

MINUTES  
NORTHEAST OHIO REGIONAL SEWER DISTRICT  
BOARD OF TRUSTEES MEETING  
AUGUST 18, 2011

Meeting of the Board of Trustees of the Northeast Ohio Regional Sewer District was called to order at 12:30 p.m. by Darnell Brown.

I. Roll Call

PRESENT: D. Brown  
R. Sulik  
J. Bacci  
S. Kelly  
W. O'Malley  
G. Starr

ABSENT: D. DePiero

The Acting Secretary informed the President that a quorum was in attendance.

II. Approval of Minutes

**MOTION** – Mr. O'Malley moved and Mayor Starr seconded that the minutes of the August 4, 2011 Board meeting be approved. Without objection, the motion carried unanimously.

III. Public Session

Executive Director Ciaccia informed the Board that no members from the public registered to speak at Public Session.

IV. Executive Director's Report

Executive Director Ciaccia moved to the first report item regarding the stormwater litigation. A pretrial was held on August 17<sup>th</sup> with Judge Pokorny. It was decided by mutual consent that the trial date be moved from September 6<sup>th</sup> to October 31<sup>st</sup>.

The communities in opposition to the Stormwater Management Program (SMP) raised concerns in reference to the changes being considered by the District as it pertains to Title V, "Stormwater Code" of the *Northeast Ohio Regional Sewer District Code of*

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 2 of 18

*Regulations* ("Code"). The changes to the Code included striking the provisions within Title V to coincide with the ruling made by Judge Pokorny. The District also considered raising the stormwater credit possibilities to 100% for all customers and not just the schools. Consequently, the communities in opposition to the SMP argued that they would need more time since their defense was predicated upon a 75% credit, and that this modification would now change their tactics and dealings with their expert witnesses. The District viewed this time extension as an opportunity to consider additional changes to Title V to be enacted before trial and therefore was in agreement to the time extension. Judge Pokorny established strict timelines and indicated that he would not entertain any additional movement from the October 31<sup>st</sup> trial date.

Executive Director Ciaccia advised that the District will bring additional changes to Title V to the Board by its September 1<sup>st</sup> meeting and at such time make the request that the District go out to the communities for a 30-day comment period. Additionally, the Stormwater Credit Policy Manual will be completed by that time and will be disseminated to the communities for a 30-day comment period.

Executive Director Ciaccia advised that the District's briefs in response to the alleged financial hardship of the Cleveland Diocese and the Cleveland Municipal School District are due by September 7<sup>th</sup>. Executive Director Ciaccia advised that the District's legal counsel claims that there is no basis for such arguments. The Cleveland Diocese response must be filed with the court by September 21<sup>st</sup>.

Executive Director Ciaccia indicated that after the comment period, the District anticipates bringing all proposed changes to the Title V to the Board at its October 6<sup>th</sup> meeting for consideration. It was agreed that there will be no further changes to Title V after the October 6<sup>th</sup> Board meeting in order to provide all parties enough time to respond and develop their strategies.

Executive Director Ciaccia advised that the final witness lists from all parties are due October 10<sup>th</sup>. All trial briefs, exhibits lists, proposed stipulations, and motions in limine are due October 21<sup>st</sup>. Executive Director Ciaccia reiterated that the trial will commence on October 31<sup>st</sup> and is estimated to last three weeks.

Executive Director Ciaccia advised that the mediation spearheaded by Cuyahoga County Executive, Edward Fitzgerald, reached an impasse. County Executive Fitzgerald distributed a letter to all mayors and township trustees inviting them to attend a meeting at his office on August 29<sup>th</sup>. Executive Director Ciaccia advised that he did not officially receive a copy of the letter and is unsure what the meeting will entail but that County Executive Fitzgerald indicated that he wanted to attempt to mediate this issue. The District plans attending the meeting. Executive Director Ciaccia advised that he was unsure as to whether the attorneys were invited but that he would get further clarification.

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 3 of 18

Executive Director Ciaccia commented that the storms continue to ravage our region and that a lot of damage occurred over the last few weeks. The District has received many requests to assist the communities with some of the stormwater problems. The District does not have a dedicated funding source and is responding when possible.

Executive Director Ciaccia referred to Resolution No. 194-11, which was on today's agenda for Board consideration. This resolution provides the District with the authority to enter into agreements with communities on an as-needed-basis to move forward with fixing some of the smaller problems.

