WPCC COMMITTEE MEETING
SEPTEMBER 29, 2009

The joint WPCC meeting was held at Willoughby City Hall. Chair and City of Willoughby Councilman Mr. Harrold opened the meeting at approximately 6:05 p.m.

In attendance from the City of Willoughby: Councilman Chris Woodin, Councilman Bob Harrold, Councilman Bob Carr, Willoughby City Engineer Jim Sayles, Service Director Angelo Thomeselli, Service Department's Ken Wetzell, Finance Director Rogowski and WPCC Plant Superintendent Jack Gorka. Also in attendance was Council Clerk Ms. Radebaugh.

In attendance from the City of Eastlake: Council President Derek Elshaw, Councilman Dennis Morley, Councilman Dan Matheke, Councilman David Knuchel, Councilman Joe D'Ambrosio, Finance Director Condron, Service Director Mr. Semik, and Eastlake City Engineer Mr. Gwydir. Also in attendance was Council Clerk Mrs. Cendroski.

SEWER SYSTEM EVALUATION PROGRAM (SSES)

Mr. Gorka: We had a joint Committee meeting in February – everyone was not there at the time and it was the first salvo before we got our draft permit. We talked about things we expected to be in our SSES permit that allows us to discharge the wastewater treatment plant to the lake. One of the requirements in there is that they were going to want us to stop by-passing. It has been a requirement since 1972 with the Clean Water Act – the intent of the Act was to eliminate all discharges of water into the lake. The waters in the U.S. are polluted anyway and for years most people treated and in our case we treat about 99% of the water but there are times when the by-passes overwhelm our ability to treat it. So we have by-passes that blend with the flow and go out to the lake. EPA is taking a firmer look at that and they want people to take steps to eliminate them. We did this in 1982 with the SSES study and they designed for certain rain events and out of that came the last expansion which included quite a bit of equalization to handle flows. The current permit requires us to look at that again because it has been over 26 years since it was done and the City of Willoughby cannot get any WPCLF loans anymore because the current SSES is out-of-date. They want a better study plan before they loan money to fix different areas in your collection system. The new permit says we have to get rid of these by-passes and the only way to figure out where they are coming from is to study your collection system and see where all the water is coming from when it rains. Phase one of the requirements is to analyze where the water inflow and infiltration is coming from and then decide what we are going to do. It is a long process but the first thing to do is to look at the sources and get the funding for the study.

Mr. Gwydir: In regards to the hand out – it is an overview of what the SSES is – what it is – why it is required – how much we believe it will cost at this moment – how it can be funded and potential benefits. And, most importantly, is the schedule for the work. The SSES has to be done and finalized by January, 2011. That means the metering of the system has to begin this spring during the high flow periods and the preplanning for the meter placement – how many meters we will need etc. needs to start in January, 2010. Backing that up would mean that all the funding – all the legislative action and such would need to be in place by the close of the year. There are some means to fund it - they are a direct capital expenditure – they are obtaining a low interest planning loan which is available at 3.25% through the WPCLF – a

combination of capital expenditure and loan or perhaps some other vehicle that we have not considered. Should a loan be considered nomination forms need to be in by the end of this October in order to secure the loan.

