

**DOVER TOWNSHIP
BOARD OF SUPERVISORS MEETING
Work Session Minutes
September 27, 2010**

The Dover Township Board of Supervisors held a work session on Monday, September 27, 2010, which began at 6:00 PM in the Meeting Room of the Dover Township Municipal Building. Dover Township Supervisors present were Chairman Curtis Kann, Madelyn Shermeyer, Michael Husson, Duane Hull, and Monica Love. Laurel Wilson, Township Manager; Charles Farley, Public Works Director; Corey Flythe, Lead Water Operator; and Dawn Slegel, Recording Secretary were also present. David McHenry and Martin Auman of Keystone Engineering Group and Dave Hagan of Double Dog Communications were in attendance at this work session.

The purpose of the work session was to discuss the Supervisory Control and Data Acquisition (SCADA) System for the water system and its connection to the Township's computer system.

Mr. Farley reported that Keystone Engineering Group and Double Dog Communications would be partnering for the operation of the new SCADA system. Double Dog would be the internet service provider.

David McHenry of Keystone Engineering stated that they have been working for almost a year on developing a SCADA system for Dover Township's water distribution system. They have produced a design which also includes the need to record for the chlorine monitoring initiative coming in April. Their initial proposal involved the use of the existing analog radio network located at five sites and incorporating all fifteen sites into this network. Recently, the option has presented itself of switching the system to a wireless broadband base. Keystone's portion of the project will be to supply the Turn Key SCADA System, to bring the data to a central computer system which will monitor the water system with alarms, control the pumps, and generate reports for DEP. There are three types of SCADA sites which are the wells, tanks, and booster station sites. Keystone will also supply the equipment which results in a \$25,000 to \$30,000 cost savings to the Township because they deal directly with the manufacturer.

Supervisor Shermeyer questioned the reason Well Nos. 7 (Cardinal Lane site) & 10 (Village Square site) are shown as a Phase II Project.

Mr. Farley replied that the cost figures are slightly over budget and these sites still need some monitoring in 2011.

Mr. Flythe added that with the new approach, there will be a cost savings which will allow these wells to be incorporated into the project.

Supervisor Husson noted his concern on the radio frequency.

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Mr. McHenry reassured Supervisor Husson that a radio field survey and communication measurements were performed. There were good signals between the sites. The old system would work, but there is a different option available. This new option is very good and is a state of the art communication set-up.

Supervisor Shermeyer noted her familiarity with the Double Dog Communications System and also asked about the outcome when the tower on Mountain Road goes out of service.

Mr. Hagan answered that tower does not have any connection with the Township's system. Some well sites might come off of that tower. The way that the programming and software is set-up if any of the sites on the SCADA system go down, that system retains the data until the power is restored. Since they are a local internet provider, Double Dog will provide the municipality with internet service at no charge and in trade they will be permitted on the tanks and facilities with their equipment to provide the community with internet service. They also replace, maintain, and repair any equipment for the Township at no expense to the Township. Everything is written in a long term contract. The Township would have the option of taking over the network should Double Dog go out of business. Double Dog's position is the intermediary between Keystone and Dover Township with the ability to contact someone local if there is a problem. They can also work with the municipality to insure that the other co-locators are installing the proper equipment on the Township's sites so there is no interference with the Township's system. This type of system has been successfully used in Dallastown Borough.

Chair Kann questioned the existing antenna contracts with the other cellular companies.

Mr. Hagan stated that the cell carriers have licensed band frequency. Their license was bought from the FCC so no one in the area can use their frequency. Double Dog uses unlicensed band products. They can adapt their frequency to not interfere with already existing frequencies. If any new carriers would want to be situated on the tank, then they have to insure that there is room in the spectrum.

Manager Wilson inquired whether the Clearwire or Open Range contracts may interfere since they are wireless internet providers.

Mr. Hagan responded he would have to check on Open Range because he was not familiar with their operation. Clearwire would not be a problem since they are licensed. He reported that Double Dog has an existing location on the Yorktowne Hotel. Double Dog is located on 84 different tower or repeater sites.

Mr. Auman stated that the radio communication existing at the five sites would remain as a back-up system. He gave the advantages of the wireless versus the analog. The Lead Operator would be able to tap into the SCADA system at any location in the Township at any time. It is a secure network. Keystone will be able to provide maintenance and support from their computer to the controller of Dover Township's SCADA system. The analog system does not have all of these capabilities. If the network is down for a period of time, this system would backfill all of the missing data from that

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time period. The Human Machine Interface (HMI) will now be changed to Clear SCADA which is web based and allows the access of personnel and will send text emails for the alarms. Video cameras can be connected to the system for security purposes.

Supervisor Shermeyer asked about the security at the well sites, specifically with fencing.

Mr. Flythe answered that not all of the well sites are fenced. He would get notified of an intrusion at a well site through the alarm system. He explained that there are currently two tank facilities that are not fenced which are Skytop and Locust tanks. Through a security assessment, it was recommended that the Skytop Tank be fenced which would cost approximately \$7,000. He added that intrusion alarms, security cameras, and motion sensors are all ways of providing additional security and can be connected to the system.

Mr. Hagan stated that Mr. Flythe will be able to actually view the area that received the alarm on his computer for vandals, etc. Any criminal act can also be recorded.

Mr. McHenry reported that Keystone and Double Dog will be working for Dover Township independently. He trimmed approximately \$15,000 from the original proposal removing equipment and supplies which will not be necessary because of utilizing the internet service of Double Dog Communications.

Chair Kann noted that the proposal would be approximately \$232,000 including Well Nos. 7 & 10. He asked the cost for Double Dog's installation.

Mr. Hagan replied that it would be free. His proposal would include the tank sites as communication locations. There may be some sites where wireless cannot reach so the radio system may have be used and if needed another radio may have be purchased.

Chair Kann asked each business represented to submit their written proposals to the Township.

Mr. Auman remarked that this wireless communication system adds so much more value to the SCADA system through flexibility, reliability, and robustness to the communications and data. He noted that each site can also work independently given the programmed perimeters.

Supervisor Hull questioned the responsibility of the computer when the Lead Operator is on vacation.

Mr. McHenry responded that there is a list of contacts which can be notified. It will go through the list until a response is received.

Supervisor Love inquired about the items not covered under the Keystone proposal such as the electrician.

Mr. Flythe replied that the Township has an electrician who is familiar with the system and works on all the Township's well sites.

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Supervisor Love questioned whether there was any new instrumentation not included in the proposal that would be needed.

Mr. Flythe answered PH meters may be needed. The Township currently has the basics.

Mr. McHenry commented that the system can grow in time.

Supervisor Love questioned whether new wells could be incorporated onto the system in the future.

Mr. McHenry answered affirmatively.

Chair Kann stated that the Board will look forward to a firm proposal from both companies.

Chair Kann concluded the work session at 6:50 PM.

Respectfully submitted by:

Dawn D. Slegel, Secretary