The District is assisting with the repair of the Mary Street Pump Station in the City of Cleveland. The District intended to take over this pump station which is tied into the combined sewer overflow (hereinafter "CSO") system. At the moment, sewage is being discharged into the environment.

Executive Director Ciaccia moved to the next report item regarding the *KMM&K* lawsuit wherein he advised that the District participated in an unsuccessful mediation before a mutually agreed upon external mediator. Judge O'Donnell has since summoned the District to appear in court on August 25<sup>th</sup> at 2:00 p.m. to participate in a settlement conference. One Board member should attend and Executive Director Ciaccia requested that the Board members provide him with their availability.

Executive Director Ciaccia concluded by recognizing the summer students who were present at the meeting and he then thanked them for the services they provided to the District over the summer.

Mayor Starr referred to the discussion held regarding the stormwater litigation and the financial hardships presented by the Cleveland Diocese and City of Cleveland. He questioned as to who or what is excluded from the stormwater regulations...any particular properties or political subdivisions?

Executive Director Ciaccia replied municipal-owned facilities, non-tax supported facilities and Cleveland airports are all excluded. Director of Watershed Programs, Frank Greenland, added that public roads and parcels less than 400 square feet of impervious surfaces are also excluded.

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 4 of 18

V. Action Items

Authorization to Advertise

Resolution No. 187-11 Crane replacement at the Southerly Wastewater Treatment Plant. Anticipated expenditure: \$120,000.00.

Resolution No. 188-11 Snow plowing services at the George J. McMonagle Building, Environmental & Maintenance Services Center and outlying facilities. Anticipated expenditure: \$35,000.00.

**MOTION** – Mayor Bacci moved and Ms. Kelly seconded to adopt Resolution Nos. 187-11 and 188-11. Without objection, the motion carried unanimously.

Authorization to Enter Into Contract(s)

Resolution No. 189-11 2011-2013 Audit professional services. Not-to-exceed \$328,000.00.

Resolution No. 190-11 One (1) year requirement contract with PVS Chemical Solutions, Inc. for sodium bisulfite solution for use at all Wastewater Treatment Plants. Cost: \$187,425.00.

Resolution No. 191-11 Contract with Marra Services, Inc. for the East 55<sup>th</sup> Floatables Project. Contract amount: \$238,750.00.

Resolution No. 192-11 Contract with Messaging Architects for software licensing and professional services to upgrade the District's email archiving system. Cost: not-to-exceed \$86,140.00.

**MOTION** – Ms. Kelly moved and Mayor Starr seconded to adopt Resolution Nos. 189-11 through 192-11. After discussion and without objection, the motion carried unanimously.

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 5 of 18

Mayor Starr referred to Resolution No. 189-11 and he explained that this will supplement the state audit with specialty audits where the Audit Committee and administration determine areas of concern that should be examined externally.

Mr. Brown referred to Resolution No. 193-11 and he requested further explanation of the Easterly Secondary System Improvements (ESSI) project as well as the timeline and duration of the work.

Director of Engineering and Construction, Kellie Rotunno, explained that this project is to upgrade the Easterly secondary capacity to 400 MGD (million gallons per day) as required under the consent decree for Project Clean Lake. The duration of the project design contract is 51 months which includes construction administration and resident engineering (CA/RE) services. The upgrades and improvements are anticipated to be completed within 51 months.

Mr. Brown inquired as to the amount of the upgrade of the secondary capacity. Ms. Rotunno stated that we are going from 330 MGD to 400 MGD.

Resolution No. 193-11	Contract with MWH Americas for the Easterly Secondary System Improvements Project. Cost not-to-exceed \$10,200,000.00.
-----------------------	--

Resolution No. 194-11	Authorizing Executive Director to enter into <u>Title V Stormwater Management Code</u> contracts and agreements. Cost: not-to-exceed \$25,000.00 per contract or agreement.
-----------------------	---

**MOTION** – Mr. Sulik moved and Mr. O’Malley seconded to adopt Resolution Nos. 193-11 and 194-11. Without objection, the motion carried unanimously.

