MEETING OF THE ORLEANS BOARD OF WATER COMMISSIONERS
June 10, 2009

A meeting of the Board of Water Commissioners was held Wednesday, June 10, 2009 in the Nauset Room, Town Hall:

Those present were Victor Noerdlinger, Robert Rich, Kenneth McKusick, Hank Schumacher and Ann Hodgkinson of the Board, Lou Briganti, Water Superintendent.

Victor Noerdlinger called the Board of Water Commissioners meeting to order at 1:00 p.m.

MINUTES

Ann Hodgkinson made a motion seconded by Robert Rich to approve the minutes of the meeting of May 5, 2009 as written. The vote by the Board was 5-0-0.

SUPERINTENDENT'S REPORT

SEE ATTACHED REPORT

COMMITMENTS/ABATEMENTS/REFUNDS

A motion was made by Kenneth McKusick seconded by Ann Hodgkinson to commit for the month of May 2009 to rate $0.00, to services $2,120.00, to usage $0.00, to installations $1,843.92 and to added billing $261.60. The vote by the Board was 5-0-0.

A motion was made by Kenneth McKusick seconded by Ann Hodgkinson to abate $10.00 from rate account #3739 for a service that has been discontinued. The vote by the Board was 5-0-0.

A motion was made by Kenneth McKusick seconded by Ann Hodgkinson to abate $74.10 from rate account #4213 for a service that is now owned by the Town of Orleans. The vote by the Board was 5-0-0.

A motion was made by Kenneth McKusick seconded by Ann Hodgkinson to refund $148.20 to rate account #3033 Community of Jesus for a service was discontinued July 2008 and invoices for August 2008 and February 2009 were paid. The vote by the Board was 5-0-0.

A motion was made by Kenneth McKusick seconded by Ann Hodgkinson to refund $287.74 to rate account #1149 for an invoice that was paid twice in error. The vote by the Board was 5-0-0.

OTHER BUSINESS

WASTEWATER MANAGEMENT STEERING COMMITTEE

A motion was made by Kenneth McKusick and seconded by Robert Rich to recommend to the Board of Selectmen to reappoint Ann Hodgkinson to the Waste

Water Steering Committee for another term. The vote by the Board was 5-0-0.

BOARD TRANSITION

The Board will discuss at their final regular meeting transition issues for the new Board of Water/Sewer Commissioners.

ADJOURNMENT

At 2:08 p.m., a motion was made by Ann Hodgkinson and seconded by Hank Schumacher to adjourn the meeting. The vote by the Board was 5-0-0.

The next regular meeting is scheduled for July 1, 2009 at 1:00 p.m.

Susan N. Brown

Secretary, Board of Water Commissioners

Town of Orleans
Water Department

Lou Briganti
6/8/2009

Board of Water Commissioners

10Jun2009

BCWUA

Barnstable County Water Utilities Association has elected a new President - Mark White of Environmental Partners Group. With this addition to the Executive Board, a legislative initiative is inevitable. Work will begin with the Water Management Act and Groundwater Rule.

Chemicals

The bid results for chemicals have been received. Through the County's bid and our own bid the price for Potassium Hydroxide has dropped significantly - from a street price of $9.00 per gallon to a bid price of $5.00 per gallon. This is 30% less that our FY09 bid price.

At this time, it appears that we have made the right decision in postponing a change to Sodium Hydroxide. The market does appear to be stabilizing.

PMA

Eagle Electric Co. is the distributor for Rockwell International for the territory that includes Orleans. We worked with (and were required to work with) Eagle Electric when we upgraded our RSView SCADA software at the beginning of this year.

Eagle Electric Co. is also our supplier for Allen Bradley Equipment. All of the electronics in the wtp, well nos. 4, 5, 6 & 7 and the 2-tanks are Allen Bradley. There are 28 units that make up the bulk of the critical electronics for these facilities. The purchase price for all 28 components is estimated to be $32,178.

Being very costly to stock spares, this type of equipment is a good candidate for a Parts Management Agreement. We have negotiated a contract with Eagle Electric that will provide all 28 components for a fee of $514 per month for a period of 5 years. The equipment would be stocked at our facility with a 1-year warranty (that begins the day a part is put into service). The contract can be terminated or renewed at the end of the 5 years.

