Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN) Metadata

Coordinating office: Charlotte Harbor Aquatic Preserves (CHAP)

Melynda Brown (CHAP manager) Melynda.A.Brown@FloridaDEP.gov

Arielle Taylor-Manges (CHEVWQMN coordinator) Arielle.TaylorManges@FloridaDEP.gov

Project Description

The Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN) is a network of volunteer monitors that sample 46 sites throughout six aquatic preserves in the greater Charlotte Harbor area. These 46 sites are fixed stations along the southwest Florida coastline that have been sampled since 1998. The sampling locations are in Charlotte, Lee and Sarasota Counties within the waterbodies of: Charlotte Harbor, Gasparilla Sound, Cape Haze, Lemon Bay, Pine Island Sound, Matlacha Pass and Estero Bay. The sampling locations and water quality parameters to collect were chosen to support two goals: 1) to characterize existing baseline water quality conditions throughout the estuarine system, and 2) to determine changes in localized conditions over time.

Volunteer monitors collect water quality data on a regular basis once a month. Monitoring is conducted simultaneously throughout the estuaries and major tributaries on the first Monday morning of each month at sunrise, when dissolved oxygen levels are near their lowest levels of the day. This synoptic “snapshot” characterization of all six estuaries each month makes the monitoring program unique within the region. The monthly sampling frequency and long-term nature of the program have provided information about tidal, seasonal and yearly changes in estuary conditions at specific locations, which can be affected by localized weather conditions, resource management practices and land use changes. Data is available to local, regional, state and federal agencies, scientific and educational institutions, elected officials, citizen support groups and the public. Data is uploaded into STORET/WIN and also to the Water Atlas website for public access: http://chnep.wateratlas.usf.edu/chevwqmn/

Partnering Agencies:

- Charlotte Harbor Aquatic Preserves
- Estero Bay Aquatic Preserve
- Charlotte Harbor Environmental Center

Sampling Sites:

Station_ID	Active/Inactive	Date Started	Date ended (if applicable)
CHV001	Active	4-Nov-96	
CHV002	Active	4-Nov-96	
CHV003	Active	4-Nov-96	
CHV004	Active	4-Nov-96	
CHV005	Inactive	4-Nov-96	4-Jun-01
CHV006	Active	4-Nov-96	
CHV007	Active	4-Nov-96	
CHV008	Active	2-Dec-96	
CHV009	Active	6-Jul-98	
CHV010	Active	2-Feb-98	
CHV011	Active	6-Apr-98	
CHV012	Active	1-Jun-98	
CHV013	Active	2-Jul-01	
CHV015	Active	5-Mar-12	
EBERS2	Active	4-Sep-01	
EBV001	Active	2-Mar-98	
EBV003	Active	1-Jun-98	
EBV004	Active	2-Mar-98	
EBV005	Active	2-Mar-98	
EBV006	Active	7-Feb-00	
EBV007	Active	1-Oct-01	
GSV001	Active	4-Nov-96	
GSV002	Active	4-Nov-96	
GSV003	Active	4-May-98	
GSV004	Active	6-Jul-04	
GSV005	Inactive	1-Jun-98	4-Dec-17
GSV005b	Active	2-Jan-18	
GSV006	Active	3-Apr-06	
LBANG1	Active	7-Sep-99	
LBFOR1	Active	3-Apr-00	
LBGOT2	Active	2-Nov-98	
LBOYS1	Active	1-Feb-99	
LBV001	Inactive	6-Jul-98	6-Nov-17
LBV001b	Active	4-Jun-18	
LBV002	Active	6-Jul-98	
LBV003	Active	6-Jul-98	
LBV004	Active	6-Jul-98	
LBV005	Active	6-Jul-98	
LBV006	Active	4-Jan-99	
LBV007	Active	7-Sep-99	
MPV001	Active	2-Feb-98	
MPV002	Active	2-Feb-98	

Station_ID	Active/Inactive	Date Started	Date ended (if applicable)
MPV003	Active	2-Feb-98	
MPV004	Active	2-Mar-98	
PIJIM1	Inactive	7-Jan-02	3-Nov-08
PIV001	Active	7-Sep-99	
PIV002	Active	2-Feb-98	
PIV004	Active	3-Jan-00	
PIV005	Inactive	8-Sep-98	5-Apr-99
PIV006	Active	2-Feb-98	
PIV007	Active	4-Jan-99	
SCV001	Active	2-Feb-98	
SCV002	Active	2-Mar-98	