Authorization of Contract Modification

Resolution No. 195-11 <b>WITHDRAWN</b>	Final adjustment deduct order for Contract No. 10000035 for the Mill Creek Interceptor – Main Branch (MCI-MB) Project. Cost decrease in the amount of \$1,456,994.71 bringing the total contract price to \$5,477,720.29.
---	---

Executive Director Ciaccia withdrew Resolution No. 195-11 which was for a final deduct order for the MCI-MB project. He explained that there was a late modification resulting

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 6 of 18

from the recent storms. The District will come back to the Board with a modified resolution.

Mr. Brown advised that the District will be presenting an update on the flooding at Southerly and he questioned, to what extent do we have the same or similar concerns in the other plants?

Executive Director Ciaccia replied that this will be addressed during the presentation and that the MCI-MB is part of the collection system which feeds into Southerly. There was additional damage caused by the floods during construction and the District will need to accommodate the contractor for those costs which will change the deduction amount on the contract.

Authorizing Certification of Delinquent Sewer Accounts for 2011

Resolution No. 196-11

Authorizing the Director of Finance to certify certain delinquent sewer charges to the Cuyahoga County Fiscal Officer pursuant to §6119.06 (W) of the Ohio Revised Code for Collection by the Fiscal Officer in the same manner as other taxes. The total amount to be certified for the tax year is \$4,820,612.00.

**MOTION** – Mr. Sulik moved and Mayor Bacci seconded to adopt Resolution No. 196-11. Without objection, the motion carried unanimously.

Mr. Brown noted that within the Board packet there is an indication as to which municipalities those delinquencies are located.

Authorization for Rights of Entry

Resolution No. 197-11

Baldwin Creek Stormwater Maintenance project located in the City of Parma.  
Consideration: \$0.00.

**MOTION** – Ms. Kelly moved and Mr. O'Malley seconded to adopt Resolution No. 197-11. Without objection, the motion carried unanimously.

VI. Information Item

1. Southerly Flood Update

Executive Director Ciaccia stated that the flood earlier this year at Southerly caused a significant amount of damage. Emergency contractors were hired to repair those damages. The District engaged Malcolm Pirnie/Arcadis Inc. (Malcolm Pirnie) to assist the District with the assessment of what caused the damages and what steps can be taken in the future to mitigate those damages. Executive Director Ciaccia turned discussion over to Director of Operations & Maintenance, Dave McNeeley.

Mr. McNeeley advised that a committee was formed to look into this incident. The committee included Deputy Director of Engineering & Construction, James Bunsey, Deputy Directors of Operation & Maintenance, Ronald Czerski and Raymond Weeden and David Frank from Malcolm Pirnie. Mr. Czerski, Mr. Weeden, Mr. Frank and Director of Watershed Programs, Frank Greenland, will present to the Board today.

Mr. Czerski stated that the incident at Southerly had raised many concerns for the reason that the District had never experienced flooding to this extent. Malcolm Pirnie assisted the District with the analysis of this event. The purpose of the investigation was to understand the causes of the event and what can be done to prevent this type of flood from reoccurring.

Mr. Czerski first presented an overview of the Southerly service area which is approximately 253 square miles and serves 45 different communities. The majority of the sewers served by Southerly are sanitary-only sewers. There are five major interceptors. In 2006, there were 600,000 people and the population decreased to 570,000 in 2010. Although the population has decreased, Southerly has experienced increased flows for the following reasons: the CSO program is capturing more stormwater and the increased amount of I&I (inflow and infiltration) into the interceptors.

Mr. Czerski advised that during dry weather, Southerly processes about 125 million gallons of wastewater per day. During wet weather events, Southerly can process through its secondary system for biological treatment 400 million gallons and move 735 million gallons through the plant per day.

Mr. Czerski indicated that it is important to note that Southerly was not designed to include a headworks bypass. He explained that as the water goes through the interceptors it has to go through the plant which is different than most wastewater treatment plants (WWTPs). Easterly and Westerly both have bypass capabilities whereas Southerly does not.

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 8 of 18

As the District begins implementing its CSO program, Southerly will have to process an extra two billion gallons of stored wastewater. The District will need to develop a system of handling the excess storage which will be a challenge moving forward.

Mr. Czerski stated that the flood was unique because two inches of rainfall came through the entire service area at the same time which impacted all of the interceptors simultaneously. Additionally, there was 8 to 16 inches of snow already on the ground and during the prior week rain and snow had already saturated the ground.