The PMA has been brought to the Town's attention and the contract is being reviewed by Town Counsel.

WTP

Membrane Performance / Replacement

1. The aggressive CIP procedure was performed on rack no. 1. The rack was in operation for 8.4 weeks since its last chemical cleaning. Between 05/11 and 05/13 the rack was washed with 2% Citric Acid, followed by a solution of KOH and Hypochlorite, followed by a final wash with 2% Citric Acid. The final permeability achieved after the last CIP was 6.34 gfd/psid. A permeability greater than 6 gfd/psid is considered very good. This rack is considered ready for summer time demand.

   Two days after completing the aggressive CIP, rack no. 1 failed its Integrity Test. The rack was taken out of service and re-tested. The broken fiber was isolated and pinned and the rack was returned to service. The membranes seem to be unable to get through an aggressive cleaning without a broken fiber.

   The same aggressive CIP procedure was performed on rack no. 2 between 05/26 and 05/28. Similar, good results were achieved with a final permeability of 6.22 gfd/psid.

2. Met with Steve Olson, Environmental Partners Group (EPG) to discuss the process and schedule for membrane replacement. A meeting is scheduled with MA DEP SERO to discuss their requirements for the process, the change to MF, the need for a pilot study and their "*approved technology list*". OH BOY!

3. The following email summarizes recent communications with Pall Corp. regarding the performance warranty;

   From: Louis Briganti
   To: Lance_Benjamin@pall.com
   Cc: Bill_Bennett@pall.com; Bob_Cundall@pall.com; Dave_Glovinsky@pall.com; Jesse_Campbell@pall.com; Karl_Britt@pall.com; Mike_Petrucco@pall.com; Mike_Poole@pall.com; Patricia_Owen@pall.com; sco@envpartners.com; Steve_Watson@pall.com
   Subject: RE: 2009.04.21.Orleans.2009_1 Rack Test
   Date: Thursday, April 30, 2009 2:02:00 PM

Lance,
Thanks for taking the time for the conference call this morning. It was helpful and your input is always appreciated.

To summarize the results;
1. Orleans will plan on doing a design flow test in July or August.
2. Pall Corp. will provide the test parameters by the end of May.
3. You will request that Pall Corp. assign a Project Manager to the Orleans account.
4. Pall Corp. is aware that I have begun the process to replace the membranes in the Orleans facility.

I am requesting the assistance of Pall Corp. in converting from UF to MF. This includes avoidance of the potential requirement of a pilot study by MA DEP.

To be quite honest and clear:
Having operated the Orleans facility for 4+ years I do not believe there has been strong clarity for when a CIP was called for. We have basically operated with a limit of 20 psid TMP. That being said, I do not believe our membranes ever met the warranty provided by Pall Corp. I think our hard efforts to make the plant work and the less than expected iron concentration have masked that fact.

I suspect that the performance of our membranes is rooted in solids loading. The data I submitted from the design flow operation in March and April indicates that 95 to 99 lbs. of Iron will result in 35 psid TMP.

The reason that I think it is important to test the warranty is to insure that we can make a smooth transition to new membranes. I am hopeful for clear cut operating guidelines and performance expectations.

I remain optimistic that a good facility can be made better and operate more economically by working with Pall Corp. and converting to MF. I am also optimistic that this can be achieved at a reasonable cost to the Town of Orleans.

Since the late phases of construction and then start up I have worked with a number of Pall Corp. employees. Because of the efforts of certain individuals I would hope for the relationship between Pall and Orleans to continue and strengthen. Please pass this along; the people that I have found courteous, professional, helpful and responsive are Eric

Lorenze (for making the plant run), Mike Montag, Joe Kelly and of course yourself Lance Benjamin.

Thanks again,
Lou

4. The morning after Town Meeting and the membrane replacement article; I was contacted by Technology Sales Associates who represents General Electric and their ZeeWeed 1500 pressurized UF membranes. The suggestion is that our Pall membranes could be substituted and the question is when will the project be bid.

   A meeting is scheduled with the Town Attorney to discuss membrane replacement and one of my most favorite of topics – "*sole sourcing and the intricacies of MASS General Law*". OH BOY!

