

Caloosahatchee Modeling TMDL Technical Group

Conference Call No. 1

August 24th 2011

Overall General Goals of the Group

- To Work together to Develop a TMDL Model
 - Utilize Local Stakeholder experience and expertise (modeling and otherwise) in selecting input parameters and finding additional calibration data.
 - Set Up a Model, as much as possible, that works in the implementation (BMAP) phase.
 - Includes improvements to previous Tidal Model.
- To Familiarize Stakeholders with Modeling Tools such that it can be used with confidence in the implementation phase.
 - Ideally develop a small core stakeholder group that is comfortable running, maintaining, and updating model for BMAP phase & other uses
- Although the temptation will be great, this group will steer away from discussing general FDEP or TMDL Policy/Rules or other non-modeling issues. These will be covered in other meetings/formats.

Meeting 1 Outline

- Introductions (Name – Position – Organization – Any particular items you want meetings to address?)
- Any Follow-up to proposed items of discussion of modeling issues the members may have and may want to see covered in the weeks to come. AND FTP sites/Sharing Information
- Preliminary Discussion of Models & Previously Discussed and Proposed Changes
 - Present Models Used
 - Rainfall, Flow, Grids, Light Algorithm
 - USEPA Model
 - Possibility of EPA/TetraTech Model Replacing Present Model.
 - Initial Reactions to the Model From Group?
 - Possible EPA/TetraTech Presentation on LSPC/WASP Models
 - Model Ready-to-Run is on FTP Site. Please Review Documentation, Run Model, Develop Questions/Comments.
- Discussion concerning preferred frequency of calls (i.e. weekly, biweekly or monthly?) and optimum dates/times for future calls.
- Set Date for Next Call

Introductions

- Your Name:
- Position:
- Organization:
- Anything you want calls/meetings to accomplish?
 - What do you hope to get out of the group meeting, and or what topics would you like to see covered).

Follow-Up Discussion on Items to cover

- List Items to cover
- Prioritize at end of call
- Possibility of sub-groups – possibly forming and having separate calls to cover individual topics – and reporting to whole group

More Housekeeping

Files Helpful to the group (models, documents, etc.) will be placed onto the FTP site by FDEP:

OLD SITE:

- http://publicfiles.dep.state.fl.us/DEAR/Caloosahatchee_Model_Group

BELOW NEW SITE (because it allows you to open in Explorer Window) – Still need to Work with out IT people to keep it alive more than 35 days):

- ftp://ftp.dep.state.fl.us/pub/outgoing/Caloosahatchee_Model_Group/

For those outside FDEP who wish to make Files available to the Group

(Outside FDEP cannot upload onto above site), You can either;

1. Feel free to send Emails*** and Email Attachments to the Group
2. Make files available from your own organization FTP site.

OR

3. upload to below site and let us all know when the upload has taken place:
ftp://ftp.dep.state.fl.us/pub/incoming/Caloos_Model_Group/

(above ftp only has a limited number of days retention time (14 days?))