Southerly began to flood at 3:15 a.m. on February 28, 2011 and the flows did not peak until after the plant flooded. Mr. Czerski noted that after Southerly flooded, the District did not violate the plant permit and that a lot of the floodwater was moved back through the plant and went back into the tanks.

Mr. Czerski discussed the impacts the rain had on the interceptors feeding into Southerly. He referred to a graphic and explained that the black clouds represented the rain which was evenly distributed throughout the entire service area. Five interceptors feed into Southerly. The Big Creek Interceptor (BCI) handles combined sewage and was 75 inches. The Southwest Interceptor was 114 inches and normally has 18 inches of flow during dry-weather. However, this interceptor was completely full resulting from the I&I and was trying to push over 500 million gallons through the interceptor. The Southerly interceptor got surcharged. The Mill Creek Tunnel (MCT) was trying to push 300 million gallons through. The Cuyahoga Valley Interceptor was full. Mr. Czerski explained that all five full interceptors were trying to jam flow into the Southerly plant simultaneously. As a result, the primary and preliminary treatment areas of the plant flooded.

Mr. Czerski referred to a photograph which showed water exiting the screen building and he stated that an underground service tunnel flooded which damaged equipment.

Mr. Czerski then turned discussion over to Mr. Frank from Malcolm Pirnie to discuss the investigation.

Mr. Frank advised that Malcolm Pirnie was asked to prepare an independent investigation of the flooding events which occurred on February 28<sup>th</sup>. The study scope included conducting interviews with District staff at the plant as well as at the management level. The data from the SCADA (Supervisory Control and Data Acquisition) system was analyzed. Malcolm Pirnie reviewed the process equipment and how that equipment was utilized during the event. Malcolm Pirnie also examined the standard operating procedures to determine whether those procedures were followed during this event. Finally, Malcolm Pirnie provided a series of recommendations to prevent this type of flooding from reoccurring.



## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 9 of 18

Mr. Frank referred to a partial schematic of the plant and advised that he wanted to focus on the “front door” of the plant which is the headworks area and screening facility. All flow must pass through the screens in order to enter the remaining process units. If the flow cannot get through the screens, then there is a flood event, which is what occurred on February 28<sup>th</sup>. The firm capacity of the screening facility at present with six out of seven screens in service is 960 MGD whereas the combined conveyance capacity of all five interceptors is in excess of 1,600 MGD. Therefore, the flow could not get into the front door and pass through the plant.

Mr. Frank explained that at the time of the event, there were insufficient screening capacities available to handle the flows that were escalating rapidly. There was a very rapid increase of flow which outpaced the capacity of the screens. One of the reasons for outpacing the capacities of the screens was that two of the screens were out of service for maintenance. As the screens that were online got outpaced the mechanical failures occurred in a domino-like effect, at which point, all of the wastewater flow being conveyed by the interceptors to the screens began backing up upstream and eventually flooding the building then exiting the building and flooding the area. As previously mentioned, there is no bypass to Southerly to accommodate for the flow when this happens.

Mr. Frank moved discussion to compare the flood on February 28<sup>th</sup> to a similarly-situated wet weather event that occurred on February 21<sup>st</sup>. On February 21<sup>st</sup>, there was a lot of snow covering the ground which melted and then was followed by a rainstorm. The difference between the February 21<sup>st</sup> and February 28<sup>th</sup> events was that the rate of change of flow coming into the plant was much greater and at a more rapid increase on the February 28<sup>th</sup>. The flow peaked at 800 MGD on February 21<sup>st</sup> whereas the last recorded flow information on February 28<sup>th</sup> showed the flow in excess of 900 MGD. The data suggests that the flow peaked a few hours later at a much greater capacity and probably as much as doubled the 900 MGD rate. Additionally, there were no screen failures on February 21<sup>st</sup> because the rate of change of flow was slower and therefore the plant operators were able to place the screens in service much further in advance than on what occurred on February 28<sup>th</sup>. The MCT operated similarly during both events, but the flow was limited to 200 MG on February 21<sup>st</sup>.

Mr. Frank advised that Malcolm Pirnie developed 38 recommendations which generally fall into three categories: 1) improvements to standard operating procedures; 2) improvements to the SCADA system and available information; and 3) capital improvements.