Sampling equipment:

- 1998-2008: Color comparator kit for pH and dissolved oxygen titration. Hydrometer and thermometer for salinity.
- 2008-2014: Hanna instruments for pH, temperature, and dissolved oxygen.
- 2014-present: Sites below were transitioned from Hanna instrument to YSI Professional Plus instruments, for pH, temperature, dissolved oxygen and conductivity/salinity:

SITE #	Transition to YSI (Mon-Year)
CHV001	Jan-15
CHV002	Jan-15
CHV003	May-18
CHV004	Jan-14
CHV006	Jan-14
CHV007	Jan-14
CHV008	Jan-14
CHV009	Jul-17
CHV010	May-18
CHV011	May-18
CHV012	May-18
CHV013	May-18
CHV015	Jan-15
EBV001	Nov-15
EBV003	Nov-15
EBV004	Nov-15
EBV005	Nov-15
EBV006	Nov-15
EBV007	Nov-15
EBERS2	Nov-15
GSV001	May-18
GSV002	May-18
GSV005b	May-18
GSV006	May-18
LBV001b	May-18

SITE #	Transition to YSI (Mon-Year)
LBV002	May-18
LBV003	May-18
LBV004	May-18
LBV005	May-18
LBV006	May-18
LBV007	May-18
LBANG1	May-18
LBFOR1	May-18
LBGOT2	May-18
LBOYS1	May-18
MPV001	Feb-16
MPV002	Feb-16
MPV003	May-18
MPV004	Feb-16
PIV001	Feb-16
PIV002	Feb-16
PIV004	May-18
PIV006	May-18
PIV007	May-18
SCV001	Feb-16
SCV002	Feb-16

Database parameters:

Parameter	Notes / Values
Site	Location of sample collection
1st Monitor	Last name
2nd Monitor	Last name
Activity_Category	*Sample*: routine sample or field observation, Blank: field or lab blank sample used for QA purposes, Duplicate: field or lab duplicate sample used for QA purposes
QACode	SB- Field Blank. SD- Field Duplicate
Date	Date of sample collection
Time Start	Time of sample collection
Time Stop	Time of sample event ending
Sunrise	Sunrise time
Wind Speed mph	**Wind Speed:** 0-1 mph, 2-3 mph, 4-7 mph, 8-12 mph, 13-18 mph, 19-24 mph, 25-31mph, ≥ 32 mph
Direction	**Wind Direction:** N NE E SE S SW W NW
Weather	**Weather:** 1= sunny, 2= partly cloudy, 3= overcast, 4= fog/haze, 5= drizzle, 6= rain
Rain	
Air Temp F	Stopped recording in 2009
Air Temp C	
Water Surface	**Water surface conditions:** 1= Calm 2=Ripples 3=Waves 4=White
Tidal Stage	**Tide stage:** 1= Incoming 2= High Slack 3= Outgoing 4= Low Slack
Secchi	Secchi disk depth (in meters). 99.0 indicates Greater than Bottom
Depth	Total depth at sampling location (meters)
Water Temp °F	Stopped recording in 2009
Water Temp °C	
DO 1	Stopped recording in November 2008
DO 2	Stopped recording in November 2008
DO 3	Stopped recording in November 2008
DO Avg mg/L	Began recording in December 2008
DO %	Started sampling with YSI Professional Plus in January 2014
Dissolved Oxygen Qualifier	Field qualifier is J
Dissolved Oxygen Comment	
pH	
pH Qualifier	Field qualifier is J
pH Comment	
Hydrometer	Stopped recording in April 2018
Hydrom Temp C	Temperature collected in cylinder to calculate salinity with hydrometer reading. Stopped recording in April 2018

