

Water Quality Functional Assessment Method Project (WQFAM)

A-Team Meeting Notes

1926 Victoria Ave. Ft. Myers, FL 33901

Meeting 1 - November 28, 2011
Scheduled 1:00 p.m. – 5:00 p.m.

Attending

| In Person: | Via WebEx: |
|-----------------|----------------|
| Connie Jarvis | Greg Blanchard |
| Judy Ott | Kim Haag |
| Karen Bickford | George Kish |
| Katie Laakkonen | Jason Green |
| Mike Bauer | |
| James Evans | |
| Greg Rawl | |
| Harry Phillips | |
| Mike Kirby | |
| Steve Adams | |
| Michael Jones | |
| Whitney Gray | |
| Lisa Beever | |

Whitney Gray gave the first presentation on the background of the project and an outline of the tasks ahead of the team, with a general timeline. Key points:

- This project will develop a *functional assessment method*
- The method will be used to evaluate the *water quality benefits* of restored and constructed treatment wetlands
- The method will be *used for evaluating and crediting water quality improvements* in BMAPs to address TMDLs
- A cross-jurisdictional, cross-functional *team* will create the method
- The method will focus on *biological and physical surrogates* for water quality measurements
- The method will be *tested and calibrated* in the field
- The method will be proposed to be *accepted by the state*

A generalized timeline was presented for the 22 months of the project.

The agenda for the meeting was altered due to the time constraints of Lisa Beever, so the next presentation was her background information on Total Maximum Daily Loads (TMDLs). Lisa defined applicable terms, and briefly discussed the processes by which waterbodies are deemed impaired. She then presented maps and lists of impairments within the study area and gave examples of the presentation of TMDL components from FDEP documentation. Lisa presented a map of BMAPs adopted and in progress within the state. She then reviewed the

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newly published CHNEP “Charlotte Harbor Seven-County Watershed Report”, pointing out the parts of the report applicable to the project, including findings on the sources of surface water pollution and the loadings. She briefly discussed trends for loadings of nitrogen, phosphorus and total suspended solids.

Whitney Gray, filling in for Jim Beever who was not able to attend due to sickness, gave the next presentation, “History of and Introduction to Wetland Functional Assessment”, which traced the progress of wetland functional assessment from its beginnings meaning only what development potential was represented, to a method for assigning mitigation ratios based on area of wetland lost, to a method for assigning mitigation based on wetland function lost.

Whitney then presented some background on the Uniform Mitigation Assessment Method and an overview of the use of the method to determine wetland function.

The final presentation was on the Hydrogeomorphic Methodology for determining wetland function in depressional and flats wetlands of Florida . Whitney gave some background, then a brief overview of the use of this method.

The next item was a discussion on water quality parameters to be assessed. The goal of the project is to devise a rapid assessment of how well a treatment wetland is doing its job, not to get a precise measurement of any parameter. Several issues emerged as being important:

- Seasonal differences
- Flashiness of systems due to rain events
- Dissolved oxygen: necessary/unnecessary/ considered linked as a causative pollutant to other pollutants
- Nitrogen – which forms?
- The possible use of the 50th percentile distributions

Although an extensive list was mentioned, much of the discussion centered around the ability to empirically test for parameters using probes or sensors, and the need to have data to tie observed conditions to.

Another issue was the role of incoming water quality, and how to know what that is as well as what the nature is of the contributing watershed. The group did not eliminate any parameters from consideration that compose what was referred to as the “typical suite”:

organic and inorganic nitrogen and phosphorus, ammonia nitrogen, TKN, orthophosphate, total phosphate, nitrate, nitrite, total nitrogen, total suspended solids, fecal coliforms, cadmium, chromium, and copper.

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It was suggested that, with additional funding, work could be done comparing water sampling test kits to probe results to lab analysis results.

Indicators of good treatment wetland performance were discussed. The first indicator mentioned was biodiversity, but there were some concerns with that: natives vs. exotics; and survival of what was planted vs. recruitment of other plants. Water clarity and depth, presence of wildlife, vegetative cover, presence or absence of hydrogen sulfide smell in sediments, colors indicating organics in soils/sediments, residence time, and lack of siltation were all mentioned as possible indicators of good treatment performance.

The final agenda item was to list locations of treatment wetlands in the study area known to the participants:

- 10-Mile Canal, Lee County
- Gordon River Water Quality Park, Collier County
- Riverside Circle City Park, Naples, Collier County
- Billy's Creek Filter Marsh, Ft. Myers, Lee County
- Seminole Campus of St. Petersburg College, Pinellas County
- Campus of FGCU, Lee County
- Conservancy of Southwest Florida, Collier County

Contacts who may know of more include:

- Johnson Engineering, Church Roberts
- FDOT
- Scheda Environmental, Tom Reiss
- Wilson Miller, Craig Schmittler

The next meeting date was not set, but a Doodle poll will be sent out with the appropriate time frame by the end of the week.

The meeting ended at approximately 4:00.