

# Water Study Group

**Town of Hull  
Water Study Group  
Summary of Proceedings  
Hull Municipal Bldg.  
July 29, 2010 at 5:00 p.m.**

The Town of Hull Water Study Group was called to order at 5:00 p.m. by Town Chair John Holdridge at the Hull Municipal Building on Thursday, July 29, 2010.

**In Attendance:** Patrick Planton, Principal Water Practice Center Leader for SEH (Short Elliott Hendrickson Inc.) of Appleton, Wisconsin and his assistant Scott Beduhn  
John Holdridge, Town Chair, Patty Amman, Hull Recording Secretary  
Hull Citizens: Russ Prusak, Michael Karch, Terry Smith, Robert Perkins

## **Status of Water Study Group**

**Holdridge** All I want to do is to talk about these issues and try to get some consensus, some direction so I just call it a Water Study Group, very informal. I put together an agenda to give us some guidance.

## **Stevens Point Well construction and finding of survey**

**Holdridge** Pat Planton agreed to come and provide us with an update. Patty will take a summary of the proceedings so we know what we talked about.

**Planton** If our coming to this meeting and sharing some information is of benefit to the City and to the project for the people on the surrounding properties, I'll do this off the clock. So I've come to give you information that you can use to your advantage for a number of different things. I'm just sharing information on the project and where we are at and some of the information from the private well survey that was done. Most of the folks here probably participated in that. So let me give you a brief update on the project itself, then we can get into the private well survey a little bit.

*Pat Planton gave the current status of the well project. Well #11 has been under construction since last December starting with the concrete caissons. This is not a vertical well but a horizontal collector well. The concrete caisson is 19' in diameter with 1 ½' thick walls that*

go down 100'. That's where the best part of the aquifer is. In a vertical well, there's 30' of screen and a 24" diameter well as opposed to this horizontal well which has 8 laterals that go out 150-180' at a 45 degree angle. It's sometimes referred to as a radial collector well. This well will have 1,240' of screen so there's a lot more area for the water to get into the well thereby reducing the possibility of any draw down of nearby private wells. So the big advantage of this type of well is less draw down with more water available – they don't want to impact nearby private wells.

Pat spoke about how they build and sink the caissons in 10' sections. That part of the construction finished in May/June.

Due to unusual and unexpected ground settling issues, the treatment plant which was originally supposed to go directly over the well, was reconfigured to be built about 150' away from the well with just a small pumping station building on top of the well. This reconfiguration set the schedule back a little bit.

The treatment plant will remove iron and manganese, while disinfecting the water and adding fluoride, erosion control, etc.

The laterals were finished in June and currently are undergoing a portion of well development that involves using high pressure water to blow out any sand or residue inside the laterals. Currently 5 of the laterals are done in this process with 3 more to go.

Test pumping will start soon to be done by Labor Day. This involves a 72 hour pump test through a temporary 16" pipe with runoff going into the Plover River about 2,000 feet away. Test pipe will be removed after testing is done.

Contractor for this phase should be done and off site by September. Treatment plant bid out in Sept., with award contract for building in October. Construction of plant to start in Nov. and run through next year Nov. Plant wouldn't be on-line until Nov. 2011.

A 24" transmission main from the new treatment plant will run down alongside Hwy. 66 to connect up with the current main at Hwy. 66 and Torun. When asked why it couldn't cut across the airport property, Pat explained the airport refused to have it, possibly due to federal regulations.

There was some discussion about how the land for the well was donated and acquired through the Boy Scouts.

Bid price for the well was \$2.3 million and the treatment plant around \$12-\$13 million. Some grant money is involved to help pay for it along with some low interest loans. SEH has their own staff members that specialize in researching grant and other funding possibilities.

Questions were raised regarding water rate increases. There will be some but generally rates in this area are pretty reasonable compared to many areas of the country.

Questions regarding the possibility of Hull tapping into this new water main at some time in the future. It could happen, if needed, to establish hydrants via a process called "live-tap" where hydrants can be added at any time in the future with the main under full pressure. The Town would have to pay for any hydrants they would want.

John Holdridge talked about the metro fire district and possible hydrant water uses in the future with the possibility of the Hull fire Dept. joining the metro fire district.

## Well Testing Information

*Pat Planton said there were 67 properties within the 1,400' circle around the well construction area that were eligible for free well and water testing in June. About 70% of those homeowners requested the test; 43 out of 67 properties, 10 being vacant. Of those 43, 16 were deep sand points and so well depths were not determined on those as it would require taking too many things apart at the risk of contamination, etc. Although results are confidential, the group discussed a way to perhaps chart general information without revealing names or addresses as the data could be useful to the Town of Hull.*

*Russ Prusak asked about the new high capacity well's maximum potential to pump 13 million gallons per day and how that might affect local water levels.*

**Pat P.** That's what we can find out maybe through the step testing, by running it at a very high rate and see what happens.