Mr. Sayles: The way this was previously done – it was a joint effort between the two Communities – the City of Willoughby took the lead and the two City engineering firms entered into a contract and did a joint project – at the request of the two Cities. The SSES was performed – recommendations came out of it which resulted in the improvements Mr. Gorka mentioned – a total of $40 million in improvements. This all sounds like just a bunch of extra work and a bunch of money for contractors and engineers. But, it all starts with what Mr. Gorka said – we should emphasize that for our constituents. Exactly why are we doing this? It is because it is a law that we have to. We are being told that we have to. To the best of my knowledge there is no appeal process. We have to do it. In my mind it is not appropriate to say the big, bad EPA is making us do this – their goal is an appropriate goal – stopping by-passing into the environment – but, also it helps reduce your costs of operating the plant. The two Communities are sharing the cost of all the power and chemicals used at the wastewater plant. You do not need to be treating all this extra water that is going down there. So, besides identifying the sources and doing the metering and figuring out the sewer capacities and treatment plant capacities the biggest thing in the SSES is a cost effectiveness analysis is performed that says – if we have so many gallons per minute leaking in from some source and it costs $10,000 to fix it but it is only costing me pennies to treat it – then we should just leave it alone and keep treating it. But, if it is only $500 to fix it then it is pretty obvious that you should fix it. That is what an SSES does. It really works through the system and comes up with a list of those things that can be done – usually it is sewer lining, grouting, smoke testing to find catch basins that may have been tied into the sanitary manhole and that type of thing. It really does have an impact on the day to day operation of the plant which is a benefit to the people who are paying for the operation of the plant – the users of the system – the residents of the two communities. All those things combined are the true motivations for doing this. Additionally Willoughby and Eastlake don't have to worry about this as much as other communities but I know when a new development comes into the City of Willoughby that as City Engineer I am always asked if we have enough sewer capacity to support it. I am still using the 1983 flow metering to make my judgments – it is definitely a tool that can at least help you do a good job of planning for any developments that are going to occur. That is probably not all that critical for Willoughby and Eastlake because there are not a lot of big developments that are probably waiting to come into the two Communities – we are mostly developed. All those tools are great for the Service and Engineering Departments – to have that current information so we can make good judgments on what to do. You can target your maintenance operations based on where you have identified problems. So, there are lots of benefits of doing this aside from being forced to do it. If we chose to ignore the EPA they will start fining us. CT Consultant's has a couple of clients that are now spending millions of dollars in engineering and will spend tens of millions of dollars on improvements – but, they spent the last twenty years thumbing their nose at the EPA and they are in big trouble now. We definitely do not want to take that too lightly – none of us have been fined by the EPA. Willoughby-Eastlake has never been fined by the EPA because we are good actors. So, there is something to be said for that. Neighboring communities have been pounced on for things we have going on in our Communities but I am convinced they leave us alone because Mr. Gorka has a great relationship with them and we report problems

we have. You do not want to get them mad at you because they will target you and then it escalates real quickly. That is the doom and gloom. But, really I would hope you would look at this as it is actually valuable – it is cost effective. In the handout there is a chart – for the last 20+ years the City of Willoughby has spent more than $20 million on their own doing various sewer projects in town and almost every one of them have been financed through the WPCLF program. To qualify for that program those projects have to have been recommended in the SSES. We have taken twenty years to implement all those projects which taking 20 years was part of the plan. But, through the years we have spent $20 million and if you look at the advantage we have in savings – at the bottom of the chart – per principle of $1 million you can see the savings between the low interest WPCLF and the standard interest rate (OWDA) is $148,000. So, multiply that by 20 and the City of Willoughby saved that much money. We understood we had to do those projects and moved ahead with those projects. We did that effectively by going for these low interest loans and getting them. They are now telling us that the SSES is too old and we no longer qualify for low interest loans which would also apply to Eastlake. Right there is a big advantage. For every million dollar sewer project we do we save $150,000 over the 20-year life of the loan – at the current rates. It is still a net savings overall assuming you have to do the projects anyway. You can ignore it and not do the projects but ultimately the EPA comes after you and will fine you. They are getting much more aggressive on system overflows – if we have overflows at pump stations or various places around the City – not just the overflow at the plant. They are getting very aggressive at going after that. Right now they have just been dealing with Willoughby and the plant but there certainly is a potential they will come straight to Eastlake if they determine that a pump station has an overflow problem. They could single Eastlake out and go after you. I feel bad about presenting this like it is a hammer that you have to do this – ultimately it is beneficial. But, it is a lot of money that winds up getting financed and paid for. The other thing that will happen – Mr. Gorka mentioned that we did the flow metering and monitoring and figured out what kind of I & I sources we could go after and remove – well, you are never going to remove more than 30% to 35% of the I & I which means that 65% of it is still in the system. That is why we had to build the retention basins we built and the larger diameter sewers. The new standards that EPA wants us to go to go to is a step up – we have to handle a bigger storm. So, I suspect we will go through this SSES and what will come out of it will be tens of millions of dollars of recommended improvements that the EPA will expect the Communities to do. Which goes back to this chart – it is going to be important that we do this and qualify for the low interest loans because – it is a catch-22 – you have to do the study so if you have projects you can get the low interest loans – but, the study creates the projects that you have to fund. You cannot go back and not do it. A big part of the cost of the SSES is the flow monitoring. CT Consultants does not do this – it will be subcontracted. The bigger piece of the puzzle of the project is what does that flow monitoring tell you – one thing I think because we have been the City Engineers for these two Communities for a long time and we have this SSES – we implemented lots of it and we know a lot about the two systems. So, I think we will be pretty effective at getting the answers without a whole bunch of guessing and calculating. I am hoping we will be pretty efficient at that just because we have lots of anecdotal knowledge of what goes on in the two Communities.