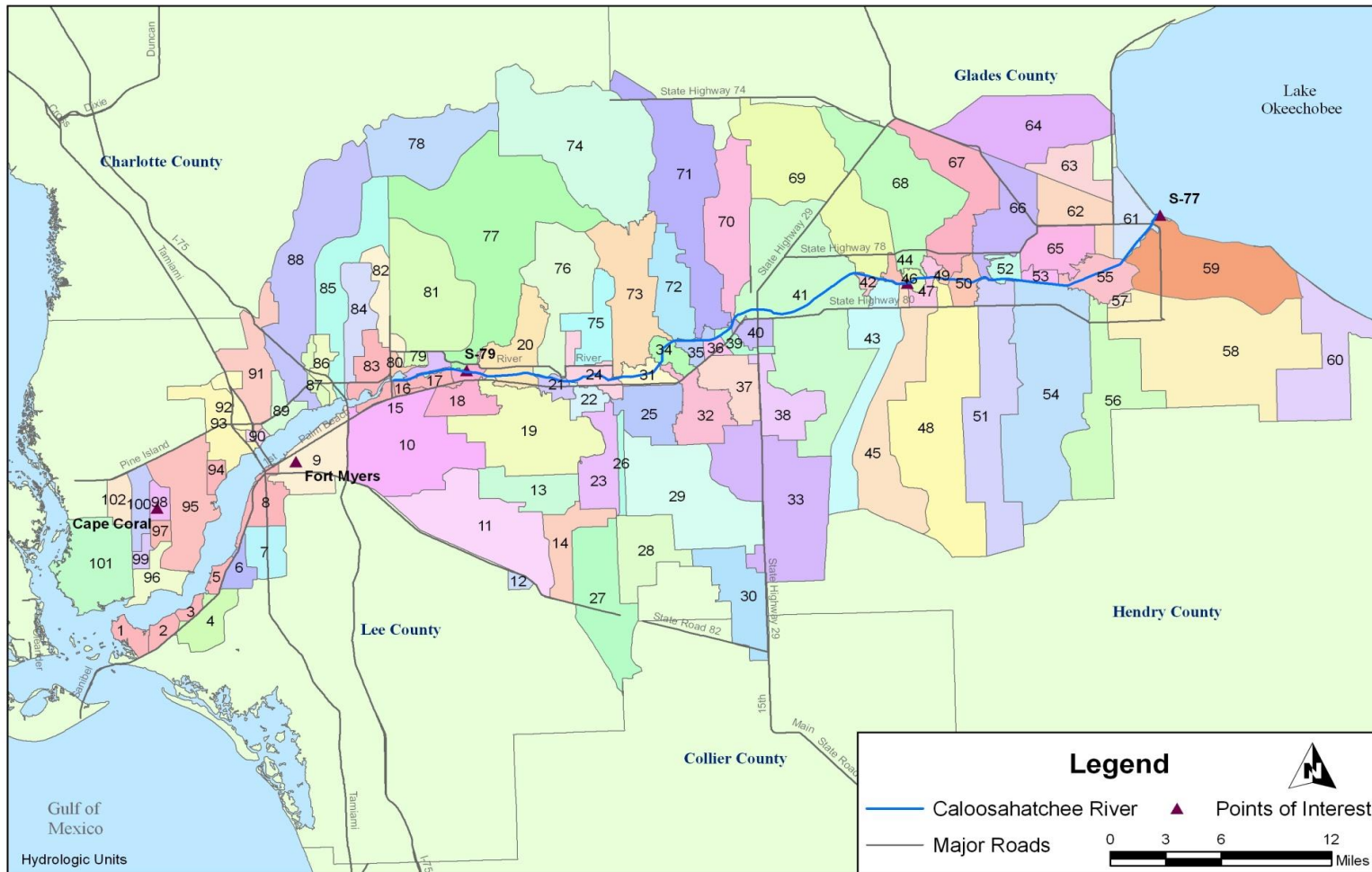
In all cases, I will then be able to transfer your files to our Publicfiles site.

