATEFROMPARTS(a.YEAR, a.MONTH, a.DAY), b.SpeciesID, b.Group1, b.Group2, 'Fixed', 'Natural', 'Transect',
0.25, NULL, a.CGT_d, NULL, NULL, GETDATE(), NULL, Site
FROM Data_296A_Final a --a.CalcareousGreenTotal_Density
INNER JOIN ref_species b on b.CommonIdentifier = 'Calcareous green algae'
WHERE a.CGT_d IS NOT NULL
AND a.CGT_d <> ''
--a.CalcareousGreenTotal_Density
```

```
exec usp_combined_data_tracking_insert @parameterID = @parameterID, @ProgramID = @programID,
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
@LastUpdateBy = @runBy
```

```
/*
SELECT distinct a.SpeciesID, CommonIdentifier
FROM Combined_SAV a
INNER JOIN ref_species b on a.SpeciesID = b.SpeciesID
where ProgramID = 296
```

```
SELECT Distinct ProgramID, b.IndicatorName, c.ParameterName, NumRowsCombined
FROM Combined_Data_Tracking a
INNER JOIN Indicator b on a.IndicatorID = b.IndicatorID
INNER JOIN Combined_Parameters c on a.ParameterID = c.ParameterID
WHERE b.Habitat = 'Submerged Aquatic Vegetation'
```

```
SELECT *
FROM Data_296A_Final
```

```
SELECT *
FROM ref_conversion_species
where ProgramID = 296
```

```
SELECT *
FROM Combined_Parameters a
INNER JOIN Indicator b on a.IndicatorID = b.IndicatorID
where b.Habitat = 'Submerged Aquatic Vegetation'
```

```
SELECT *
FROM DataStreamProcedure
WHERE ProgramID = 296
```

```
SELECT *
FROM ref_species
where habitat = 'Submerged Aquatic Vegetation'
and commonidentifier like 'S%'
ÿ
SELECT *
FROM ref_species
WHERE CommonIdentifier = 'Syringodium filiforme'

exec usp_delete_combined 17, 'Combined_SAV'
*/

END
```

GO

```
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
```

```
CREATE PROC [dbo].[usp_combined_wq_wc_nut_insert_296B]
```

```
AS
```

```
BEGIN
```

```
SET NOCOUNT ON;
```

```
SET XACT_ABORT ON;
```

```
-- Delete existing data
```

```
exec usp_delete_combined 57, 'Combined_WQ_WC_NUT'
```

```
-- Constants - PLEASE SET NOW!!
```

```
DECLARE @dataLoadCode varchar(10) = '296B';
```

```
DECLARE @combinedTable varchar(50) = 'Combined_WQ_WC_NUT';
```

```
DECLARE @ParameterID int;
```

```
DECLARE @TotalRows int;
```

```
ÿ
```

```
-- Setup data load
```

```
DECLARE @runBy varchar(50) = SYSTEM_USER;
```

```
DECLARE @programID int, @dataStreamID int;
```

```
SELECT @dataStreamID = DataStreamID,
```

```
@programID = ProgramID
```

```
FROM DataStreamProcedure
```

```
WHERE DataLoadCode = @dataLoadCode;
```

```
ÿ
```

```
--delete existing data
```

```
exec usp_delete_combined @datastreamID, 'Combined_WQ_WC_NUT'
```

```
-- Insert data
```

```
SET @TotalRows = 0
```

```
Set @ParameterID = 3 -- Temp
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
```

```
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, a.DateTime_UTC, NULL, NULL, 'Bottom',
a.Value, GETDATE()
```

```
FROM Data_296B_Final a
```

```
Where ISNUMERIC(a.Value) = 1
```

```
and a.LocationID is not null
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterID, @ProgramID = @programID,
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
@LastUpdateBy = @runBy
```

```
/*
```

```
SELECT *
```

```
FROM Combined_WQ_WC_NUT
```

```
SELECT *
```

```
FROM Data_296B_Final
```

```
SELECT *
```

```
FROM Combined_Parameters a
```

```
join Indicator b on a.IndicatorID = b.IndicatorID
```

```
where b.Habitat = 'Water Column'
```

```
and b.IndicatorName <> 'Nekton'
```

```
SELECT *
```

```
FROM DataStreamProcedure  
WHERE ProgramID = 296
```

```
SELECT *  
FROM Combined_Data_tracking  
where programid = 296  
ÿ  
exec usp_delete_combined 57, 'Combined_WO_WC_NUT'  
*/
```

```
END
```

```
GO
```



```
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROC [dbo].[usp_Data_296A_Load_insert]
AS
BEGIN
SET NOCOUNT ON
SET XACT_ABORT ON

TRUNCATE TABLE Data_296A_Final

INSERT INTO Data_296A_Final ([Site], Latitude_dd, Longitude_dd, T_C, T_N, T_P, S_C, S_N, S_P, H_C,
H_N, H_P, Tt_f, Sf_f, Hw_f, CGT_f, Tt_a, Sf_a, Hw_a, CGT_a, Tt_d, Sf_d, Hw_d, CGT_d, d15N_Tt,
d13C_Tt, d15N_Sf, d13C_Sf, d15N_Hw, d13C_Hw, [Year], [Month], [Day])
SELECT [Site], Latitude_dd, Longitude_dd, T_C, T_N, T_P, S_C, S_N, S_P, H_C, H_N, H_P, Tt_f,
Sf_f, Hw_f, CGT_f, Tt_a, Sf_a, Hw_a, CGT_a, Tt_d, Sf_d, Hw_d, CGT_d, d15N_Tt, d13C_Tt, d15N_Sf,
d13C_Sf, d15N_Hw, d13C_Hw, [Year], [Month], [Day]
FROM Data_296A_Load
END

GO
```

```
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROC [dbo].[usp_Data_296B_Load_insert]
AS
BEGIN
SET NOCOUNT ON
SET XACT_ABORT ON

TRUNCATE TABLE Data_296B_Final

INSERT INTO Data_296B_Final (DateTime_UTC, Station, Value)
SELECT DateTime_UTC, Station, Value
FROM Data_296B_Load
END

GO
```