

# Engineering and Operations Committee Meeting

## Minutes

**August 30, 2012**

The meeting was convened at 3:05 P.M., Thursday, August 30, 2012, at the Lakeway Municipal Utility District's office located at 1097 Lohmans Crossing, Lakeway, Texas 78734-4459.

The following Engineering and Operations (E&O) Committee members were in attendance:

Don Walden, *Chairman*,  
Harvey Harrison, *Committee Member (Vice Chairman)*,  
Bob Rives, *Committee Member (Secretary)*,  
Pat Rossmiller, *Committee Member*,

Earl Foster, *General Manager (GM), Lakeway M.U.D.*,

(Carl English, *Committee Member*, was not in attendance).

The following LMUD Board of Director was in attendance:

Jerry Hietpas, *Board Member and Board Liaison to Committee*.

The meeting was called to order by the Committee Chairman, Don Walden at 3:05 P.M.

The meeting's agenda had been distributed to all Committee and Board members by e-mail on August 28, 2012. The designated Agenda for the meeting was issued by Mr. Foster in the following manner:

1. Review Engineer's Contract
2. Update on Progress of Water Model
3. Review Billing Report
4. Discuss Proposed Pilot study by "More Aqua."

The meeting's first item of the agenda was a review of the contract (Agreement) between LMUD and Christianne M. Castleberry of Castleberry Engineering & Consulting, P.L.L.C. (CE&C). The general consensus of the Committee Members indicated no problems with the agreement. Mr. Foster mentioned that he was please with the work of the engineer and felt that she has the required knowledge for the work involved. Her primary work at this time involved the water-model system. The contract was open ended with a 30-day notification clause should either party wish to terminate. Members indicated that in the future it would be

good to budget her work at least within an estimate for the year and perhaps LMUD should establish milestones or some way benchmark the modeling work time and costs by the engineer up to the final completion date. There was a general consensus that the hourly charges were reasonable considering her company's overhead costs. The Board Liaison said that the Board anticipates extra engineering costs (such as electrical engineering costs on the tank's construction) for the Eagle Storage Tank noting that the engineering/modeling operating costs will eventually be moved to the capital budget. The CEC engineer is budgeted from about \$60,000 to about \$90,000 for the total project. Talks on the Engineer's Contract were terminated with a consensus of agreement among the Committee Members for accepting the Contract.

Mr. Foster introduced Agenda item 2 and called Consultant Castleberry into the meeting and she gave an update on the LMUD hydraulic model saying she still need to calibrate the system's model of the Eagle Storage Tank (E-1 Tank). Foster reiterated that the basic problem is the need for more storage capacity; however, the E-1 Tank area cannot accommodate a larger tank. Therefore, LMUD needs to examine the tank requirements and to identify the best area for a new tank by creating a relational data base in the modeling system that will validate engineering assumptions which can aid engineering design and asset planning. Next Mr. Foster handed out a LMUD Hydraulic Model Timeline showing that May and June 2012 were used for installation, training, and collection of facility data and to evaluate SCADA demands, and that July and August were being used to import the GIS piping system and hydrants into the model. Furthermore, they now needed to complete construction of the model's structure, evaluate average meter-based demands, evaluate actual peak day and average day demands, and finally to allocate assigned average demands to nodes within the water model. During the month of September the engineer should complete demand allocation adjustments and lay out the model's strategy rules. When the calibrations are substantiated by actual pressure tests with sensors at strategic locations along the LMUD system using flow meters a good knowledge of the logic of the model system will be better known. There are many unique calibrations in the model which requires technical editing and debugging; such is an iterative process. The final scheme is to modify the model to provide LMUD with definitive evaluations and simulations for alternative hydraulic system scenarios. Foster was asked if he had a drop-dead date for the finalization of the modeling results. He said such was not yet specifically determined but that his personal driving force was to be able to sell bonds for the construction by next year. The Consultant was hopeful for a full-model run near the end of September but she said that calibrations of the model were still on-going and she required at times feedback from the Innovyze maintenance contractor regarding a number of technical issues, which at times can be slow. The engineer noted that the model is self-contained on the LMUD computer system and is not connected to any outside sources and that there were no license feeds on the model system.

Item 3 of the Agenda was a review of the billing report. Mr. Foster handed out a paper showing statistics on the connections. The paper shows a total water connection of 3,999 with a usage of 156,991,000 gallons based on bi-monthly usage as per the July billing date. In-District was 2,879/114,396,000, and Out-of-District was 1,120/42,595,000, respectively. Also there are 2,966 wastewater connections of which the vast majority of these are In-District. A second information paper handed out was the Actual Consumption Report from the July billing date of 7/20/12.

The next Agenda item was a discussion on a proposed pilot study by *More Aqua*. *More Aqua*, Inc. furnished LMUD an executive summary report regarding an evaporation suppression retardation capability to water reservoirs, a letter from Texas A&M, and a paper by Matthew L. Wald. Moshe Alamaro, founder and CTO of *More Aqua*, Inc., proposed to obtain a permit from TCEQ so as to conduct a study using a LMUD five-acre reservoir to test his product. The product is a monolayer film made of material extracted from palm and coconut oil and also contains hexadecanol and octadecanol. This material forms a single-molecule film and requires a 12cc/acre application that should last about one week after application. The product then degrades into water and carbon dioxide and the material is considered harmless to humans and animals. *More Aqua* will also do extensive water-quality experiments and testing during the pilot period. They claim that the monolayer is used safely in swimming pools to suppress evaporation (with an environmental permit). The Committee was intrigued by the claims; however, its first look brought forth remarks that we need to weigh the benefits along with the risks. Is it really not harmful to humans and wildlife? What are the liabilities to LMUD, to the community, as well as to the general safety aspects associated with study? If LMUD allows the study what advantages will we have? Additionally, there is the question of notifying LCRA and the public should the study be approved. The Chairman asked that the Committee Members read the full report and accompanying papers from *More Aqua*, Inc. and then the Committee would talk more about it at the next meeting.

Having completed the Agenda items it was moved and motioned that we elect a Vice Chairman. Harvey Harrison was nominated and approved by all of those present. The Chairman and General Manager then asked the Committee to designate their preference for a time and date for the next E&O Committee meeting. The Committee agreed to meet on September 27, 2012, at 3:00 PM. Thursday was agreed as the best general meeting day. Mr. Hietpas replied that he will be unable to attend that day. The Chairman asked Mr. Foster if we could see the wastewater results for the next meeting.

The meeting was adjourned at 4:30 PM.

The Minutes have been read and approved by:

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*Don Walden, Chairman*  
*September 3, 2012*

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*Earl Foster, General Manager, LMUD*  
*September 3, 2012*

*RGR/August 31, 2012*