   With membrane replacement thus complicated I decided to contact Pall Corp. What follows are my phone conversation notes;

   06/05/2009
   Called and by chance got Lance Benjamin;

   Lance acknowledged that Pall had not responded to the tracer study/Hydrofluorosilic Acid - email. He said that it had been discussed and would be considered okay for the test.

   I explained our situation as becoming more complicated;
   - I was contacted by Technology Sales Associates after Town Meeting. They asked when we would be bidding and recommended GE's ZW1500 pressurized ultra filtration membrane (zeeweed PVDF).
   - DEP has been no help to date. A meeting with DEP is scheduled for next Tuesday.
   - It is not clear if Pall's micro membranes are on DEP's approved technology list.
   - Public bidding may be required.

   Lance said the Pall micros have been approved for Stow, Swansea, Gardner, Oxford and Bellingham – all in MASS. I said I would keep Pall informed of DEP's restrictions.

   I asked and Lance advised that Pall does NOT want to lose the Orleans contract. They want to work with us and want us to be happy. He did say that we were the ONLY major water plant with the ultra membranes in the USA.

Lance advised that Bob Cundell (who works for Dave Glovinsky) would like to talk to us. He would be willing to sell us membranes without using F.R. Mahoney and he'd be willing to help with the pilot test.

Well no. 5 rehab

Maher Services arrived on site June 1st to begin the rehabilitation of well no. 5. At the time of this writing work continues and is nearly complete.

Hoping not to speak too soon; it appears that a quality job is being done.

The bid for the rehabilitation of well no. 5 was awarded to Maher Services for $13,850.

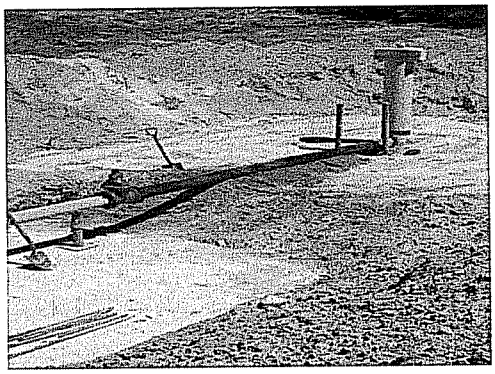
Well no. 8

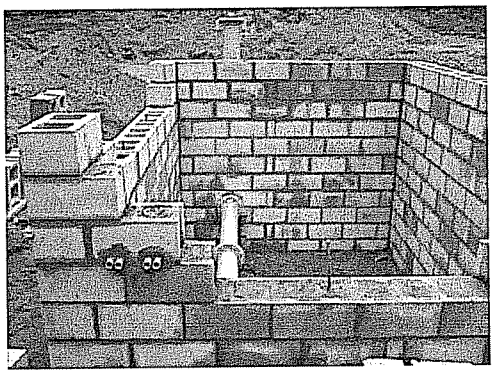
- Much work has been completed on well no. 8;
  5. The pitless adapter has been installed (with the assistance of Brewster Welding).
  6. A sanitary seal was poured around the well casing.
  7. The concrete floor for the vault that will hold a flow meter and necessary instrumentation has been poured.
  8. The last of the piping and a shut-off valve have been installed and connected to the pitless adapter.
  9. A local tradesman is constructing the vault.

Town of Orleans
Water Department

Lou Briganti
6/8/2009

Board of Water Commissioners



- The bid for installation of the electric and fiber optic lines was awarded to Farrell Electric. It is anticipated that this work will begin in short order. Once complete, power and communications will be provided through well no. 2.

- The bid for the purchase and installation of the pump and motor is scheduled for a July 1st opening.

Renewable Energy Committee

From: John Jannell
Sent: Thursday, May 14, 2009 3:03 PM
To: Louis Briganti
Subject: Committee action
Attachments: final wind action.docx

Lou,

Town of Orleans
Water Department

Lou Briganti
6/8/2009

Board of Water Commissioners

On Tuesday May 12 the Renewable Energy Wind Committee voted unanimously on the attached action item for wind energy. In short the REWPC is recommending to the BOS that some follow up work be taken up and the project should be referred to the BOWC for consideration. Please make the BOWC aware of this action as it will be presented to the Selectman on June 17th as a key part of the Committee final report.