Mr. Woodin: Certain hot spots of I & I?

Mr. Sayles: Exactly. We will do the metering to focus on those kinds of areas. In Mr. Wooden's Ward – that part of the City was not even studied because the sewers were only 15 years old at the time. Now, it is 25 years later and there are probably a lot more sources of I & I just because sewers age, deteriorate and crack.

Mr. Knuchel: Does this study also involve a follow-up or action plan or will that be on Mr. Gorka or the individual Cities?

Mr. Sayles: The EPA requires an implementation. Part of what comes out of this is an implementation plan – they have an implementation schedule within five years of the date of the permit.

Mr. Gorka: Out of the last SSES it created 12 projects that Willoughby undertook over the next 25 years. We just completed one of the last ones. It is not like all this is going to happen right away – it will be a plan to show where the bad things are and you have plenty of time to figure out what you need to do. The EPA is not like a hammer waiting to hit you – but, they want you to demonstrate that you are trying to solve the problem. It is in the permit that they want us to do an SSES – show what we need to do for the future. They are not expecting us over night to stop all by-passing – they know this will be a long plan and I feel they are just like any other bureaucrat – as long as they can show they are trying to make us adhere to the clean water act then we will continue to get federal funds.

Mr. Sayles: The implementation plan we have to do within 5 years – you have to start within 5 years but it could be a 20 year plan of projects.

Mr. Semik: Although we are not on a time table we do not have forever to do these projects. We don't have that latitude anymore. They will say we have time but they will not drag things out 20 years.

Mr. Sayles: Technically, 20-25 years ago we did not have that latitude either.

Mr. Semik: I have some new Council members here and I am glad Mr. Knuchel, our Finance Committee Chair, is here. These are things we will have to start budgeting for once this study is done. We should start thinking for next year and start putting money aside. Willoughby is already onboard and you are looking for us to join together and do the study at the same time.

Mr. Sayles: Right. It is a joint system.
Mr. Semik: We talked about this the first of the year – Willoughby is going to do it – were we going to do it? It came out of that meeting that we should do it at the same time. Our Finance Directors will have to speak to the funding.

Mr. Elshaw: The cost of the study is $500,000 split? Why so much for the study - this is just to identify infiltration.

Mr. Gwydir: This is for the metering, the analysis and all the information required by the EPA. Page 11 or 12 of the handout is what we are required to do.

Mr. Sayles: It also includes review and determination of alternatives to solve the issues.

Mr. Elshaw: What is the biggest expense? I know you subcontract the flow monitoring – then you have to interpret what that means.

Mr. Gwydir: That is probably the bulk of the cost – and, we have to make a determination about where to do that flow monitoring in the City so that we get the most data back. That is the game we are playing right now – how many points we need to monitor to get the data we need without doing so few points that we need. We already had an SSES study done so we know where the past monitoring points are – there is something to go on and look at those same points to see what has changed. That way we have some points of comparison to what we saw before. That will drive the overall cost. We picked $500,000 but we have a range from mid-$400,000 to low-$600,000 depending on what is chosen. We are trying to see what we can do to lower those costs. We think this is a very expensive undertaking.

Mr. Elshaw: It is. That is the difficulty. I understand it needs to be done and I appreciate what the EPA is trying to do. It is just a lot for just a study – a book of what we need to do.