Parameter	Notes / Values
Salinity ppt	Was collected with Hydrometer until April 2018 (some sites earlier)
Specific conductance ms/cm	Began collecting this data in April 2014 (all sites by April 2018)
Salinity Qualifier	Field qualifier is J
Salinity Comment	
Water Color, observed	1=Med Brown 3=Red Brown 5=Green 7=Yellow Brown 9=Blue 2=Dark Brown 4=Green Brown 6=Yellow Green 8=Green Blue 10=Other
Water Color, measured	
Nitro. Val.	Total Nitrogen (mg N/L). The sum calculation of organic (total Kjeldahl nitrogen) and inorganic (nitrate and nitrite) forms of nitrogen when available.
TN_Comment	Total Nitrogen comments
TKN_Qualifier	Total Kjeldahl nitrogen qualifier
TKN_Comment	Total Kjeldahl nitrogen comment
TKN_Analysis_Date	Date Total Kjeldahl Nitrogen was analyzed
TKN_Analysis_Time	Time total Kjeldahl nitrogen was analyzed
TKN_Prep_Date	Date total Kjeldahl nitrogen sample was prepared
TKN_Prep_Time	Time total Kjeldahl nitrogen sample was prepared
NOX_Qualifier	Inorganic nitrogen (nitrate and nitrite) lab qualifier
NOX_Comment	Inorganic nitrogen (nitrate and nitrite) lab comment
NOX_Analysis_Date	Inorganic nitrogen (nitrate and nitrite) date analysis was conducted
NOX_Analysis_Time	Inorganic nitrogen (nitrate and nitrite) time analysis was conducted
NOX_Prep_Date	Inorganic nitrogen (nitrate and nitrite) date the preperation of sample was conducted
NOX_Prep_Time	Inorganic nitrogen (nitrate and nitrite) time the preperation of sample was conducted
Phos. Val.	Phosphorus value (mg P/L)
TP_Qualifier	Phosphorus qualifier
TP_Comment	Phosphorus comment
TP_Analysis_Date	Phosphorus analysis date
TP_Analysis_Time	Phosphorus analysis time
TP_Prep_Date	Phosphorus date the sample was prepared
TP_Prep_Time	Phosphorus time the sample was prepared
Chl a Val.	Chlorophyll a- corrected value (ug/L).
ChlA_Qualifier	Chlorophyll a- corrected qualifier
ChlA_Comment	Chlorophyll a- corrected comment
ChlA_Analysis_Date	Chlorophyll a- corrected analysis date
ChlA_Analysis_Time	Chlorophyll a- corrected analysis time
ChlA_Prep_Date	Chlorophyll a- corrected preperation date
ChlA_Prep_Time	Chlorophyll a- corrected preperation time
Colif. Val.	Fecal coliform (sampled until August 2018). cfu/100 mL
Coliform_Qualifier	Fecal coliform qualifier
Coliform_Comment	Fecal coliform comment
Coliform_Analysis_Date	Fecal coliform analysis date
Coliform_Analysis_Time	Fecal coliform analysis time

Parameter	Notes / Values
Coliform_Prep_Date	Fecal coliform prep date
Coliform_Prep_Time	Fecal coliform prep time
Turbidity	Turbidity value (NTU)
Turbidity_Qualifier	Turbidity qualifier
Turbidity_Comment	Turbidity comment
Turbidity_Analysis_Date	Turbidity analysis date
Turbidity_Analysis_Time	Turbidity analysis time
Turbidity_Prep_Date	Turbidity prep date
Turbidity_Prep_Time	Turbidity prep time
Lab Color	Lab color value (PCU)
Lab_Color_Qualifier	Lab color qualifier
Lab_Color_Comment	Lab color comment
Lab_Color_Analysis_Date	Lab color analysis date
TKN_value	Total Kjedahl nitrogen value (mg N/L)
NOX_Value	Nitrogen (nitrate + nitrite) value (mg N/L)
Lab_Color_Prep_Time	Lab color prep time
Lab_Color_Analysis_Time	Lab color analysis time
Lab_Color_Prep_Date	Lab color prep date
Comments	Any other site notes. Also indicates if calibration passed verification

Value Qualifiers (VQ):

Laboratory reports include both lab results and value qualifiers. The value qualifier is a single letter that describes the lab result. The following is a brief description of laboratory value qualifiers:

A - Value reported is the mean of two or more determinations

B - Results based on colony counts outside the acceptable range

G- *Field qualifier.* The analyte was detected at or above the method detection limit in both the sample and the associated field blank, and the blank value was greater than 10% of the associated sample value.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantification limit