JOHN

REWP COMMITTEE
RECOMMENDED ACTIONS ON
WIND TURBINE GENERATOR INSTALLATION

After looking at all of the original wind sites and additional wind sites throughout the Town, The Committee Recommends that a single turbine be installed on the site known as Site 1, in the Orleans Watershed.

After looking at the facility types proposed in the original two turbine project, and touring the watershed and meeting with staff from the Water Department, the Committee recommends that a 600KW class or similar turbine be installed on the recommended site, Site 1, in the Orleans watershed.

After reviewing the published report by the engineering firm of Weston and Sampson, the Committee understands that a municipally owned and operated 600kw turbine is a viable project on Site 1. The Committee recommends that the Town move this project forward for development.

After requesting a detailed financial pro forma for a Cape and Vineyard Electric Cooperative (CVEC) owned and operated turbine in the Orleans watershed and receiving none, the Committee realizes it will conclude its charge without this important information. It is, however, still the Committee's recommendation to become a member of the CVEC in order to participate in cape-wide renewable energy initiatives and gain better insights into the potential advantages of cooperative ownership for future Orleans projects.

The Committee also recommends that if any of the variables that led the Committee to this recommendation change, such as electrical rates, net metering legislation, and regional ownership opportunities (CVEC), that the Board of Selectman should re-visit this recommendation and modify, if necessary, so that this recommended action it is in the best interest of the Town.

The Committee recommends that the BOS authorize the additional work necessary to develop this project. Funding for this feasibility work can be achieved through the available balance ($18,533) of the original 2003 article for the feasibility of wind in the watershed. This additional study should include specifications on access, a purchase strategy along with accounting recommendations, a shipment and transport plan of the turbine to the site, and details on the cost of the assembly and the necessary electrical connections. This effort would be used to prepare documents for local, regional and state approvals of the project. The goal of the further study is to obtain the necessary documents that will lead the Town to a turn- key purchase, installation and operation of a turbine. Specifically, the following should be looked at more by a Town Board, staff or outside expert to provide some answers:

Access to Site
The Committee recommends that a new site plan be prepared so that it can be used for local approval of the project.

Financing Strategy
The Committee recommends an investigation of how best to fund the initial 5 years of the project. Zero interest construction loans, free cash, and reserve accounts should all be examined to determine the best way for the Town to finance the project.
Under the Green Communities Act provisions are detailed for the establishment of an enterprise fund. As the project creates revenue via avoided electrical costs, the Town would like a detailed strategy on how to manage electrical accounts that are used to create revenue for the project through virtual net metering. The strategy should include which Town electrical accounts to use and show how the net benefits will be redistributed.

Assessment of Risks
The Committee recommends that an assessment be made to estimate the costs/risks to the town in the event of two worst-case equipment failures. Although early failure is not expected, the Committee would like a better understanding of some of the costs associated with a worst-case scenario. The first scenario would involve description of costs to the town of an "in-warranty failure" such as a gear box failure that would necessitate the lowering of the nacelle to ground level for repair. The second scenario would involve description of costs if the same event occurs "out of-warranty". Availability and cost of insurance to cover such failures should be included in the analysis. This work would also include the financial impact due to the out of service time during a failure.

Operation, Maintenance, and Management
The Committee recommends an identification and evaluation of possible operation and maintenance plans together with an evaluation of these plans. At a minimum these should include credible Town directed options as well as the turn key purchase of operational and maintenance service from qualified suppliers.

Finally, because the facility is located in the Orleans Watershed and under the jurisdiction of the Board of Water Commissioners, the Committee recommends that the project be referred to the Orleans Board of Water Commissioners. In doing so we anticipate they would have the support of the Board of Selectman in following up with the additional work needed and moving the project forward as an Orleans Water Department capital plan item to be submitted in FY10. In the event that the Board of Water Commissioners do not accept this recommended project, the Committee recommends that the Board of Selectman support this project at an alternate site in Town if feasible.

Miscellaneous

Staff is signing up for classes prior to 12/31/2009 to obtain the CEU's needed to maintain their DW-licenses.