Mr. Sayles: There is a lot of effort that goes into that. Basically it is the review of the systems and the review of the old data and determining where the meters should go. With the downloading of the data – the data has to be worked because it does not make sense all the time – you have to look at it carefully for the things that tell you if something is bad data and should be ignored. The analysis will show you what the flows are and how the system reacts to storms. Then, part of the study branches off – for instance – this neighborhood reacts quickly – when it rains there is flow coming in – now we need to do smoke testing because it is likely we will find direct connections that may be easy to fix but in a neighborhood where the flow does not spike up as quickly during a rain but comes up gradually over the next several hours – that is a different kind of leak and a different kind of review and testing. You go through that project in each of the little mini systems where the meters are and try to make a determination as to what is the appropriate next step in each of those groups. Beyond that, you are also looking at the sewer capacities. When we have that 10-year 2-hour storm are the sewers big enough all the way to the treatment plant. So we are analyzing the capacity of the system to get to the plant. Once it gets to the plant can it handle the flow – so, is there expansion at the plant that is appropriate or not? Maybe we have to expand or add sewage equalization basins – maybe we have to increase sewer capacities in the system to transport the flow. But, in the meantime you are still looking for I & I sources and you wind up making a determination that if you spend $1 million on sewer rehabilitation you are actually going to reduce the flow and save $2 million at the plant or equalization basin. Then, those two paths converge for that cost effectiveness. It is a lot of man-hours.

Mr. Elshaw: How accurate do you identify the infiltration with the study?

Mr. Sayles: It depends on how deep we want to go. I am visualizing we do not want to go all that deep – that would probably be way more expensive then what we are talking about to get down to that detail. In my mind – we believe we can reduce the flow from a neighborhood by 30% and it is cost effective to do that – so, part of our implementation will be - let's develop a program to go in and systematically over several years track down and eliminate

the I & I. Mr. Wetzel used to work at CT Consultants – he now works in the Willoughby Service Department. This is what he did when he worked at CT. Willoughby has an in-house guy who will help direct how this goes.

Mr. Wetzel: You can think of it realistically – it is only like 50 cents for a linear foot of all the sewer system.

Mr. Carr: This is a 20 year study – they are not going to bother us for another 20 years?

Mr. Sayles: Probably what will come out of this is – you will probably have to do some projects. If you are not moving down that path they will bother you.

Mr. Carr: Within the study are we also going to look at geographic areas – what they are zoned for right now – and what may be there? If we are looking at the airport – that is a future we don't know.

Mr. Sayles: When we are analyzing the sewer capacities and the equalization basin capacities and the treatment plant capacities we have to factor in future development – 20 years. You have to go off the current zoning. You have to project out 20 years – one what you think the population change and development will occur over 20 years. In this field of engineering there is no way you can safely predict beyond 20 years and even in our 20 year prediction there will be a lot of cushion. There have been a couple of developments in Willoughby that were not anticipated but we put them in and everything turned out okay. The meters themselves are only accurate down to 5%. Plus the sewers are older now – the sewers are probably leaking more so – it is a never ending thing – but, it is a fact.

Mr Carr: Can you explain the process of re-metering – it sounds like a pretty long process.

Mr. Sayles: The meters are only in place for two months. You try to catch several good storms that show us something. Then you take that data and project it into the bigger designed storm and the 20 year future flow. You wind up generating estimates of annual and comparing it to annual rainfall.

Mr. Carr: What happens if it goes two months and you haven't got the right size storm? You are hoping you get a good rain?

Mr. Sayles: That's right.

Mr. Wetzel: That is why it is key to get it in during the spring time – the wet weather. But, the whole process is long – that is several months but there will be 5 or 6 months minimum of data analysis. We look for a proper rainfall but you may get a long duration rain – that shows you one problem and you might get a high intensity rain over a short duration that shows you a different problem. You have to look at it over the entire system. The analysis is very cumbersome and takes a long time. Then you have to write the report.

Mr. Sayles: Ideally, they say catching four or five good rain events give great results. We have done metering for two months and have nothing. Then it is back to the City to say it is another $80,000 for another month of metering.

Mr. Wetzel: While the information is coming in you have to look at it to make sure things are going okay or if a specific meter has not failed.

Mr. Sayles: You don't wait until the end to find nothing.

Mr. Wetzel: You make sure everything is okay and download the data. We have lost meters and they are $4,000 or $5,000 each.

Mr. Sayles: You also don't want a rain event that is too big.

Mr. Condron: How would the funds be selected to do the measuring and engineering. Would that be proposals – would each City do it – or the WPCC?