J - Estimated Value

K - Actual value is known to be < value given

L - Actual value is known to be > value given

N - Presumptive evidence of presence of material

O - Sampled, but analysis lost or not preformed

Q - Sample held beyond normal holding period

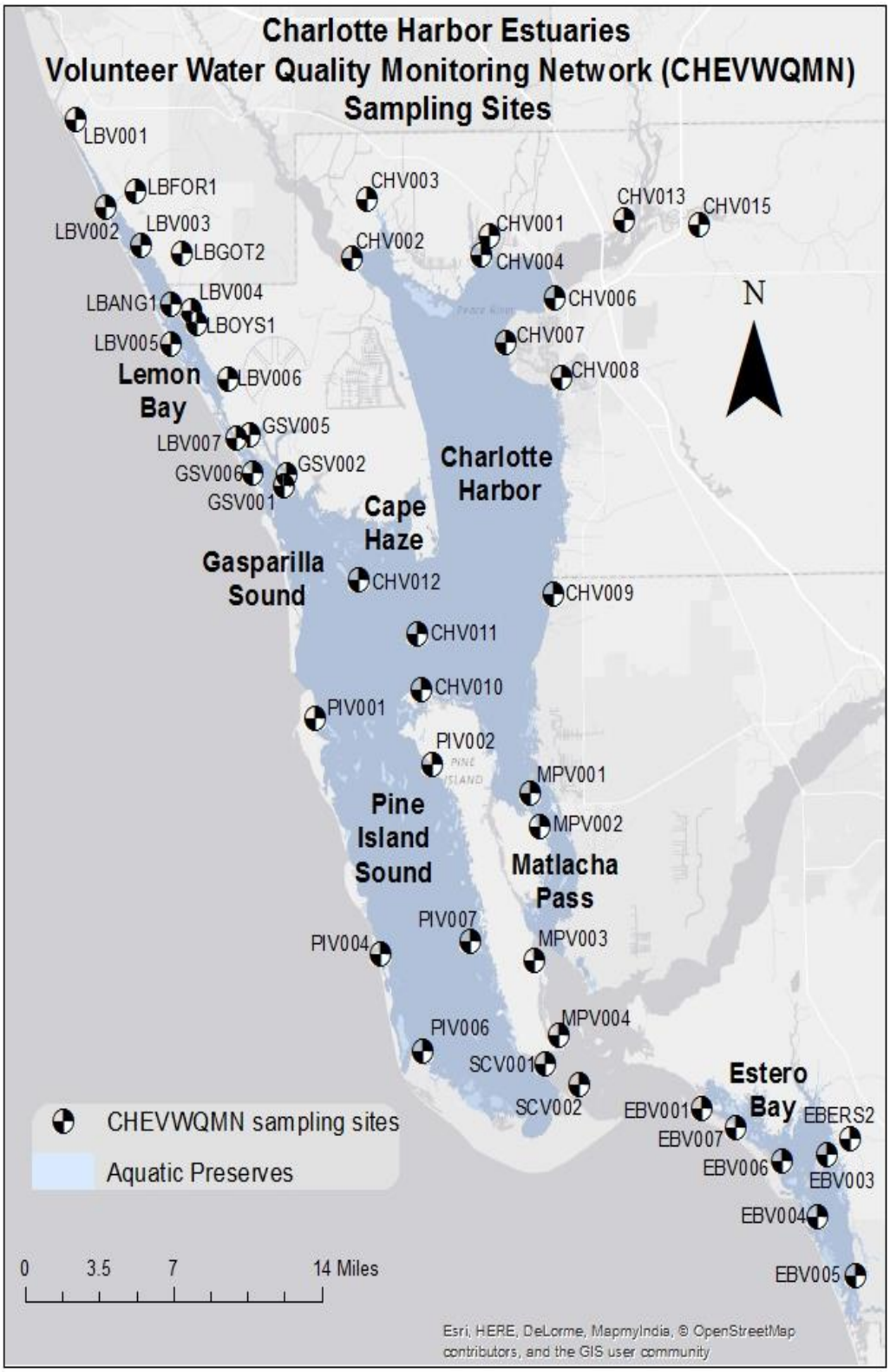
T - Value reported is less than the criterion of detection

U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.

Y - The laboratory analysis was from an unpreserved or improperly preserved sample, data may not be accurate.

