

RESTORATION EVALUATION PLAN

Project Name: Wildcat Cove Salt Marsh Restoration Project

Project Proponent: St. Lucie County/St. Lucie County Mosquito Control

Project Goal (the overall intent of the habitat restoration effort; in some cases, it can be long-term and exceed the life of the immediate available funding):

The goal of this project is to reconnect the 114-acre Wildcat Cove Preserve to the Indian River Lagoon to restore historic wetland hydrology and re-establish mangrove, salt marsh and adjacent upland habitat.

Structural Objective:

Parameter (what will be measured and in what units): The invert elevation of the culvert in feet NGVD

Baseline (pre-construction or earliest available post-construction numerical value for the structural parameter): The dike is at approximately +3.5 feet NGVD and is 30 feet wide.

Reference (ideal numerical value for the structural parameter): The elevation reference for the site is a benchmark #9477A29 at +7.635 feet ngvd

Target (proposed numerical value desired for the structural parameter): The culverts will be 40 feet long, 30 inch diameter, Corrugated Aluminum Pipe (CAP), installed at -1.0 feet NGVD invert elevation.

Timing (sampling frequency and end date): Survey is done and as-builts performed before and after construction, respectively

Functional Objective:

Parameter (what will be measured and in what units): Water quality (temperature (Deg C), salinity (ppt), pH (units), dissolved oxygen (ppm), Redox (mv), Eh (mv)) and water elevation (feet NGVD), mangrove coverage (aerial photo comparisons)

Baseline (pre-construction or earliest available post-construction numerical value for the functional parameter): Water quality has been obtained on a monthly basis for

several years. Annual water quality sampling for 2004 (pre-construction) is attached as a separate file.

Water level data pre- and post-construction is provided below. A 90.6 % reduction in head difference at maximum daily water level has been recorded for the reference dates, pre- and post-construction.

	Pre-Const	Post-Const
Water level 12/30/04		03/01/05
Wetland	1.14	1.33
Estuary	1.46	1.36
Diff	0.32	0.03

Reference (ideal numerical value for the functional parameter):

The water quality reference is the manufacturer standards for calibration and standardization set for the meter.

The elevation reference for the site is a benchmark #9477A29 at +7.635 feet ngvd

Target (proposed numerical value desired for the functional parameter):

Water quality targets are as follows:

Parameter	Min	Max
Temp	N/A	35 deg C
Salinity	N/A	40 ppt
pH	6.0	N/A
D.O.	2.0	N/A
Eh	0 .100 mv	N/A

Water level targets are as follows:

100 % tidal prism replication is the sought for empirical value for the water level target

Timing (sampling frequency and end date): Sampling is done daily for water levels and monthly for water quality in perpetuity