**Robert P.** In the study that was done, when you looked at the yield of the horizontal collector, was that calculation based upon 13 million gallons per day?

**Pat P.** We've gotten drawdown curves out of that report for anywhere from 1,000 to 9,000 gallons per minute. I can get you those curves, but what I would suggest is why don't we wait until the testing is done. Because those curves were very conservative and I don't want to...we'll know within a month what the specific capacity will be. What the aquifer will be able to produce and how much draw down there will be, even at a higher rate. We should be finished in a week. They have to finish the last 3 laterals then they have to pull the pipe out and fuse it together. They can't tell me exactly when it's going to start.

One of the reasons we did the private well testing is because it shows us some results like one well that had a high nitrate level. Only 2 wells were above the secondary standard for iron, .3ppm. It was a deep point, not a drilled well. Of the 43 total wells that were sampled, 18 were shallow sand points, 16 were deep sand points and 9 were drilled. 40% of them are shallow. The wastewater lab in Stevens Point verified the quality of the water then verified by the University, nothing out of the ordinary. There was one well that had an extreme level of hardness and I'm questioning if they had a softener because that was the only well that had slightly corrosive, everybody else had .... A term indicating that water tends to scale calcium carbonate on pipes which is better than water that is more corrosive that might leach out lead and copper from the pipes into the water. People think soft water is great, but soft water also tends to be corrosive water. Then you're deciding whether you want your pipes to plug up with calcium or do you want them leaching out.

**Russ P.** I've lived here 25 years and the calcium build up is very minor on the pipes.

**Pat P.** That's one of the treatment chemicals Stevens Point has, it's a corrosion inhibitor. It coats the pipe a little bit and keeps any lead or copper from getting into the water.

**John H.** I don't know, we're kind of fishing how we approach this problem as well as the whole system of water in the Town of Hull. Nobody seems to look at that and nobody seems to pay any attention to the householder. They're always worried about the trout stream or the potato farmer or industry or the municipal water supply. We've probably got 1/3<sup>rd</sup> of the households in Portage County that have a private water supply.

**Russ P.** When you do this maximum pumping that you're going to do with the new well, will you also do well monitoring in the surrounding test wells?

**Pat P.** We're going to have a discussion tomorrow afternoon with the well contractor. We have 5 monitoring wells on the site that we built in 2007 and 2008. The City has a number of them in and around the area and we're going to talk about what other wells we want to monitor for water levels. I think one would be right out here in the parking lot.

**Russ P.** I see one out there by me at the end of Skyline and Somerset. That's almost directly north of your pumping site. See what kind of variation you get out there. Nobody ever knew about that well and that's one we did way back when the Town was thinking about putting in wells way back then out there. That one sat there for awhile and they asked if it was my well. The University was using it. It sat in a corrugated column with a cap over it, when the City had it. Now there's a big square lock box over it. Nobody even knew the well was there before for years.

*Some back and forth discussion on previous flood years, wells in that area.*

**Pat P.** I know the City is very protective of any wells that might affect the groundwater. Remember the problem in the past at the airport with the fuel getting low and they thought kids might be stealing fuel. They found out that nobody was stealing anything but that the fuel was leaking into the ground. The airport wells were affected and the mayor got people out there right away to find out where it was leaking, where it was going and what it was affecting and to stop it. Once you get wells contaminated, it is not just like you can treat it. That's one of the reasons they've got a fair amount of monitoring wells throughout the Plover River area at different levels. If you don't know what you're looking for, you're never going to see them. Scott and I went out several months ago looking for certain ones on the map and we couldn't find 2 out of the 3 because they're hidden out of sight. There's one out in your parking lot that we can put a transducer test on. You're a little bit further away here, but we can do yours Russ at Skyline and Somerset. There's one north of Plover Heights Road and Highway 66.