Z - Colonies were too numerous to count (TNTC)

Site locations and map:



Station Details

Station ID	Station Name	Station Description	Strata	County	Latitude	Longitude
CHV001	Sunrise Waterway	Sunrise Waterway/Edgewater Dr/Pt Charlotte	Tidal Peace	Charlotte County	26.971111	-82.10639
CHV001a	Sunrise Waterway	Near CHV001 but due to construction	Tidal Peace	Charlotte County		
CHV002	Myakka River	Myakka R/SR 776/El Jobean	Tidal Myakka	Charlotte County	26.95944	-82.21278
CHV003	Sam Knight Creek	Sam Knight Cr/SR 776/Pt Charlotte	Tidal Myakka	Charlotte County	26.994167	-82.199722
CHV004	Charlotte Harbor	Charlotte Harbor/Pt Charlotte Beach Pier/Pt Charlotte	Tidal Peace	Charlotte County	26.961667	-82.113056
CHV005	Peace River	Peace R/Nav Marker Red #4/Harbor Heights	Tidal Peace	Charlotte County		
CHV006	Charlotte Harbor	Charlotte Harbor/Gilchrist Pk/Punta Gorda	Tidal Peace	Charlotte County	26.934722	-82.056944
CHV007	Ponce de Leon Inlet	Ponce de Leon Park Inlet/Punta Gorda	West Wall	Charlotte County	26.909167	-82.095278
CHV008	Alligator Creek	Alligator Cr/Callaloo Caribbean Restaurant & Bar Dock/Punta Gorda	Without Strata - Alligator Cr	Charlotte County	26.888056	-82.054444
CHV009	Burnt Store Entrance	Burnt Store Marina Entrance/Punta Gorda	Lower Charlotte	Charlotte County	26.761389	-82.061111
CHV010	Charlotte Harbor	Charlotte Harbor/Bokeelia Fishing Pier/Bokeelia	Lower Charlotte	Charlotte County	26.706111	-82.165833
CHV011	Charlotte Harbor	Charlotte Harbor/Nav Marker Red #4/N of Bokeelia	Lower Charlotte	Charlotte County	26.739167	-82.166389
CHV012	Bull Bay	Bull Bay/Piling NE of 1st Fish House	Cape Haze	Charlotte County	26.773056	-82.210278
CHV013	Peace River	Peace R/3416 Peace River Dr/Harbor Heights	Tidal Peace	Charlotte County	26.98000	-82.003333
CHV015	Myrtle Slough	bridge at 38734 Washington Loop Rd Punta Gorda	Tidal Peace	Charlotte	26.9762128	-82.94603
EBERS2	Estero River	Estero River/Estero River Scrub Access Rd/Estero	Estero Bay	Lee County	26.438611	-81.40000
EBV001	Matanzas Pass	Matanzas Pass/DEP Estero Bay Dock/San Carlos Island	San Carlos Bay	Lee County	26.457778	-81.953333
EBV003	Estero Bay	Estero Bay/1st Small Island W of Estero R Mouth	Estero Bay	Lee County	26.429444	-81.858056
EBV004	Estero Bay	Estero Bay/Carl Johnson Park Boat Ramp/Ft Myers Beach	Estero Bay	Lee County	26.393611	-81.865556

Station ID	Station Name	Station Description	Strata	County	Latitude	Longitude
EBV005	Estero Bay	Estero Bay/Pelican Bay Nature Park Pier/Bonita Springs	Estero Bay	Lee County	26.426111	-81.892778
EBV006	Estero Bay	Estero Bay/Nav Marker Green #51/NW of Big Carlos Pass	Estero Bay	Lee County	26.355556	-81.835833
EBV007	Estero Bay	Estero Bay/Mound House Dock/Ft Myers Beach	Estero Bay	Lee County	26.451667	-81.936389
GSV001	Coral Creek	Coral Cr/SR 771 Bridge/Placida	Cape Haze	Charlotte County	26.833889	-82.26500
GSV002	Gasparilla Sound	Gasparilla Sound/Boca Grande Pier/Placida	Lower Lemon Bay	Charlotte County	26.82722	-82.266944
GSV003	Gasparilla Sound	Gasparilla Sound/Nav Marker Green #19/S of Placida	Cape Haze	Charlotte County		
GSV004	Gasparilla Sound	Gasparilla Fishery Restaurant Dock	Cape Haze	Charlotte County	26.830000	-82.265278
GSV005	Coral Creek	Coral Cr/20 Arlington Dr/Cape Haze	Lower Lemon Bay	Charlotte County	26.857500	-82.289167
GSV005b	Coral Creek	West Coral Creek; The center of the small bridge on Cape Haze Dr	Lower Lemon Bay	Charlotte County	26.855288	-82.290198
GSV006	Gasparilla Sound	8886 Bay Street/ Little Gasparilla Island	Lower Lemon Bay		26.713733	-82.185050
LBANG1	Ainger Cr	Ainger Cr/SR 776 at Marina Isles Condo Dock/Englewood	Lower Lemon Bay	Charlotte County	26.930822	-82.370000
LBFOR1	Forked Creek	Forked Cr/SR 775 Bridge/Englewood	Without Strata - Upper Lemon Bay	Sarasota County	26.921111	-82.333056
LBGOT2	Gottfried Creek	Gottfried Cr/SR 777 Bridge E. Dearborn St/Englewood	Without Strata - Upper Lemon Bay	Sarasota County	26.9618930	-82.3425660
LBOYS1	Oyster Creek	Oyster Cr/2424 Placida Rd/Englewood	Lower Lemon Bay	Charlotte County	26.930833	-82.370000
LBV001	Alligator Cr	Alligator Cr/Yacht Club Dr/Venice	Without Strata - Upper Lemon Bay	Sarasota County	27.043889	-82.423889
LBV001b	Lemon Bay	At end of dock adjacent to boat ramp	Without Strata - Upper Lemon Bay	Sarasota County	27.039481	-82.4265

