

# Data Acquisition Standard Operating Procedures

## Tampa Bay Benthic Monitoring (ID# 4067)

Last Updated: 5/6/2023

### Program Summary

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Benthic in-fauna, %silt-clay, sediment contaminants, DO, PH, conductivity, salinity, water temperature.

### URLs

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- Program - <http://www.epchc.org/>
- DDI - <https://data.florida-seacar.org/programs/details/4067>

### Contacts

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Contact Name	Organization	Email	Phone
Ed Sherwood		esherwood@tbep.org	727-893-2765

### Data Tables

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- Data\_4067A\_Final
- Data\_4067A\_Load

### Data Stored Procedures

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- usp\_Data\_4067A\_Load\_insert
- usp\_combined\_wq\_wc\_nut\_insert\_4067A

# Data Acquisition Standard Operating Procedures: ProgramID 4067

Date Created: 01/16/2019

Created By: *Claude Kershaw*

Date Modified: 05/10/2022

Created By: *Jennifer Baker*

## Data File Paths:

1. Data: [\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR\\_FDEP\Data\ID\\_4067\\_EPC\DataToLoad\EPC DataSubmittals\\_2016.mdb](file://forest.usf.edu/data/PDrive/CAS-WI/Misc/Projects/SEACAR_FDEP/Data/ID_4067_EPC/DataToLoad/EPC_DataSubmittals_2016.mdb)
2. Data: [\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR\\_FDEP\Data\ID\\_4067\\_EPC\DataToLoad\ID\\_4067A\\_1993-2017.csv](file://forest.usf.edu/data/PDrive/CAS-WI/Misc/Projects/SEACAR_FDEP/Data/ID_4067_EPC/DataToLoad/ID_4067A_1993-2017.csv)
3. Data:

DDI URL: <http://dev.seacar.waterinstitute.usf.edu/datadiscovery/programs/details/4067>

## Contact Information:

Contact Name: Ed Sherwood

Contact Organization: Program - Tampa Bay Benthic Monitoring

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## Procedure Overview:

1. Remove/replace spaces from the column headers (the geodatabase creation process requires no spaces or non-alphanumeric characters except for underscores).
2. Use SQL Server Import Export Wizard to load the data "EPC DataSubmittals\_2016.mdb" specifically the table: "Results\_Hydrology" which is now "BioHydrology.csv" into **Data\_4067A\_Load**.
3. Use SQL Server Import Export Wizard to load the data "ID\_4067A\_1993-2017.csv" into **Data\_4067A\_Load** and add the extra column [ID, ProgramAbbrev, Comments, DO-BCat, DOpQ-T, DOpQ-B, ProgramId] from this excel to the existing table.
4. Execute procedures usp\_Data\_4067A\_Load\_insert to load the data into tables **Data\_4067A\_Final**.
5. The Monitoring Location information can be found in the data table **Data\_4067A\_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\_4067A\_Final** with the LocationID in the **SampleLocation** table. Join on the [StationID] column in **Data\_4067A\_Final** and the ProgramLocationID column in **SampleLocation**.
10. Combine the data into the **combined\_wq\_wc\_nut** table using **usp\_combined\_wq\_wc\_nut\_insert\_4067A**

#### Data Tables

1. Data\_4067A\_Load
2. Data\_4067A\_Final

#### Data Stored Procedures

1. usp\_Data\_4067A\_Load\_insert
2. usp\_combined\_wq\_wc\_nut\_insert\_4067A
3. usp\_SampleLocation\_Point\_update

#### GIS Procedures

1. The Monitoring Location information can be found in the data table **Data\_4067A\_Load**.
2. Complete steps 4 through 8 in the “Procedure Overview” section of this document.

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

```
CREATE PROC [dbo].[usp_combined_wq_wc_nut_insert_4067A]
```

```
AS
```

```
BEGIN
```

```
SET NOCOUNT ON;
```

```
SET XACT_ABORT ON;
```

```
/*
```

```
UPDATE Data_4067A_Final
```

```
SET SECCHI = REPLACE(SECCHI, '>', '')
```

```
*/
```

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

```
DECLARE @dataLoadCode varchar(10) = '4067A';
```

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

```
DECLARE @ParameterID int;
```

```
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```

```
-- Setup data load
```

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

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

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

```
@programID = ProgramID
```

```
FROM DataStreamProcedure
```

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

```
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```

```
--delete existing data
```

```
exec usp_delete_combined @datastreamID, @combinedTable
```

```
-- Insert data
```

```
Set @ParameterID = 6-- Specific Conductivity
```

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

```
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
```

```
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('umho', 'mS/cm', a.Conductivity), GETDATE()
```

```
FROM Data_4067A_Final a
```

```
Where a.Conductivity is not NULL and a.StratumName='Surface' --a.Cond_T is not null
```