One example of an operating procedure change is the consideration of adding to the staff in advance of imminent severe wet weather to provide additional resources and the manpower required to handle equipment that is manually activated.

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 10 of 18

The District could benefit from the reorganization of the SCADA system and to have the headworks and flow information on a simple dashboard so plant operators can quickly make operation decisions.

There is no influent flow monitoring at the plant and flow registers after it has gone through the screens. With respect to the February 28<sup>th</sup> incident, flow was not getting through the screens and therefore operators were not aware of the severity of the situation. It would be beneficial if an influent flow monitoring system was established.

Replacing the bar rakes is an important improvement that is currently in the design phase. Mr. Frank advised that lessons learned from this event can play into that project design.

Mr. Frank concluded by stating that the headworks bypass channels is the complete solution to any future worst-case scenario incidents and that getting the flow around those screens is critical to prevent this type of flooding. These types of events are increasing in magnitude and frequency and therefore it would be beneficial for the development of an extreme wet weather standard operating procedure to ensure that all the tools are brought to bear in a coordinated fashion.

Mr. Sulik questioned that if the District were to implement a headworks bypass channel, where would that water dump into?

Mr. Frank replied that if the problem is isolated to the screens, then the first choice would be to bypass around the screens and bring it back into the facility for treatment. This would need to be interconnected with an outfall directly into the Cuyahoga River for extreme emergency situations. Executive Director Ciaccia added that in this situation, the District would need a permit from the Ohio EPA, which has marginally been discussed.

Mr. Sulik questioned whether this would cause flooding in the river area.

Mr. Brown commented that this scenario would occur during a critical storm and the District would be adding more flow to a swelling river. He questioned whether there was a tipping point for how much flow could be released into the environment.

Mr. McNeeley stated that the flow would reach the river either way. In this instance, the flow would go through the plant first but would ultimately be discharged into the Cuyahoga River. Therefore, the District would not be adding additional flow but rather bypassing that flow around the plant.

Mr. Sulik questioned whether the flow would be slowed down if it goes through the plant. McNeeley advised that the intent is to provide as much treatment to the flow as possible and that the bypass would provide protection to the facility.

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 11 of 18

Mr. Brown questioned that if the flow is not surcharged, then it is stored into the pipes? Mr. McNeeley affirmed. Mr. Brown commented that we are referring to extreme situations resulting in the flow volume exceeding the capacity of the pipes and that this is not the District's standard protocol. He then questioned whether the District should consider a tipping point that would suggest a time where flow, if discharged into the environment, would significantly impact downstream communities.

Mr. Greenland commented that Mr. Brown's suggestion should be taken into consideration during bypass discussions. He explained that in extreme situations the bypass alternative would be used like a "red panic button" in order to prevent the plant from becoming inundated with water and preventing the plant from shutting down for days, weeks or even months. Mr. Greenland stated that Southerly's flow contribution to the river would not be that significant.

Executive Director Ciaccia reminded the Board that the CSO program is also designed to capture certain volumes of flow in a typical year. There will be atypical years however from a standard operating procedure standpoint and that the District may have to overflow into the system in order to prevent the water from inundating the plant.

Mr. Brown commented that the changes in the rainfall patterns combined with the unique circumstances of the February 28<sup>th</sup> incident made for a "perfect storm" and seemingly those tendencies are becoming more frequent and this needs to be considered in future planning.

Ms. Kelly referred to the two bar screens that were out of service and she questioned whether the District has backup screening.

Mr. McNeeley explained that there are seven large bar screens which are an integral part of the structure and that we cannot quickly switch-out bar screens which are built in place.

Ms. Kelly questioned as to the District's backup plan when the screening is out of service.

Mr. McNeeley explained that the seven bar screens serve as the backup for the other screens. Typical plant flow uses one to two bar screens but during wet-weather events additional bar screens are used. During this incident, all five available bar screens were used which had the capacity of handling approximately 800 MGD. As mentioned by Mr. Frank, when the first bar screen failed it cascaded down and each bar screen became overloaded with debris. The cycle of the bar screen does not allow for quick cleaning and fails either through high torque or some other mechanism. Therefore, the debris

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 12 of 18

builds up quicker than the bar screens have the capability of cleaning which results in a rapid cascading failure because the equipment is overloaded with flow and debris.