Station ID	Station Name	Station Description	Strata	County	Latitude	Longitude
LBV002	Lemon Bay	Lemon Bay/7765 Manasota Key Dr/Manasota Key	Without Strata - Upper Lemon Bay	Sarasota County	26.99013	-82.400008
LBV003	Lemon Bay	Lemon Bay/Suncrest Ln/Englewood	Without Strata - Upper Lemon Bay	Sarasota County	26.969722	-82.374444
LBV004	Lemon Bay	Lemon Bay/SR 776 Fishing Pier/Englewood	Lower Lemon Bay	Charlotte County	26.934167	-82.352000
LBV005	Ski Alley	Ski Alley/Wanna Be Resort/Englewood Beach	Lower Lemon Bay	Charlotte County	26.912371	-82.35256
LBV006	Buck Creek	Buck Cr/SR 775 Bridge/Rotonda	Lower Lemon Bay	Charlotte County	26.888333	-82.310556
LBV007	Lemon Bay	Lemon Bay/State Park Dock/N of Placida	Lower Lemon Bay	Charlotte County	26.855833	-82.313333
MPV001	Matlacha Pass	Matlacha Pass/Nav Marker Green # 63/N of Matlacha	Matlacha Pass	Lee County	26.645833	-82.083333
MPV002	Matlacha Pass	Matlacha Pass/Pine Is Rd West Bridge/Matlacha	Matlacha Pass	Lee County	26.625000	-82.074167
MPV003	Matlacha Pass	Matlacha Pass/Nav Marker Red #24/E of Tropical Homesites	Matlacha Pass	Lee County	26.546667	-82.079722
MPV004	Matlacha Pass	Matlacha Pass/Nav Marker Gr #3/E of 8th Ave/St James City	San Carlos Bay	Lee County	26.502222	-82.061944
PIJIM1	Big Jim Creek	Pine Island Sound/Big Jim Cr/W of Fritz Park/Bokeelia	Pine Island Sound	Lee County	26.678056	-82.128333
PIV001	Pelican Bay	Pelican Bay/Cayo Costa State Park Dock Dock	Pine Island Sound	Lee County	26.690833	-82.244722
PIV002	Pine Island Sound	Pine Is Sound/Nav Marker Green #11/E of Pineland	Pine Island Sound	Lee County	26.662222	-82.155833
PIV004	Redfish Pass	Red Fish Pass/South Seas Plantation Dock/Captiva	Pine Island Sound	Lee County	26.552222	-82.196944
PIV005	Roosevelt Channel	Pine Is Sound/Roosevelt Channel/T'ween Waters	Pine Island Sound	Lee County		
PIV006	Pine Island Sound	Pine Is Sound/Nav Marker Red #2/Dinkins Bayou/Sanibel	Pine Island Sound	Lee County	26.495000	-82.166389
PIV007	Pine Island Sound	Pine Is Sound/Flamingo Bay PVC Marker #1	Pine Island Sound	Lee County	26.558889	-82.128333
SCV001	San Carlos Bay	San Carlos Bay/Nav Marker Red #12/S of St James City	San Carlos Bay	Lee County	26.486111	-82.071944
SCV002	San Carlos Bay	San Carlos Bay/Nav Marker Red #4/Woodrings Pt/Sanibel	San Carlos Bay	Lee County	26.473611	-82.046389