

## Chesapeake Bay Algorithm Implementation Project

After a second breakout group session, one main theme was developed – to organize an implementation project (IP) for a Chesapeake Bay specific algorithm. This project involves collaboration between NOAA, NASA, and the CBP, and will demonstrate the research to operations process. Key personnel who have agreed to participate in the implementation project are Gene Feldman (NASA), Chuck McClain (NASA), Shawna Karlson (NOAA CoastWatch), Dave Jasinski (UMCES/CBP), Mark Trice (Maryland DNR), and Cindy Johnson (VADEQ).

The IP's first goal is to apply the three regional chlorophyll algorithms currently available (NOAA, UMD, ODU) on eight years of SeaWiFS data and validate with existing Chesapeake Bay Program in situ data. The ultimate goal of phase one will be to identify the best algorithm or combinations of algorithms to use for regions of the Bay. This work will be conducted by Gene Feldman's group at NASA. Atmospheric corrections will also be applied by using data from several existing AERONET network sensors in the Bay region. This work will be conducted by Chuck McClain and Gene Feldman at NASA. The results of the validation process may suggest the need for further algorithm refinements. It is expected that this will be an ongoing process during and after the IP. Algorithms will then be applied to Aqua MODIS chlorophyll data. The estimated timeline to complete the validation process will be six months.

Following the validation trials, the chosen algorithm(s) will be implemented by NOAA CoastWatch to provide daily regionally corrected Aqua MODIS chlorophyll data to managers, in a suitable GIS format. Upon delivery of data by CoastWatch, Chesapeake Bay Program, Maryland DNR, UMCES-IAN/NOAA analysts will develop methods to implement the data into forecasting, indicator and alert system tools. Finally, it was also suggested that Larry Harding's CBRSP could be refocused to sample major Bay tributaries and incorporated in the satellite remote sensing IP of the main Bay.