



**City of Madison
Proceedings - Final
BOARD OF WATER
COMMISSIONERS**

City of Madison
Madison, WI 53703
www.cityofmadison.com

Tuesday, November 21, 2006

4:35 PM

119 E. Olin Avenue

CALL TO ORDER

ROLL CALL

PUBLIC COMMENT

APPROVAL OF MINUTES

1. Approval of minutes of October 17 meeting, and special meeting of November 1.
 1. **October 17 minutes approved with the following change: a change from 6.2 mpl to 6.2 ppb, and on page 9, moving approval of informational reports to the end of Item 10. On Item 14, text was missing so that was rectified.**

INFORMATIONAL REPORTS

2. October Water Quality Report.
 - A. Monthly monitoring report.
 - B. Test results for Alachor ESA.

Joe Grande reported that results on Well 28 will be available at the next meeting. Quarterly and annual VOC sampling is now complete for the year. Up to this point, 2,310 samples have been taken for manganese.
3. November Staffing Report.

Dave introduced Dan Rodefled as the new Operations Manager, saying Dan has worked for the Utility for almost 16 years. Dan was most recently a field supervisor in the distribution section, and he has been the field supervisor for the lead service replacement program, which created a vacancy in that position. Dave said we hired two new meter readers who started November 5.

Customer Service Report: Ken Key said he has received the cert for Admin Clerk 1 in the shop area, and he will hold interviews next week. He's been in contact with Dave Marsh of Badger Meter who puts out their national publication and he is going to do a feature article on our meter shop and us. Ken said when it arrives he'll show everyone a copy of it. Ken said he's been in touch with our third party printer regarding our new bill format, and our goal is to have that out to the public in February.
4. Operations Report.

Dan Rodefled said lead replacements were down in October due to hot patchwork, which we do before the plants close down for the winter.

5. Engineering Report.

Al said work on the Felland Road reservoir continues, and Natgun will soon be packing up and leaving for the winter and remobilizing in April to finish the project. On the Glenway test well, we haven't abandoned the well yet as we plan to do some more testing. The pump was pulled out for the winter. The initial testing was very good, but we want to do some additional testing in conjunction with Montgomery. Flushing continues; we are at 40% at the end of October so we are making good progress. Jon asked if they have it figured out so we're not having pressure loss or colored water at the schools. Al replied that we've discovered several closed valves in the system and sometimes loss of pressure is due to that, sometimes it's due to the fact that opening a hydrant the pressure drops to a point where people on upper floors have very low pressure. Dave said we are going through some learning curves with this program. He said Doug DeMaster is being very careful about documenting all of these things and making sure when we find these issues and that they are corrected. When we continue this next year we will be in a much better position having better documented information. Al said some problems on the Isthmus is due to buildings that are 6 or 7 stories tall and the top 2 or 3 stories would be out of water during flushing. We've talked about solutions and we've talked to the DNR about this. Al said we have 10 wells that have manganese above 20ppb and those are the ones we want to get flushed. Al said Ryan Campbell, our graduate student, will present his thesis work in December.

FINANCIAL REPORTS

6. Fund Balance Reports.

Robin said balances are as they should be. We had a good October and put money in the PILOT Fund.

7. Capital Project Reports.

Robin presented this report for August and September, and he said we've used up our budget for this year for main replacement. Costs for the unidirectional flushing program were \$93,000 spent in August, and \$77,600 in September. Year to date we've spent \$357,000 on unidirectional flushing. On manganese investigation, we've spent \$8,700 and in September we spent \$59,300. A lot of that reflects that the first 6-month bill came from the City Health Lab. \$188,300 total has been spent.

8. Income Statements.

At six months, our revenues were up about 15.5% over 2005, reflecting the rate increase that was in place. Power for pumping was up 21%, \$142,000. In water treatment, we're up \$91,000 or 38%. Chemicals are costing more than in 2005. At the end of June 2005, we showed a \$400,000 loss, and at the end of June this year we show a \$757,000 gain, reflective of the rate increase and higher pumpage in the second half of 2005. Looking at the nine months, income was up 11.44% so it's starting to show the lower pumpage we've had this year. Pumping costs are up as in the water treatment area. Transmission and Distribution is up \$426,000 and a lot of that reflects on the cost of flushing. Robin said the rate case has not been filed yet.

Lauren Cnare made a motion to accept the information reports; Greg Harrington

seconded, unanimously passed.

ADMINISTRATION

9. Update on Mayor's 10-Point Water Quality Initiative and Water Quality Standards.

Dave reported that we have identified a peer review taskforce and we have had our first meeting. We spent the most time on Well 29 and the Montgomery Associates proposal. Dr. Ken Bradbury is the hydrogeologist in the group and he was interested in the proposal. Three scientists are on the task force, including an environmental microbiologist and an environmental toxicologist. The group will meet quarterly.

In the customer service area, a customer survey was sent out and we've received the information back on the results of the survey. We haven't had a chance to go through it in great detail yet but he will try to do that within the next month and bring the results to the board in December.