Mr. Woodin: Are you going off of anything from the previous study – do you have a map showing the size of the pipes and the flow rates from that time. Are adding new developments to this map – it is a built on process?

Mr. Sayles: Right.

Mr. Woodin: Do we keep track of maintenance that was done? If we wanted to look at Lakeshore Blvd. in Eastlake – is that something that we would have?

Mr. Sayles: We have maps of the sewers.

Mr. Woodin: Is there a maintenance log that was done or can we do that as a WPCC Committee so we can have historical records of what maintenance was done on these 4-20 years from now.

Mr. Thomeselli: We keep all maintenance records.

Mr. Woodin: If I asked you and we pulled it up on a data base?

Mr. Sayles: We have started a GIS map in Willoughby and there is money available for adding pieces to it. It is not to that point.

Mr. Thomeselli: Most of the records we have they are trying to transfer them – you are going back 30 years ago.

Mr. Woodin: I thought it would be good for both Communities down the road – maybe then we would never have to entail such a large study the next time. We would hit certain geographic areas.

Mr. Sayles: Mr. Wooden is actually onto something here. If you have an accurate GIS map of the system the meter results can be plugged into the map and you can to modeling of the system and make those projections – it does become easier with the map. Doing the map is hundreds of thousands of dollars alone. If we had that map right now the SSES would be cheaper.

Mr. Woodin: That is what I was trying to get to.

Mr. Sayles: But we don't have it and won't have it for a long time. As to how to implement the project - it makes sense that it is all done together because the systems do come together in joint facilities into the waste water treatment plan. Eastlake and Willoughby could do their own SSES – that could be done – but, you will wind up duplicating some effort. There is an economy to doing it all at once which also carries over to how it gets funded. If we go through getting a low interest WPCLF loan typically the loan process work is a $20,000 - $25,000 item. Just to get the paperwork done for the loan. You could do one loan – that is one time – if City does their own loan it is $25,000 each. There is economy of scale if you do it all at once – that is the best way to go.

Mr. Elshaw: You are talking about the engineering/planning loans?

Mr. Sayles: Yes. There is definitely economy of scale in doing one project. If CT was doing the work we would probably have a bigger fee if you split it up. But, we are definitely not recommending that. Our recommendation is it is definably much more cost effective to do it as a whole. The Finance Directors need to get involved in how the one application will be – is Willoughby leading with Eastlake reimbursing Willoughby for the cost – that is how it went last time. Both firms were working in both Cities – it was a joint effort – it was one study. Eastlake paid Willoughby back per month as the invoices were submitted. The construction went the same way.

Mr. Elshaw: How do the loans work – what is the period of time for payback?

Mr. Sayles: The planning loan is 5 years. But, if the result of the study is you are going to start doing some construction projects – you just need to start one construction project – the construction loan at the same interest rate are 20 year loans – you can roll the 5-year loan and roll it into the 20-year loan.

Mr. Carr: How would you pick the company to put in the meters?

Mr. Sayles: We would have to go through our own selection process – bids and quality of work – there are not many out there.

Mr. Knuchel: Would that be a specialized service and move past the bid process?

Mr. Sayles: It is all professional services.

Mr. Knuchel: I mean a special service where you would only have one bidder if you would send it out for bid or do you still have to go out for bids.

Mr. Sayles: The way we would propose to do it is – assuming CT is the choice by the City to do the study – we would subcontract internally to get the best price for the best result.

Mr. Carr: It is not necessarily the lowest bidder.

Mr. Sayles: Not necessarily.

Mr. Condron: This would be the ODWA with a WPCLF loan?

Mr. Sayles: It is a WPCFL loan – OWDA manages it but is the WPCLF interest rate.

Mr. Rogowski: Because of the draw on these funds we probably would not have our first payment until January, 2011.

Mr. Sayles: They probably will still be doing the study in January, 2011 so it would not be until July, 2011.

Mr. Rogowski: It would be my suggestion – I don't have a quarter of a million dollars lying around – we would get the WPCLF loan and have an agreement with Eastlake to have the payments come to us in advance so we would have 50% of the loan payment done instead of doubling the paperwork.

