

# Data Acquisition Standard Operating Procedures

## Guana River and Guana Lake Water Quality Monitoring (ID# 5014)

Last Updated: 5/6/2023

### Program Summary

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The objective of this effort was to quantify spatial/temporal variability of selected water quality parameters within the Guana system. Water quality observations in this system have been very limited historically and this study aimed to develop a baseline survey of water quality conditions over a variety of seasonal conditions and a spatial gradient. Besides the spatial gradient objective, sites were selected at Mickler's weir and either side of Guana dam to study hydrologic connections.

### URLs

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- Program -
- DDI - <https://data.florida-seacar.org/programs/details/5014>

### Contacts

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Contact Name	Organization	Email	Phone
Nikki Dix		Nikki.Dix@dep.state.fl.us	

### Data Tables

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- Data\_5014A\_Final
- Data\_5014A\_Load

### Data Stored Procedures

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- usp\_combined\_wq\_wc\_nut\_insert\_5014A

# Data Acquisition Standard Operating Procedures: ProgramID 5014

Date Created: 01/09/2019

Created By: *Claude Kershaw*

## Data File Paths:

1. Data: "\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR\_FDEP\Data\ID\_5014\GuanaPilotData.csv"
2. Spatial Data: "\\forest.usf.edu\data\PDive\CAS-WI\Misc Projects\SEACAR\_FDEP\Data\ID\_5014\Finalized sampling locations 2018.xlsx"

DDI URL: <http://dev.seacar.waterinstitute.usf.edu/datadiscovery/programs/details/5014>

## Contact Information:

Contact Name: Nikki Dix

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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 into **Data\_5014A\_Load**.
3. Execute procedures usp\_Data\_5014A\_Load\_insert to load the data into tables **Data\_5014A\_Final**.
4. The Monitoring Location information can be found in the file "Finalized sampling locations 2018.xlsx".
5. Add new Monitoring Locations into the **SampleLocation\_Point** table.
6. Add new Monitoring Locations into the **SampleLocation** table. This will generate a LocationID for each Monitoring Location.
7. Update the **SampleLocation\_Point** table with the LocationID generated in the **SampleLocation** table. Run procedure usp\_SampleLocation\_Point\_update to do this.
8. Update the LocationID column in table **Data\_5014A\_Final** with the LocationID in the **SampleLocation** table. Join on the [Station\_Code] column in **Data\_5014A\_Final** and the ProgramLocationID column in **SampleLocation**.

## Data Tables

1. Data\_5014A\_Load
2. Data\_5014a\_Final

## Data Stored Procedures

1. usp\_Data\_5014A\_Load\_insert
2. usp\_SampleLocation\_Point\_update

## GIS Procedures

1. The Monitoring Location information can be found in the file “Finalized sampling locations 2018.xlsx”.
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_5014A]
```

```
AS
```

```
BEGIN
```

```
SET NOCOUNT ON;
```

```
SET XACT_ABORT ON;
```

```
/*
```

```
UPDATE Data_5014A_Final
```

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

```
*/
```

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

```
DECLARE @dataLoadCode varchar(10) = '5014A';
```

```
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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```

```
-- Insert data
```

```
Set @ParameterID = 9-- Chlorophyll a uncorrected for pheophytin
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
```

```
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('ug/L', 'ug/L', a.CHLa_Mono_N), NULL,
GETDATE()
```

```
FROM Data_5014A_Final a
```

```
Where a.CHLa_Mono_N is not null
```

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

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
```

```
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('mg/L', 'mg/L', a.DO_N), NULL, GETDATE()
```

```
FROM Data_5014A_Final a
```

```
Where a.DO_N is not null
```

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

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('%', '%', a.DOp_N), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.DOp_N is not null
anda.LocationID is not null
```

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

```
-- Insert data
Set @ParameterID = 17-- NO2+3 Filtered
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('mg/L', 'mg/L', a.NO23F), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.NO23F is not null
anda.LocationID is not null
```

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units](NULL, NULL, a.PH_N), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.PH_N is not null
anda.LocationID is not null
```

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('ppt', 'ppt', a.SALT_N), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.SALT_N is not null
anda.LocationID is not null
```

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

```
-- Insert data
Set @ParameterID = 11-- Secchi Depth
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('m', 'm', a.SECCHI), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.SECCHI is not null
anda.LocationID is not null
```

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('umho', 'mS/cm', a.SpCond_N), NULL,
GETDATE()
FROM Data_5014A_Final a
Wherea.SpCond_N is not null
anda.LocationID is not null
```

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

```
-- Insert data
Set @ParameterID = 16-- Total Kjeldahl Nitrogen TKN
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('mg/L', 'mg/L', a.TKN), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.TKN is not null
anda.LocationID is not null
```

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

```
-- Insert data
Set @ParameterID = 15-- Total Nitrogen
```

```
INSERT INTO Combined_WQ_WC_NUT (ProgramID, DataStreamID, ParameterID, LocationID,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT@programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('mg/L', 'mg/L', a.TN), NULL, GETDATE()
FROM Data_5014A_Final a
Wherea.TN is not null
anda.LocationID is not null
```

```
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,
Activity_Start_Date_Time, ACTIVITY_DEPTH, Activity_Depth_Unit, RELATIVE_DEPTH, Org_Result_Value,
VALUE_QUALIFIER, DateAdded)
SELECT @programID, @dataStreamID, @ParameterID, a.LocationID, CAST(a.DateTimeStamp as
datetime), NULL, NULL, 'Surface', dbo.[udf_convert_units]('deg c', 'deg c', a.WTEM_N), NULL, GETDATE()
FROM Data_5014A_Final a
Where a.WTEM_N is not null
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_5014A_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 = 10000
```

```
SELECT *
FROM Combined_Data_tracking
where programid = 557
and datastreamID = 7
```

```
exec usp_delete_combined 47, 'Combined_WQ_WC_NUT'
*/
```

```
END
```

```
GO
```