*** Emails between the Group members is a great way to keep things going between meetings.

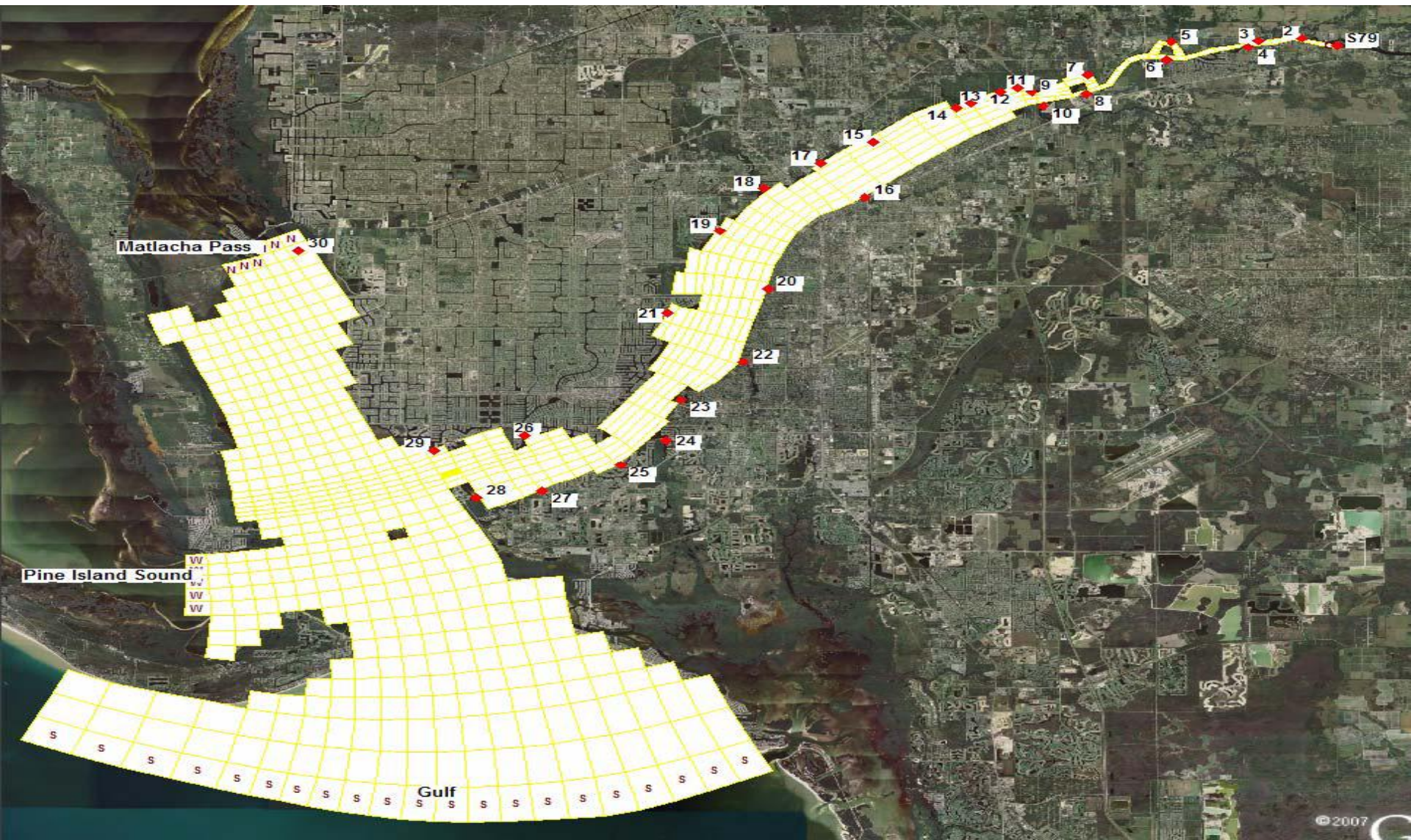
Quick Review of Prior Model Runs

Historical: Tidal Caloosahatchee Nutrient TMDL Approach

Computer Model HSPF feeding into Hydrodynamic Model (EFDC) at 29 Linkage Points



Hydrodynamic EFDC – Tidal Caloosahatchee



FACTORS PREVIOUSLY DISCUSSED TO BE RESOLVED BY MODELING GROUP

- Grid Sizes in Estuary
 - Should Smaller grid sizes in the San Carlos Area improve precision in Light Attenuation Assessment?
- Light Algorithms Improvements and Representations
 - Handling EFDC Light Attenuation Component to model
- Rainfall Data (NEXRAD or Other?).
- Incorporation of New Tributary Flow Data. Redo Calibration

USEPA/TetraTech Charlotte Model

1. Uses Loading Simulation Program in C++ (LSPC) instead of Hydrologic Simulation Program in Fortran (HSPF)
2. Both uses EFDC, but utilizes WASP for Water Quality
3. There are significant differences in how EPA-Tetrattech Set up Model that should be discussed by this Group
 - Possibility of EPA/TetraTech Model Replacing Present Model.
 - Model Ready-to-Run and Documentation is on our FTP Site.
 - General Initial Reactions to the Model From Group?
 - Please Review Documentation, Run Model, Provide Questions/Comments for EPA-TetraTech
 - Possible EPA/TetraTech Presentation on LSPC/WASP Models

Part of Our Role Should Include:

Looking at the impact of the potential change to EPA model

- Initially we have only looked at the comparison between LSPC & HSPF Total Nitrogen, which is reasonable considering different rainfall sources and watershed setups

Model	Simulation Comparison LSPC-TetraTech and HSPF/DSLLC Total Nitrogen in Total Pounds 2003-2005	
	<i>Caloosahatchee Watershed Upstream of S79</i>	<i>Caloosahatchee Watershed Downstream of S-79</i>
LSPC -EPA/TetraT	8,595,299.33	6,712,622.14
HSPF-FDEP/DSLLC-CDM	8,194,980.00	6,196,970.36
LSPC as % HSPF	105%	108%

- More Work By FDEP and Group would be necessary to fully determine impact and positives/negatives of adoption.

Assignment For Next Time to Get Us Moving.

- Read USEPA Model Information
- Open & Take a look at the HSPF Input File.
- Open & Take a look at the LSPC Input File.
 - Modify LSPC Input file such that output generated goes to desired location.
- Run USEPA/Tetratech LSPC Model of Charlotte (includes Charlotte & Caloosahatchee Watershed)
(Run from Charlotte Watershed site)
- Run HSPF Model used in Tidal TMDL
 - If necessary, download Basins from EPA site. I typically only use WINHSPFLT (part of download) for HSPF run.

EPA Sites For downloading Basins (& HSPF) models

Basin Documentation and Training (online sites)

- <http://water.epa.gov/scitech/datait/models/basins/bsnsdocs.cfm>
- <http://water.epa.gov/scitech/datait/models/basins/training.cfm>

Basin Documentation and Training (online sites)

- http://water.epa.gov/scitech/datait/models/basins/BASINS4_index.cfm

How Often Should we do this?

- Bi-Weekly? Weekly? Monthly?
- Possibly Develop Focus Sub-Groups that might meet on more frequent basis.
 - Work on problems running model
 - Work on items of limited interest to full group, and if necessary report back to the general group
 - i.e. this weeks assignment of running LSPC and HSPF models.
- Wednesday Afternoon work well?
- Date of Next Meeting

- Any Final thoughts?