Executive Director Ciaccia added that the two bar screens were scheduled for maintenance during the winter which is the optimal time to conduct maintenance since it is the season receiving the least amount of flow. Even if those two bar screens were in service, we would have experienced the same situation.

Mr. Brown commented that we are concerned with the lessons learned from this unique situation. Given the different variables surrounding this incident, it is prudent to develop strategies on how to effectively manage similar situations in the plant as well as predict when the District may encounter this type of exposure in the future.

Mr. McNeeley agreed and advised that one of those strategies is to improve their reliability and that two bar screens out of service will no longer be acceptable.

Mayor Starr questioned, "How much that would have solved the problem?"

Mr. McNeeley indicated that we do not know whether having all seven bar screens in service would have solved the problem because of the volume of flow that was coming into the plant, and even if we had all seven bar screens in service, as soon as you lost the first one the cascade-effect would have occurred.

Mayor Starr questioned whether retention was an option and if the District could build green infrastructure to capture the flow.

Mr. Frank replied that the magnitude of flow was so significant that the District could not build enough detention to address this situation.

Ms. Rotunno added that the combined sewer interceptors coming into the WWTP are designed to overflow during extreme wet weather conditions and that those CSOs are supposed to occur upstream from the plant. However, with the lack of real-time SCADA controls and the ability to see what was coming into the plant, the District plant operators were not able to adequately control those combined sewer interceptors coming into the plant. Therefore, as part of the recommendations going forward, we should let overflows occur where intended in the CSO system, which is upstream, and perhaps avoid it at the plant altogether.

Mr. Brown questioned, so the overflows would occur before it gets to the plant? Ms. Rotunno affirmed. Executive Director Ciaccia stated that "optimally in this situation that is what we would have liked to have occurred."

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 13 of 18

Mr. Frank turned discussion over to Mr. Weeden to present the Board with the damages and recovery efforts.

Mr. Weeden stated that a lot of his presentation had been previously discussed during this presentation. He explained that water will seek its lowest place and it will do damage. At the headworks building, the District lost two additional bar screens during this process due to the cabling system which deploys the bar screen up and down. In order to relieve the water from the building, District staff had to pry open an overhead door which enabled some of the water to exit but caused damage at the headworks building.

The major pieces of equipment that were damaged included 40 motors for sludge pumps, drain pumps and sump pumps, which would have been able to remove water from inside the tunnels, as well as the blower systems for the aeration toward our first stage aeration process, and motors as small as one-and-a-half horsepower up to 150 horsepower. The District also lost three motor control centers, instrumentation equipment including uninterruptible power supply at the headworks building, some fiber optics, patch panels in one of tunnels and a lot of local control switches. There was also damage caused to some electrical runs and some steam piping became inundated with water and had to be replaced.

In about 12 hours all flow was contained through the preliminary treatment, which is the headworks, and into the primary treatment units, which did not include sludge removal. The District did not have the ability to process sludge out of the primary treatment units for about three days.

The cleanup efforts began immediately. The headworks building was cleaned and by 2:00 that afternoon Mr. Weeden advised that he walked through the building and could barely notice that an incident had occurred. Mr. Weeden stated that the crews worked very hard in the beginning stage and that it took three days to pump all of the tunnels down, which is when the heavy duty cleaning and hosing of the tunnels began.

The District then began to repair and replace equipment. Internal staff as well as the contractors on emergency contracts were working side by side as they replaced motors, pumps, electrical panels and control panels. Mr. Weeden stated that it was a very integrated operation. The total cost was \$1.1 million; \$238,000 of internal direct labor not including cost of benefits, \$156,000 in material and supplies and \$600,000 of emergency contract services.

Mr. Weeden stressed the importance of the emergency contracting services which helped the District get the preliminary and primary treatment units back online. Not having the ability to remove sludge from the primary treatment units significantly impacted District operations especially at the Easterly plant since they pump their biosolids 13 miles across town to the Southerly WWTP. The District needed for those primary treatment units to

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 14 of 18

be running in a timely fashion and those emergency contractors assisted in getting motors repaired and replaced in the sludge pumps, drain pumps and blower systems.

Mr. Weeden stated that the next actions include prioritizing the recommendations and reorganizing the wet weather flow control procedures at Southerly. Southerly has good standard operating procedures as it pertains to wet weather. However, due to the rate of change in the weather patterns, the District is no longer able to operate the plant as in the past.

