

## Status Report Modeling Technical Review Group (MTRG)

### Savannah Harbor Expansion Project August 23, 1999

A meeting was held on August 23, 1999 in accordance with the MTRG's recommendation to review the status of the execution of the Field Data Collection Task after it was underway for a few weeks. The goals of the meeting were as follows:

- Review data collected to date.
- Review meteorological and hydrologic conditions under which data collected.
- Provide further review by the MTRG and prepare comments on the monitoring program.

The following persons were in attendance at this meeting.

Bill Bailey	USACOE	912-652-5781	<a href="mailto:william.g.bailey@sas02.army.mil">william.g.bailey@sas02.army.mil</a>
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Brittany Robinson	Harbor Committee	912-238-6426	<a href="mailto:brittany_robinson@ucamp.com">brittany_robinson@ucamp.com</a>
James Martin	USERDC-WES	601-634-3517	<a href="mailto:martinj@ex1.wes.army.mil">martinj@ex1.wes.army.mil</a>
Roy Burke	GAEPD	404-675-1665	<a href="mailto:roy_burke@mail.dnr.state.ga.us">roy_burke@mail.dnr.state.ga.us</a>
John Sawyer	City of Savannah	912-964-0698	<a href="mailto:jsawyer@ci.savannah.ga.us">jsawyer@ci.savannah.ga.us</a>
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April Turner	OCRM	843-744-5838	(not provided on sign in)

The meeting on the 23<sup>rd</sup> of August was held in the USACOE offices in Savannah and lasted from 10:00 am until 4:00 pm. Steve Davie of ATM was the primary presenter at the meeting. The format of the meeting was as follows:

- Presentation of field data collection effort, methods utilized, final placement/maintenance of continuous stations, and execution of sampling program.
- Presentation of hydrologic, meteorological, and dredging conditions under which data collected in July and August 1999.
- Presentation of continuous monitoring data collected to date for salinity, temperature, dissolved oxygen, and chlorides.
- Discussion of data set collected to date and adequacy of the data set relative to the proposed modeling effort.

Additionally, a tour of the data collection effort by boat was provided on August 24, 1999 from 9:00 am until 12:00 pm. The tour left from Bull River Marina and covered the lower Savannah River below Fort Jackson, and then up to the USACOE Depot. The following persons participated in the tour:

Bill Bailey

Jim Greenfield  
Larry Neal  
Brittany Robinson  
James Martin  
Roy Burke  
Bo Ellis  
Steve Peene  
Steve Davie  
Trish Reese (GPA)

The following specific topics were discussed, during the meeting on the 23<sup>rd</sup> or during the boat tour on the 24<sup>th</sup>.

### **Points of discussion**

- Concern over the amount of dredging occurring during the data collection effort, and the proximity of that dredging to ATM instrument locations. Specific dredging activity by the USACOE for channel maintenance, and private dredging upstream of the USACOE Depot for a marina were discussed.
- The present conditions (instream temperatures and flows) were discussed and it was generally agreed that these represent critical conditions relative to dissolved oxygen.
- Cloud cover and how it will be addressed in the model, given the data collected for solar radiation, was discussed.
- QA/QC procedures were discussed, and other than specific recommendations listed below, were deemed appropriate.
- Locations and elevations of instruments were discussed, and other than specific recommendations listed below, were deemed appropriate.
- Status of Chloride monitoring effort, identified late start on Chloride data collection August 10, 1999, and will extend monitoring program 10 days accordingly.
- Bathymetry relative to the dredging activity was discussed and how the model will handle this. Identified that pre- and post-dredging surveys will be utilized in model development to assure that the most accurate possible depths are utilized.
- The anticipated completeness of the data set for model calibration, based upon data presented to date, was discussed. It was generally agreed that for dissolved oxygen and salinity the data set should be sufficient. Status of chloride data set still undecided at this time. Will discuss at the next meeting.

The MTRG made specific recommendations on the data collection effort, including recommendations for focused data collection in specific areas. The following summarizes the specific recommendations.

### **Recommendations**

- ATM should conduct a single day of monitoring in the vicinity of the USACOE dredge operating in the navigation channel. The purpose of the measurements is to try and quantify the effects of the dredging effort on in-stream dissolved oxygen concentrations. The sampling effort to occur over a single tidal cycle and consist of longitudinal profiles of the centerline of dredge activity (upstream and downstream of the dredge) to quantify the net dissolved oxygen deficit associated with the dredge plume. Additionally, if a maximum dissolved oxygen deficit location is found downstream of the dredge activity, a cross-sectional profile to be collected at that location, or as near as possible.
- ATM should get a list of agitation dredge activity occurring during the data collection effort from the USACOE.

- ATM should obtain the most recent bathymetric information available from the Corps for use in the model development.
- GPA-21 (bottom) should be removed during USACOE dredging activity in the area of the Depot.
- GPA-22 should be moved to the upper end of the Kings Island Turning Basin. Both surface and bottom instruments should be moved.
- Dissolved oxygen measurements should be corrected for drift where applicable and sufficient data are available to provide for correction. The raw and corrected data should be presented.
- ATM should post-calibrate instruments to check clock settings.
- ATM should provide the data (after completion of QA/QC processing) to MTRG members for review.
- ATM should collect one LT BOD sample within a dredge plume from maintenance dredging.

The next MTRG meeting was set for September 29<sup>th</sup> in Atlanta at the EPA Region IV offices. The goal of this next meeting is to provide final comments on the ongoing field data collection.