


# St. Joseph Bay Aquatic Preserve Hyperspectral Imaging

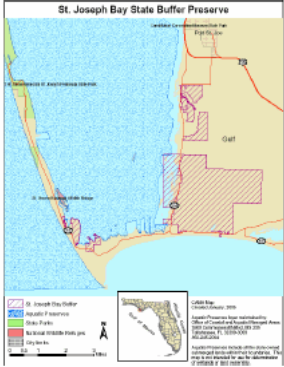
BSS provided technical writing and editing support to the Florida Department of Environmental Protection, Office of Coastal and Aquatic Managed Areas, as a member of the Florida Environmental Research Institute project team. Hyperspectral imagery was collected in the St. Joseph Bay State Buffer Preserve for seagrass mapping. BSS wrote and edited the Field and Final Reports that described the collection, processing, and analyses of the hyperspectral imagery.

Field Report



### 1.0 INTRODUCTION


Hyperspectral analysis is an excellent means of obtaining high-resolution imagery of seagrass coverage, bottom types and some water quality measures. The primary objective of this Task Assignment is to collect and analyze hyperspectral imagery (HSI) for seagrass mapping in the St. Joseph Bay State Buffer Preserve (Figure 1), one of the aquatic preserves in Florida.



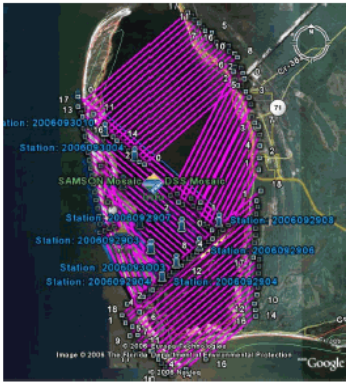
**Figure 1. Map of St. Joseph Bay State Buffer Preserve (produced by CAMA).**

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Final Report



When the exact latitude, DOY, and TOD are known, then flight lines and times may be created in advance of deployment. FERI has created custom software that will make the advanced deployment calculations for any marine imaging sensors within minutes of deployment. The output from this software includes digital maps, as well as text based coordinate files that may be automatically imported into charting (e.g. Noletec) or flight management (i.e. POSTrack) software. This software was used to pre-determine the St. Joseph Bay flight paths (Figure 2) and provide adaptive sampling capabilities.



**Figure 2. Actual Flight Lines for the St. Joseph Bay State Buffer Preserve Seagrass Project.**

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