**Russ P.** There's another one that is behind that house on the end of Plover Heights Road. If you had a 6" drop at that well, that is almost 2,000 feet away from your high capacity well. If you're pumping 13 million gallons, I would like to see where that cone goes. I still need to talk to you about how you claim our water comes from the north. I don't buy into that at all. If we were getting our water from the north, we'd be pulling it out of Hay Meadow and all the rusty stuff from there and we don't have that problem with rust. I can show you wells out there that are about 100' north of the one I just told you about. They just sunk a well in there last year

and went down 40' and had no rust problems at all. Go almost due west of that about 500' and that well came in with so much rust that they had to pull it up from 40' to 25' to get out of it. If you go around Hampton Court and look at all the sprinkler wells down there, those houses are staining and we don't have any of that at my well. That's what I'm concerned about. Our water is so good there and if you start sucking this bad water through, we're going to have a quality problem with our water. You're within 1,000 feet and I'm within 2,000 feet and I'm out on the fringe of where that water is coming from. Just due north of us, and I've lived in that area for 35 years, I know where the hard pan is. I know where the water changes. I know where the wells are where the bedrock is. As soon as you get up to Jordan Road, you get into bedrock and I don't believe our water is coming through granite bedrock. So that idea that our water is coming from the northwest, I don't believe that.

**Pat P.** There's an old well by the airport and the bedrock is high by the airport.

**Russ P.** It goes right around that corner. It goes by that Moses Creek water shed in there and goes right up Reserve. The wells are 140' deep over there. It's not the same water. The water right outside the door here is bad at 100'. The well right at the mobile home park, it was annexed to the City because the water was so bad you couldn't wash clothes in it.

**Pat P.** Have you noticed any change in your water quality in the 35 years you've lived there?

**Russ P.** At the new house, no. Chet's Plumbing came out there for a pump problem last year. I had to pull my point up and he thought we were going to have to change it. He pulled that up and there was not a bit of rust in there after living there 25 years. There was no rust in that well casing at all. He was surprised. He said he's never seen anything like that. That's how good our water is in that little neighborhood. If you go 500' in the other direction to our old house, you now get into hard pan. The field up there, the chemicals came from the field, drained into the hard pan and we had high nitrate levels at the old house. If the septic goes bad, it goes right to the well. That hard pan drops off in 500'. I can pretty much go around the neighborhood and tell you which wells have had problems. The idea that our water is coming from the north, I don't buy that because all the wells up north, in Dewey, you've got a different kind of water up there.

**John H.** From your perspective, for Hull, we don't have any data. We haven't looked at this at all in any systematic way. We've got people like Russ who know far more than most of us know. We've got others, but most citizens don't know that much. They don't even know the depth of their casing. Seldom do many people get their water checked, unless they need to for their children.

**Pat P.** For \$100, everyone should do it every year.

**John H.** I know. But I look at my neighborhood and we're right down where the well fields are at. We had a neighborhood watch meeting the other night and just threw the

question out and we got 40 houses and there were 10 households represented there and nobody had gotten their water tested. I think I go down 15 feet for water for my sprinkler. You've got lots of experience on this. How would you approach the water from the Town of Hull standpoint?

**Pat P.** What's the general impression from the people in your Town about their water? Quantity issues or quality issues?

**John H.** I've had some calls on quantity. When the water goes down, there's kind of a panic. I remember one guy was checking his point for his lawn and the water went down, but then it went back up later. It fluctuates. How do you articulate it for 2,020 households? Russ pointed out that if you go west of I-39, that's a whole different situation there.

**Russ P.** That's really different.

**John H.** I know that water is going to be a big issue. It already is in a lot of parts of the state and a lot of parts of the country. We go down to Tuscan and it's a whole different ball game down there. So as far as collecting data, we don't have any data. You would have the most data of anybody.

**Pat P.** The first thing I would do is maybe do a survey of everybody in your Town. You won't get 100% participation but then you've got pretty good participation here tonight. Because you have a lack of information, try to get some of that. Send out a mailer to everybody in the Town. Maybe one page of 10 questions. You'd send it because you feel strongly that water will be a big issue in the future and you want to know what do people think about their water supply and their private water supply system. The first thing I would do John is try to collect information that will fill in the gaps. Find out if a lot of people think like you do or if they even care. I'm an engineer so I can look at this stuff and make sense out of it but some can't. If your water doesn't smell bad, taste bad or isn't discolored, people think it must be fine.

**Russ P.** How soon after your testing will you be able to give us an idea if your initial concept or perceptions were correct?

**Pat P.** Probably a week or two.

**Russ P.** So before the first of the year?

**Pat P.** Easily.

**Terry Smith** Before we leave, they wanted me to ask about the river, is that going to affect the river?

**Pat P.** We're going to put a stream gage in there. This afternoon, we canoed the Plover River and it's very high right now. We just wanted to see where we're going to be dumping this

water in the river. Where that high pressure gas easement goes through, that's where the pipe is going to come out and discharge into the river. The contractor will secure some sort of a raft in the river on the right side to dissipate all that energy so it won't affect anybody canoeing past because there's a lot of people on that river. There were 13 groups this morning. We had to go this afternoon because we couldn't get a canoe. I can't say for sure, Terry, but the affect should be negligible.