One recommendation that has been implemented is that the Operations staff puts the equipment in earlier and at a much lower flow rate than in the past. The staff and equipment are more prepared to deal with these types of events. District staff meets weekly and in some cases daily to ensure that the maintenance time schedules and preventative maintenance schedules are all on track.

Inventory is researched to ensure that all critical equipment parts, especially for the headworks unit, is in the plant in order to maintain two to three bar screens at any given time. Maintenance staff has potential repair items in the headworks building and, in the event of a failure; staff can immediately repair those items.

Adjusting operations related to wet weather strategy has changed so that the District can gain access and get the plant flow through at an earlier stage.

Implementing the dashboard which was previously discussed by Mr. McNeeley is going to be very important in order to provide our operators with the information they need.

Two major projects have been added to the Capital Improvement Program (CIP); Southerly Facilities Plant 1 and Southerly Facilities Plant 2. One covers the primary treatment and the other covers the preliminary treatment units.

Mr. Weeden concluded by informing the Board that two bypass options at Southerly are being considered. The first option is to simply bypass the bar screens and the flow will still come into the Southerly plant and then be reintroduced downstream. Therefore, should the bar screens fail, then the District would be able to relieve the surcharge. The second option is to bypass upstream.

Discussion was turned over to Mr. Greenland to present I&I.

Mr. Greenland advised that there was a lot of discussion about I&I during the 5-year rate proposal. Larger storms are hitting this region resulting in a lot of environmental flooding and basement flooding. I&I is increasingly becoming an issue for the District since it is taking in more flow into its interceptors for treatment that is not sanitary flow. Some of this inflow is by design and some is not. These systems are 70 to 100 plus year

## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 15 of 18

separate sewer systems. As they age, they develop cracks and leaks which occur in the sewers in the public right-of-way and on private property. Mr. Greenland advised that there is just as much private sewer lying in this region as there are public-right-of-way sewers and both contribute to I&I.

Mr. Greenland stressed that a regional strategy for handling I&I must be developed. Some of the outstanding issues to be considered as the District moves forward with the development of an I&I strategy include: How does this mesh with community efforts? Do we work on private property? Do we work on public property? Who pays?

Mr. Greenland advised that it has been 30 years since the District conducted a comprehensive sewer system evaluation survey which was in support of the Southwest Interceptor project and the Heights Hilltop Interceptor project. Those were detailed assessments which attempted to target cost-effective removals of I&I.

Most of the communities had to incur the cost of removing I&I from their local systems and the majority of that removal was in public right-of-way. According to Mr. Greenland, the communities invested hundreds of millions of dollars in dealing with I&I which included meeting peak flow limitations that were imposed on them or controlling sanitary sewer overflows.

Mr. Greenland advised that there are private property issues and that managing I&I will not be entirely effective if we simply concentrate resources in the public right-of-way for the reason that water will migrate to the next hole which may be located on private property.

Although the population has remained stagnant and even declined in the Southerly district, the lineal feet of sewer pipe has increased over the last 10 to 15 years. As the lineal footage of pipe increases, I&I has a greater likelihood of entering the system.

Mr. Greenland concluded by stating that the District must develop a strategy for dealing with I&I going forward.

Executive Director Ciaccia stated that the District has a defined mission and is exercising its authority over stormwater. A regional network has been developed and needs to start getting its arms around I&I issues. The District needs to engage the communities, for it is evident that they need help, but they have to want the help. Executive Director Ciaccia explained that we are going to have to identify a strategy for engaging the communities on this issue because it is affecting the District. Mr. Brown agreed.

Ms. Kelly questioned whether there were any other impacts that could potentially come before this Board resulting from the February 28<sup>th</sup> event. Mr. Weeden indicated not to

BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 16 of 18

his knowledge and he explained that out of 8,000 hours of direct labor there were no slips, trips or falls. However, there was one employee that was exposed to bacteria.

Ms. Kelly inquired about the welfare of that employee. Mr. Weeden stated that he is back to work and to his knowledge he is fine. Mr. Weeden stated that staff was able to prevent any injuries after 8,000 hours of direct labor in a wet environment, which was significant, and that no extra damage occurred as a result of this event.

