

# Data Acquisition Standard Operating Procedures

## SERC Water Quality Monitoring Network (ID# 509)

Last Updated: 5/6/2023

### Program Summary

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The function of the SERC Water Quality Monitoring Network is to address regional water quality concerns that exist outside the boundaries of individual political entities. Funding for the Network has come from many different sources with individual programs being added as funding became available. Field sampling occurs over different time periods due to the nature of the funding. The Florida Keys National Marine Sanctuary and the Southwest Florida Shelf are sampled quarterly.

### URLs

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- Program - <http://serc.fiu.edu/wqmnetwork/>
- DDI - <https://data.florida-seacar.org/programs/details/509>

### Contacts

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Contact Name	Organization	Email	Phone
Henry Briceno		bricenoh@fiu.edu	

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### Data Tables

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- Data\_509A\_Final
- Data\_509A\_Load

### Data Stored Procedures

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- usp\_Data\_509A\_Load\_insert
- usp\_combined\_wq\_wc\_nut\_insert\_509A

# Data Acquisition Standard Operating Procedures: ProgramID 509

Date Created: 10/17/2018

Created By: *Claude Kershaw*

## Data File Path:

1. "P:\Misc  
Projects\SEACAR\_FDEP\Data\ID\_0509\_SERC\_WQ\DataToLoad\SouthFloridaEstuariesWQ\_ppm.x  
lsx"
2. Worksheet: "Data ppm"

DDI URL: <http://dev.seacar.waterinstitute.usf.edu/datadiscovery/programs/details/509>

## Contact Information:

Contact Name: Henry Briceno

Contact Organization: Program - SERC Water Quality Monitoring Network

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## Procedure Overview:

1. Use SQL Server Import Export Wizard to load data into **Data\_509A\_Load**.
2. Execute procedure usp\_Data\_509A\_Load\_insert to load the data into table **Data\_509A\_Final**.
3. The Monitoring Location information can be found in the Load table **Data\_509A\_Load**.
4. Add new Monitoring Locations into the **SampleLocation\_Point** table.
5. Add new Monitoring Locations into the **SampleLocation** table. This will generate a LocationID for each Monitoring Location.
6. Update the **SampleLocation\_Point** table with the LocationID generated in the **SampleLocation** table. Run procedure usp\_SampleLocation\_Point\_update to do this.
7. Update the LocationID column in table **Data\_509A\_Final** with the LocationID in the **SampleLocation** table. Join on the [STA] column in **Data\_509A\_Final** and the ProgramLocationID column in **SampleLocation**.

## Data Tables

1. Data\_509A\_Load
2. Data\_509A\_Final

## Data Stored Procedures

1. usp\_Data\_509A\_Load\_insert
2. usp\_SampleLocation\_Point\_update

## GIS Procedures

1. The Monitoring Location information can be found in the Load table **Data\_509A\_Load**.
2. Complete steps 3 through 7 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_509A]
AS
BEGIN
SET NOCOUNT ON;
SET XACT_ABORT ON;
```

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

```
DECLARE @dataLoadCode varchar(10) = '509A';
DECLARE @combinedTable varchar(50) = 'Combined_WQ_WC_NUT';
DECLARE @ParameterID int;
DECLARE @TotalRows 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 records
```

```
exec usp_delete_combined @dataStreamID, @combinedTable
```

```
-- Insert data
```

```
SET @TotalRows = 0
Set @ParameterID = 17--NO2+3 Filtered
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.NOX AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Where a.NOX is not null
and a.LocationID is not null
```

```
SET @TotalRows = @TotalRows + @@ROWCOUNT
```

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

```
-- Insert data
```

```
SET @TotalRows = 0
Set @ParameterID = 18--NH4 Filtered
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.NH4 AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Where a.NH4 is not null
and a.LocationID is not null
```

```
SET @TotalRows = @TotalRows + @@ROWCOUNT
```

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

```
-- Insert data
SET @TotalRows = 0
Set @ParameterID = 15--TN
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.TN AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.TN is not null
anda.LocationID is not null
```

```
SET @TotalRows = @TotalRows + @@ROWCOUNT
```

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

```
-- Insert data
SET @TotalRows = 0
Set @ParameterID = 19--TP
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.TP AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.TP is not null
anda.LocationID is not null
```

```
SET @TotalRows = @TotalRows + @@ROWCOUNT
```

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

```
-- Insert data
SET @TotalRows = 0
Set @ParameterID = 9--CHLA_unc
```

```
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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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.CHLA AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.CHLA is not null
anda.LocationID is not null
```

```
SET @TotalRows = @TotalRows + @@ROWCOUNT
```

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

