Monitoring Plan

The monitoring plan included both Physical and Biological components.  

Physical Monitoring - The physical monitoring program addressed three needs:  
(1) Performance related, (2) Public information, and (3) Park management.

Performance Related Monitoring Needs

The primary performance related monitoring need is associated with the  
performance and evolution of the system, especially the sand flows and beneficial  
and adverse effects of the placement. Monitoring is particularly valuable to  
assist in understanding the natural system and to fine-tune later maintenance  
nourishment projects. Detailed needs are discussed below.

Profile and Planform Evolution - Repeated profile surveys serve to document  
the three-dimensional changes in the nourishment volumes. Usually sand is placed  
on a profile that is steeper than the equilibrium profile. The equilibration  
process occurs as a result of storms which mobilize the sediment at greater and  
greater depths. Associated with this equilibration process can be a substantial  
change in shoreline position that is not related to sand flow laterally along  
the beach. Documented volumetric changes along with an estimate of longshore  
sediment transport at one location allow determination of the rates of sand flow  
as a function of alongshore distance. A sufficient number of profiles should  
be measured to allow definition of anomalous features, such as the rhythmic  
planform features that can be fairly accentuated at some locations; an example  
is Perdido Key.

Wave Measurements - The wave characteristics relevant to sediment transport  
include: height (or energy), period and direction. Results obtained from a  
directional wave gage provide such data and allow much better interpretation of  
volumetric changes and profile adjustment. Available wave measurements also  
facilitate interpretation of storm effects including any documented difference  
between the effects to nourished and control areas.

Wind and Precipitation Measurements - Following nourishment, generally  
there will be a fairly broad expanse of dry sandy beach. Onshore winds blowing