Mr. Sayles: Mr. Rogwoski mentioned amending the contract between the two Cities. Each time a major project has been done the contract between the Cities was amended. That is our recommendation. The other issue on the funding – to get the loan in place before we start the work – we have to start the metering in March and our planning in January or February – which means we have to get started on the loan process. The EPA has said they need to see a nomination form for the planning loan in October. The nomination form does not commit you to anything but we do need to have an idea as to whether we are doing this as one group. That is something the Administrations, Finance Directors and Service Directors and Engineers need to work on – so we can figure out what number we want to put in the nomination form. The nomination form does not commit you to anything but it starts their process at the EPA to get you in – because they budget and plug in your number so they don't commit too much and don't have any money to loan you – that is a possibility too.

Mr. Knuchel: What information is required on that form?

Mr. Sayles: It is the amount and the schedule

Mr. Knuchel: And that is done by the Mayors and Finance Directors?

Mr. Sayles: Typically CT does that – we will meet with the Finance Directors and Mayors to make sure everyone is on board with how we came up with the numbers – I think the Mayor has to sign the form.

Mr. Matheke: I know these will not be huge amounts – but, are Lakeline and Timberlake going to be paying part of the costs?

Mr. Sayles: From Willoughby's perspective both of those come into Eastlake – however you would want to handle it. EPA has specifically said they need to be included. They are in the planning area.

Mr. Elshaw: We appreciate the City of Willoughby offering to handle the loan and paperwork and free up our Finance Director on a few things. Once the study is done and you identify possible projects how are they taken on by the Cities? What Eastlake projects came about from the last SSES.

Mr. Sayles: The Quentin Road pump station work you are doing now was recommended in the old plan.

Mr. Elshaw: How do we do the projects – is it City by City?

Mr. Gwydir: Once they are identified then they fall back to the individual Cities.

Mr. Sayles: Unless it is a joint facility project – like a bigger truck sewer on Erie Road – that would be a project that both Cities pay for. But, if it winds up being something at a City's pump station then that is the City's.

Mr. Gorka: The joint facilities are all delineated in the Agreement. Truck lines, equalization tanks – any joint lines.

Mr. Sayles: The next step is to get the nomination form in.

Mr. Elshaw: That will take the Finance Directors and you guys.

Mr. Sayles: From the way we are going Willoughby is the lead and from the EPA's point of view that is the way it will go.

Mr. Elshaw: Will anything come forward for Council to pass?

Mr. Sayles: In the nomination form you are actually not committing to anything – nothing will be needed for the nomination form.

Mr. Condron: What about the Agreement amendment.

Mr. Rogwoski: We won't worry about that for the form submittal but we will do it in the next month or so while the paperwork gets started.

Mr. Gorka: From the environmental standpoint – because that is what I do – the ultimate goal here is clean water – livable, fishable in all streams, rivers and lakes. That is the bottom line of all this – to eliminate the by-passes. If you have ever been along Lake Erie when the Regional Sewer District is doing their thing in a rain event the beaches are filthy. That is what the EPA wants to eliminate and we may be a part of solving that problem here if we get rid of our by-passes. Although ours don't look like anything.

Mr. Woodin: Are we doing anything to help that out? You go to a lot of these seminars and they are all speaking of the rain water, being more responsible – they are doing these rain guards. Are we educating the public in regards to that and will that help in anyway shape or form?

Mr. Gorka: Public outreach really does not have to do with storm water but mercury. We have done a whole lot of low level mercury testing. Mercury is everywhere – the concentration in the lake is 3 to 4 parts per trillion – nanograms. But, it is so small – it is everywhere. We did a lot of low level testing as a study for 1 ½ years around 2000 and we had certain concentrations around 300 nanograms. I stopped because I did not need to do it anymore but I have to do it again – as part of our new permit I started doing it in February. What I found is that we are averaging inflow-wise about 60. So, over a short period of time no one has done anything to make anyone stop doing anything other than public outreach – telling people that fluorescent bulbs are bad and they should not be broken in your backyard – bring used batteries, etc. to hazardous waste disposals. We do handouts to industry all the time. It must be working because there is less mercury out there and it is not because we are running around beating on people to stop them from doing it. Public outreach does work because sooner or later it becomes part of what you do – recycling the same way and everything else. It becomes part of your life and I think eventually storm water will go that way too. It just takes time to change the mindset.

There were no further questions.

The meeting was adjourned at approximately 7:10 p.m.

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