Regarding external communication, we have a second joint meeting of the Madison Board of Health and the Board of Water Commissioners set for November 28. We've also scheduled a meeting on Monday, November 27 for all customers in the Well 3 service area. Over eleven thousand postcards have been mailed to all customers in the Well 3 area. Dave said the board is welcome to attend.

Dave said we have five people on the Citizen Focus Group. Information is being sent to them. He said Lynn Williamson might offer another name for someone interested in being part of the group. Primarily they will discuss the water quality report and improvements that can be made to it.

Regarding external communication, improving public outreach and education, Dave said we held the joint meeting with Board of Health and another meeting is scheduled for November 28. Public meetings were held in four well service areas where levels of manganese are highest. Presentations have been made to civic clubs, neighborhood associations and other groups. A Water Quality Listserve has been developed and updates have been issued regularly. The new Water Quality Manager, Joe Grande, is well aware of his responsibilities with respect to public outreach and education. He is well qualified to handle these responsibilities.

Dave said, regarding EMA, the assessment groups "guiding coalition" have met and EMA is gathering information. They are on track to complete this project by early next year.

NEW BUSINESS ITEMS

10. Election of Officers.

Percy said that Larry Studesville is deciding if he will continue on the board. Jon Standridge made a motion to table the election until the December meeting. Greg Harrington seconded; unanimously passed.

11. Annual Review of Operating Rules.

This item was tabled and will be on December's agenda.

12. Authorizing the Mayor and the City Clerk to execute an amendment to the Professional Services Agreement with Earth Tech Inc. for the addition of the preparation of Wellhead Protection Plans for Water Utility Unit Wells 6, 12, 18 and 24 (City Wide).

Sponsors: Common Council By Request and Lauren Cnare

A motion was made by Harrington, seconded by Standridge, to RECOMMEND TO COUNCIL TO ADOPT - REPORT OF OFFICER AI said seven wellhead protection plans have been completed and we need to do 4 per year. Earth Tech just completed plans for wells 30, 14 and 9. Percy asked if each well is unique and AI said that is correct. With the four we're starting now and will commission another four in a few months, we will complete eight plans in 2007. Greg Harrington made a motion to approve the resolution. Jon Standridge seconded; unanimously passed.

The motion passed by acclamation.

13.

Authorizing the Mayor and the City Clerk to execute a Professional Services Agreement with Montgomery Associates LLC for the completion of a study of Manganese in Water Supply Wells and Identification of Alternatives (3rd AD).

Sponsors: Lauren Cnare and Common Council By Request

A motion was made by Cnare, seconded by Standridge, to RECOMMEND TO COUNCIL TO ADOPT - REPORT OF OFFICER AI introduced Rob Montgomery and Ken Quinn of Montgomery Associates. Rob said they developed this proposal from comments and discussions with AI. He said he and Ken have worked together over the years on a number of projects including groundwater and surface water projects. Rob is a water resource engineer and a hydrogeologist. Rob said they've developed experience and understanding looking at the aquifer in Madison, and thinking about water supply wells, especially recently with MG&E on the Odana Road recharge project. They've been interested in the changes in manganese that they have seen in some of the surface water. Rob said Ken is interested in Well 10 as he lives in that neighborhood. They then gave a PowerPoint presentation on the proposal.

Montgomery's objectives are to understand the source and causes of manganese in our wells. Finding out the causes of manganese can answer well head treatment questions such as will Mn concentrations vary through time, and will other contaminants follow in time (i.e. carbon tet).

Finding out more about Mn will aid in new well location in determining if a well will produce acceptable levels of Mn. They also addressed overall well field management questions such as will Mn issues continue to spread or worsen, and is there anything that can be done to control this.

Montgomery's proposal will focus on Well 29 only, and consider wells with similar construction but different water quality. They will study source vs. cause, looking at Mn minerals in the aquifer and for hotspots that may be present. The cause of Mn in water is that it can be dissolved with changes in geochemistry.

Their working hypotheses covers Mn dissolution by man made or natural sources, connectivity between the shallow and deep aquifers, and changes to oxygen reduction due to well construction and operation. The methods they will use in the study will be background data analysis, time series water quality analyses at selected wells, mineralogy of aquifer solids, well hydraulics analysis and coordinating the results with WGNHS.

They will produce a description of probable causes of Mn in water supply wells, recommendations such as an action plan for Well 29 and other wells analyzed to achieve acceptable Mn concentrations, and process to site and evaluate new or existing water supply wells. After the presentation, Jon asked if the Mn oxide and iron oxide is in the rock and it's ubiquitous, and if there may be hotspots but it's pretty much everywhere? Ken said that is what they are expecting, that there might be some areas where you don't see it as widespread and that is why the cuttings analysis that the Geological Survey can do is going to very important. Jon said, so it has to be reduced to be dissolved, and Ken said yes. Jon asked if out in the distribution system it gets oxidized again and that is the black stuff we have coming out of people's taps. Ken said that is their understanding. Jon said you say once its soluble, it can migrate, and so do you have any idea how far. It would move with the water until geochemistry changed again and it became unstable, and would precipitate back as Mn oxide. Ken said he's worked on projects where he has seen it to depths of 350' and from distances of well over 1,000'. He has seen biodegradable influence at distances of 5,000'. More questions and answers followed.