**John H.** I see your project as the big catalyst, but I see the problem as much broader than that in Hull where we just don't have good data.

**Pat P.** If I were coming in and looking into Town, almost like Plover did years ago, they had a nitrate problem. Half of the town had a nitrate problem and the other half didn't. Dan Schuler was a fairly forceful leader back then and he said we've got to do this and go ahead, do the screening and we're going to put a water system in. Seven years later it was the greatest thing Plover ever did. They then had fire protection over the whole town. The nitrate was taken care of. The water is very good and very cheap and no one ever looked back. So what I would do is try to find out from the people volunteer information. What kind of water problems have they got with their own private systems. Maybe they've got a problem with quantity because the well is old or their pump is old or too shallow. There are a lot of different factors that go into it. The overriding thing is not so much quantity and quality. Where's the water a problem? What kind of treatment is needed?

**Robert P.** The other thing you need to do is to educate people about the quality. I don't think most of the people know.

**John H.** I think it's a big educational project as much as anything.

**Pat P.** The ultimate solution would be, if you don't want to be annexed to the City, and you live in the Town of Hull for a reason, there's nothing to say that you couldn't become a sanitary district and buy water wholesale from the City.

**John H.** Or, simply make sure you protect the private wells you have and make good decisions about them.

**Pat P.** What I would do is get a map of the Town. You've got some information here. You could talk to the 43 people and say, would you mind if we posted some of that information. I just don't want to violet anybody's confidentiality.

**Russ P.** I need to go to another meeting but I think we should call another meeting for after they have completed their pumping test out there. Pat, I would like a commitment from you that you will monitor the level in that one well that I indicated at the corner of Somerset and Skyline.

**Pat P.** We'll do that. We're talking tomorrow about doing at least 3 wells outside of the site. I want to know what happens out here too. I told them I don't want to get 25 phone calls saying there are problems.

**John H.** What is the feeling of you folks here about the awareness? About getting more information out and maybe look at some test wells? Organize a systematic approach and see where that takes us on the assumption that water is a challenge as we go forward.

**Russ P.** That's fine John. The Town of Hull is a pretty good range of where the water is coming from right now.

**John H.** But people don't know that Russ, you know it. We tried to preserve I-39 West. The level of knowledge on a lot of these things is not high at all. That's my concern. That before you take on anything, you better get the public with you and you better get it all out there.

**Pat P.** One thing you might be able to do for minimal or no cost is we could put some of this information on a map but not put the individual properties but a contour map together to indicate higher pockets of iron or nitrates in given areas. That would give you some information in specific areas. Another thing you might do if the city would be willing, the City samples the test wells every month for nitrates, iron, manganese and again, because they want to have as much reaction time as possible if there is a contamination.

**John H.** Are you saying that's every month and any well they have?

**Pat P.** Every monitoring well they do, they run a circuit and do samples. They're not certified lab samples but they have a lab at the waste water plant where they sample it.

**Russ P.** I know I've seen them out at that well at Somerset and Skyline.

**Pat P.** They keep doing those tests every month. I'm an engineer and I love looking at lots of data. It's not cheap as they have scores of monitoring wells.

**Michael K.** There's a lot of information out there today. Is that information on the Internet right away?

**Pat P.** The stuff that the City collects is not required to be reported.

**Michael K.** I'm not saying that it's required, but do they put it out for the public?

**Russ P.** Kim Halverson holds onto that pretty tight.

**Pat P.** They're protective of where the monitoring wells are and the data they collect.



## Next Meeting Date

**Pat P.** I would say if you want to have another meeting in mid-September, I think that would be okay. Shoot for the 3<sup>rd</sup> of 4<sup>th</sup> week of September.

**John H.** I'll call these other people on this list because we didn't get calls from anybody. I asked them to call if they couldn't make this meeting and we'll see if they still want to participate. If they don't, we'll take them off the list. The least I expect from them is to call. If they can't make it, that's fine, but they should call to let us know.

**Russ P.** I do have another possible volunteer for you John.

**John H.** We can broaden the group.

**Russ P.** He would have been here tonight, but his son came in from San Diego, Tom Voltman.

**John H.** If they have the interest, we'll try to get them. We've got a meeting date but we need participation.

*Because of some scheduling conflicts with Pat's schedule in September, it was decided to meet on a Tuesday instead of a Thursday so Tuesday, Sept. 28<sup>th</sup> at 5:00 p.m. was chosen.*

*Pat P. requested that a copy of the meeting notes be sent to him.*

**Adjournment**     *Meeting ended at 6:35 p.m.*

Respectfully submitted,

Patty Amman  
Recording Secretary  
Water Study Group