```
ÿ
-- Insert data
SET @TotalRows = 0
Set @ParameterID = 7--TURB
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST (a.TURB AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.TURB is not null
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

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

```
-- Insert data
```

```
SET @Total Rows = 0
```

```
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.Date as datetime), a.DEPTH,
NULL, 'Bottom', CAST(a.SAL_B AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.SAL_B is not null
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
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.Date as datetime), a.DEPTH,
NULL, 'Surface', CAST(a.SAL_S AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.SAL_S is not null
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

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

```
-- Insert data
```

```
SET @Total Rows = 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, CAST(a.Date as datetime), a.DEPTH,
NULL, 'Bottom', CAST(a.TEMP_B AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Wherea.TEMP_B is not null
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
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.Date as datetime), a.DEPTH,
NULL, 'Surface', CAST(a.TEMP_S AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
```

```
Wherea.TEMP_S is not null  
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterId, @ProgramID = @programID,  
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @Total Rows,  
@LastUpdateBy = @runBy
```

```
ÿ  
-- Insert data  
SET @Total Rows = 0  
Set @ParameterID = 1--DO
```

```
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.Date as datetime), a.DEPTH,  
NULL, 'Bottom', CAST(a.DO_B AS NUMERIC(25,8)), GETDATE()  
FROM Data_509A_Final a  
Wherea.DO_B is not null  
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
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.Date as datetime), a.DEPTH,  
NULL, 'Surface', CAST(a.DO_S AS NUMERIC(25,8)), GETDATE()  
FROM Data_509A_Final a  
Wherea.DO_S is not null  
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterId, @ProgramID = @programID,  
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @Total Rows,  
@LastUpdateBy = @runBy
```

```
ÿ  
-- Insert data  
SET @Total Rows = 0  
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.Date as datetime), a.DEPTH,  
NULL, NULL, CAST(a.pH AS NUMERIC(25,8)), GETDATE()  
FROM Data_509A_Final a  
Wherea.pH is not null  
anda.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

```
exec usp_combined_data_tracking_insert @parameterID = @ParameterId, @ProgramID = @programID,  
@dataStreamID = @dataStreamID, @CombinedTableName = @combinedTable, @NumRowsFinal = @Total Rows,  
@LastUpdateBy = @runBy
```

```
-- Insert data  
SET @Total Rows = 0  
Set @ParameterID = 12-- Light Extention coeff
```

```
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.Date as datetime), a.DEPTH,
NULL, NULL, CAST(a.Kd AS NUMERIC(25,8)), GETDATE()
FROM Data_509A_Final a
Where a.Kd is not null
and a.LocationID is not null
```

```
SET @Total Rows = @Total Rows + @@ROWCOUNT
```

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

```
/*
SELECT *
FROM Combined_WQ_WC_NUT
```

```
SELECT *
FROM Data_509A_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 = 509
```

```
SELECT *
FROM Combined_Data_tracking
where programid = 509
```

```
exec usp_delete_combined 15, 'Combined_WQ_WC_NUT'
*/
```

```
END
```

```
GO
```



```
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROC [dbo].[usp_Data_509A_Load_insert]
AS
BEGIN
SET NOCOUNT ON
SET XACT_ABORT ON
ÿ
INSERT INTO Data_509A_Final (SURV, DATE, TIME, STA, SITE, BASIN, CLUSTER, ZSI, ZONE, LATDEC,
LONDEC, DEPTH, YEAR, NOX, NO3, NO2, NH4, TN, DIN, TON, TP, SRP, APA, CHLA, TOC, SiO2, SAL_S, SAL_B,
TEMP_S, TEMP_B, DO_S, DO_B, TURB, pH, Kd, DETECTION_LIMITS, NOX_DL, NO3_DL, NO2_DL, NH4_DL, TN_DL,
DIN_DL, TON_DL, TP_DL, SRP_DL, APA_DL, CHLA_DL, TOC_DL, SiO2_DL)
SELECTSURV, DATE, TIME, STA, SITE, BASIN, CLUSTER, ZSI, ZONE, LATDEC, LONDEC, DEPTH, YEAR,
NOX, NO3, NO2, NH4, TN, DIN, TON, TP, SRP, APA, CHLA, TOC, SiO2, SAL_S, SAL_B, TEMP_S, TEMP_B,
DO_S, DO_B, TURB, pH, Kd, DETECTION_LIMITS, NOX_DL, NO3_DL, NO2_DL, NH4_DL, TN_DL, DIN_DL, TON_DL,
TP_DL, SRP_DL, APA_DL, CHLA_DL, TOC_DL, SiO2_DL
FROM Data_509A_Final
END
GO
```