Lauren Cnare asked if this is the first time they've applied this hypoesthesis to this kind of situation or have they done it before. Rob said he has applied this theory in many studies since around 1978. He's looked at hundreds of sites, and nine large water supply systems and evaluated water quality changes. Rob said with respect to Well 29, not knowing what we're going to determine, the biggest value in this study is to try to understand what is likely to continue at 29. He said they will move forward as fast as they can but it will be several months. Greg

said so the schedule in the scheme of things is relatively short, a couple of months. Greg said so your work can help me understand what might happen at Well 29, if we put a filter there or relocate somewhere else. Rob said we might learn something that is extremely valuable. Percy Mather asked if there is any treatment other than filtration. Rob said there is no simple fix for the problem. Percy said it's possible we may know more about the situation, but not the solution.

Lauren Cnare made a motion to approve the resolution with \$45,000 to go to Step 1. Jon Standridge seconded; unanimously passed.

The motion passed by acclamation.

14. SUBSTITUTE - Authorizing the Mayor and the City Clerk to execute a Professional Services Agreement with Earth Tech, Inc. for the completion of a filter pilot study for a three million gallon per day iron and manganese removal filter and associated buildings and equipment for Unit Well 29 (3rd AD).

Sponsors: Lauren Cnare and Common Council By Request

Approved with a friendly amendment to the fiscal note stating not to exceed \$50,000 for pilot study.

RECOMMEND TO COUNCIL TO ADOPT - REPORT OF OFFICER Dave said we have to report on this item at the December 5 meeting of the Common Council. Al said we put the amount of \$50,000 in the resolution and that this will be a competitive proposal. Jon Standridge asked why we don't do this in-house and Al said it's a staff availability and time issue. He said we are in the process of hiring a Water Supply Engineer, which would help. Lauren Cnare made a motion to approve the resolution with a friendly amendment saying, "not to exceed \$50,000, to be added to the fiscal note, to be used for the pilot study." Jon Standridge seconded; unanimously passed.

CORRESPONDENCE AND SPECIAL INTEREST ITEMS

15. Black & Veatch presentation of Master Plan.

Tom Nevins and Jerry Edwards presented the Master Plan. The plan is to develop short-term (through 2010) and a long-term (through 2025) plans of improvements needed to correct current system deficiencies and to serve anticipated growth over the next 20 years. The product of this project is a 5-year and 20-year capital improvements program (CIP). The existing MWU water system includes 24 active wells, 31 pumping stations, 31 storage facilities, and over 800 miles of water pipeline. Improvements listed for 2007 are building a new deep well to replace capacity lost to reduced use of UW 10 and increased UW demands, possibly install a filter at Well 29, replace aging BS106, demolish and rebuild; BS 113 - change/add pumps to improve fire supply capacity until fire storage is built in 2012: improve RES106 refill ability and reliability. A PRV station at Vondron Road to improve fire low capacity in Zone 4 and improve reliability is listed in the CIP. At Gammon Road provide emergency supply transfer capability and improve reliability.

After the presentation, Jon asked if there is \$7 million more per year that wasn't identified previously and what the percentage is. He asked what the increase would be on an average bill. Robin said a rough guess would be 3.5%. Al said that this is not \$7 million in new spending. Much of this is already in our capital budget. We have \$4 million in our current CIP budget. Jon said so it's

only \$3.5 million. Lauren asked if that figure in dollars is adjusted with some inflation, moving upward. Tom said all of these figures are based on 2005 dollars to be consistent with the Infrastructure Plan. Greg said use is figured at 85 gallons per person per day and asked how that compares with national averages. Al reported that a Seattle is the country at 60, but there is a difference in climate there. Al said Seattle also has a very aggressive conservation plan and a very rigid penalty for using more water; if you go over a certain limit your water rates double, and if use goes even higher, they triple. People there are financially motivated to conserve. Al said he thinks we can do better. Ken said he seems to recall that on our annual data sheet, we were coming in around 77 gallons per person. Lauren said there is room for improvement.

The approval of the Master Plan will be on the December agenda.

16. Montgomery Associates professional services proposal for hydrogeologic and geochemical studies to assess cause of and predict manganese dissolution in wells.

This item was discussed in the Item 13 discussion.

17. Meeting schedule for 2007.

APPROVAL OF NEXT MEETING DATE

18. Approval of the next regular meeting date of December 19, 2006. (Note: Joint meeting of Board of Health and Board of Water Commissioners is set for November 28 at 5:30 p.m.)

ADJOURNMENT

Jon Standridge made a motion to adjourn the meeting. Lauren Cnare seconded; unanimously passed.

Meeting adjourned at 7:50 p.m.