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

```
and ISDATE(SampleTime) = 1
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterID, @ProgramID = @programID,
```

```
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
```

```
@LastUpdateBy = @runBy
```

```
-- Insert data
```

```
Set @ParameterID = 1-- Dissolved Oxygen
```

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

```
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
```

```
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('mg/L', 'mg/L', a.DO), GETDATE()
```

```
FROM Data_4067A_Final a
```

```
Where a.DO is not null and a.StratumName='Surface'
```

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

```
and ISDATE(SampleTime) = 1
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterID, @ProgramID = @programID,
```

```
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @@ROWCOUNT,
```

```
@LastUpdateBy = @runBy
```

```
-- Insert data
```

Set @ParameterID = 5-- Dissolved Oxygen Saturation

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('%', '%', a.DOPercent), GETDATE()
FROM Data_4067A_Final a
Wherea.DOPercent is not null and a.StratumName='Surface'
anda.LocationID is not null
andISDATE(SampleTime) = 1
```

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

-- Insert data

Set @ParameterID = 4-- pH

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units](NULL, NULL, a.pH), GETDATE()
FROM Data_4067A_Final a
Wherea.pH is not null and a.StratumName='Surface'
anda.LocationID is not null
andISDATE(SampleTime) = 1
```

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

-- Insert data

Set @ParameterID = 2-- Salinity

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('ppt', 'ppt', a.Salinity), GETDATE()
FROM Data_4067A_Final a
Wherea.Salinity is not null and a.StratumName='Surface'
anda.LocationID is not null
andISDATE(SampleTime) = 1
```

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

-- Insert data

Set @ParameterID = 3-- Water Temperature

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('deg c', 'deg c', a.Temperature), GETDATE()
FROM Data_4067A_Final a
Wherea.Temperature is not null and a.StratumName='Surface'
anda.LocationID is not null
andISDATE(SampleTime) = 1
```

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

-- Insert data

Set @ParameterID = 6-- Specific Conductivity

```

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('umho', 'mS/cm', a.Conductivity), GETDATE()
FROM Data_4067A_Final a
Wherea.Conductivity is not NULL and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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

-- Insert data
Set @ParameterID = 1-- Dissolved Oxygen

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('mg/L', 'mg/L', a.DO), GETDATE()
FROM Data_4067A_Final a
Wherea.DO is not null and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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

-- Insert data
Set @ParameterID = 5-- Dissolved Oxygen Saturation

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('%', '%', a.DOPercent), GETDATE()
FROM Data_4067A_Final a
Wherea.DOPercent is not null and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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

-- Insert data
Set @ParameterID = 4-- pH

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units](NULL, NULL, a.pH), GETDATE()
FROM Data_4067A_Final a
Wherea.pH is not null and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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

-- Insert data
Set @ParameterID = 2-- Salinity

```

```

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('ppt', 'ppt', a.Salinity), GETDATE()
FROM Data_4067A_Final a
Wherea.Salinity is not null and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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

-- Insert data
Set @ParameterID = 3-- Water Temperature

INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID, SampleDate,
ActivityDepth_m, TotalDepth_m, RELATIVEDEPTH, ResultValue, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.SampleTime as datetime),
Depth, NULL, a.StratumName, dbo.[udf_convert_units]('deg c', 'deg c', a.Temperature), GETDATE()
FROM Data_4067A_Final a
Wherea.Temperature is not null and a.StratumName='Bottom'
anda.LocationID is not null
andISDATE(SampleTime) = 1

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_4067A_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 = 4067

SELECT *
FROM Combined_Data_tracking
where programid = 4067
and datastreamID = 7
ÿ
exec usp_delete_combined 115, 'Combined_WQ_WC_NUT'
*/

END

```

GO



```
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROC [dbo].[usp_Data_4067A_Load_insert]
AS
BEGIN
SET NOCOUNT ON
SET XACT_ABORT ON

TRUNCATE TABLE [dbo].[Data_4067A_Final]

INSERT INTO [dbo].[Data_4067A_Final] (ProgramName, FundingProject, AreaAbbr, AreaName, Hexagon,
Year, SampleTime, StationID,
StationNumber, Latitude, Longitude, ProfileRep, Depth, DepthQual, StratumName, Temperature,
TempQual, DO, DOQual, DOPercent,
DOPercentQual, Conductivity, CondQual, Salinity, SalinityQual, pH, pHQual)
SELECT ProgramName, FundingProject, AreaAbbr, AreaName, Hexagon, Year, SampleTime, StationID,
StationNumber, Latitude, Longitude,
ProfileRep, Depth, DepthQual, StratumName, Temperature, TempQual, DO, DOQual, DOPercent,
DOPercentQual, Conductivity, CondQual,
Salinity, SalinityQual, pH, pHQual FROM [dbo].[Data_4067A_Load]

END

GO
```