Mr. Brown commented that all of us watched in amazement as the communities in this region experienced historical flooding. There were instances where people stated that they "have been here 30 years and never flooded but in the last six months I've flooded three times." Those types of impacts are not only happening at the District's plant but are occurring throughout this region.

Mr. Brown commented that the District treats the water coming into the plants during wet weather events and that there is no revenue source that covers the costs of treating that additional flow. The District at times is treating twice or sometimes three times the amount of flow that we are not collecting revenues for. Mr. Brown agreed with Mr. Greenland that we really need to get our hands around the I&I issue and devote more resources to I&I.

Mayor Bacci wanted to recognize the "boots on the ground" and he stated that the men and women of the District as well as the private sector did an outstanding job and pulled together. The administrative staff followed through with an investigation and was proactive by making the adjustments in the current environment. Mayor Bacci stated, "Great job."

Mayor Starr stated that Mr. Greenland gave an excellent summary of I&I. He questioned that when the District creates the stormwater district, how will we mandate that communities are forced to conduct maintenance programs on their capital improvements and maintain sanitary and storm sewers?

Mayor Starr commented that we all receive calls some of which are troublesome. Each situation needs to be analyzed. He questioned, is it the building, the footer drains or between the house and the T-line? Which is the right-of-way? Mayor Starr speculated that 90% of the flooding problems result from people not maintaining their underground between the house and a line, but the government is maintaining the right-of-ways. He questioned, "How do you mandate that?"

Mr. Greenland replied that we do mandate it and that we will need to examine the discharge permit program that has been in place since the mid 1980s, which falls under Title III and Title IV of the Code. Mr. Greenland stated that the District mandates that communities have good best management practices for their sewer systems. Certain



## BOARD OF TRUSTEES

Regular Meeting

August 18, 2011

Page 17 of 18

communities have peak flow limitations imposed upon them. The Southwest Hilltop studies took a hard look at how our community is complying with peak flow limitations and most communities are in compliance. There are some instances where communities need to comply with permit provisions. The District will have to examine Title III and Title IV with respect to driving a future I&I program forward.

Mayor Starr questioned if Mr. Greenland was referring to the page-and-a-half to two-page document the communities receive from the District. Mr. Greenland affirmed that a form is sent to each political subdivision.

Mr. Greenland stated that “we’re going to have to take a hard look at enforcement” and that there are certain areas receiving excessive I&I. The broader picture will have to be examined. There are peak flow limitations in place and the District must develop an I&I strategy going forward. Title III and Title IV will have to be adjusted to correspond with that strategy.

Mr. Brown stated that this discussion needs to continue into the future so the Board has a clear understanding of where the District is going and how we intend to deal with this issue. Ultimately, there are going to be some tough answers and actions that will have to be taken.

Executive Director Ciaccia added that the reconstitution of the community discharge program is part of the District’s strategic business plan but has been “backed up” due to the struggle over the SMP. Executive Director Ciaccia commented that “how many irons are you going to have in the fire with the communities” but it is on the books and the District needs to get this plan in the process of moving forward.

### VII. Public Session (any subject matter)

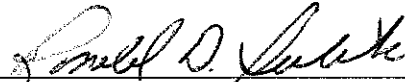
No members from the public registered to speak at Public Session.

### VIII. Open Session

Mr. Brown recognized the summer students and thanked them for the services they provided to the District over the summer. On behalf of the Board, Mr. Brown indicated that he was hopeful their experience was one of value and wished them the best of luck on their future endeavors.

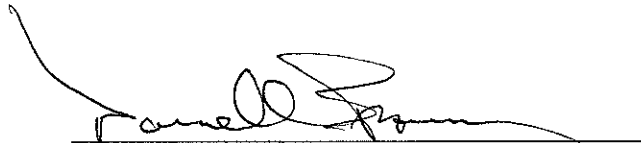
IX. Adjournment

**MOTION** – Mr. Brown stated business having been concluded, he would entertain a motion to adjourn. Mayor Bacci moved and Mr. O'Malley seconded the motion to adjourn at 1:39 p.m. Without objection, the motion carried unanimously.



---

Ronald D. Sulik, Acting Secretary  
Board of Trustees  
Northeast Ohio Regional Sewer District



---

Darnell Brown, President  
Board of Trustees  
Northeast Ohio Regional Sewer District