

1. <u>REPORT DATE:</u> July 16, 2007	2. <u>BUREAU AGENDA NO.</u> JUL-2007-OSA-0181*
3. <u>BUREAU:</u> Office of Special Assistants	
4. <u>SECTION(S):</u>	5. <u>PUBLIC MEETING DATE:</u>
6. <u>APPROVED BY:</u> Director: C.W. Davis 7-1824 Mgr/Spvr: K. Sophy 7-8108 Legal Review:	July 25, 2007 DOCUMENT FOLDER
7. <u>PERSONS IN CHARGE:</u> K. Barrow 2-8840	9. <u>EFFECTIVE DATE OF FILING:</u>
8. <u>DOCKET NO.:</u> C-20054746, C-20054919, C-20055371	DOCKETED AUG 27 2007

10. (a) **CAPTION** (abbreviate if more than 4 lines)
 (b) Short summary of history & facts, documents & briefs
 (c) Recommendation

(a) Spring Township v. Pennsylvania American Water Company (PAWC); Neil R. Rahn and David Singerling, *et al.* v. PAWC; Wilson School District v. PAWC.

(b) The above-captioned Complaints relate to a water main break that occurred on February 5, 2005, on the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania. By Initial Decision issued October 4, 2006, ALJ Weismandel found that the Complainants did not meet their burdens of proof and dismissed all three Complaints. Exceptions were filed on October 24, 2006, by the Wilson School District, Robert Soto and Anna K. Stubenrauch-Soto, Neil Rahn and David Singerling, *et al.*, the Office of Consumer Advocate, and the Township of Spring. PAWC filed Reply Exceptions on November 3, 2006.

(c) The Office of Special Assistants recommends that the Commission adopt the proposed Opinion and Order which denies the Exceptions.

Order DOC No. 670675

Calendar DOC No. 670678

11. MOTION BY: Commissioner Chm. Holland
 Commissioner Fitzpatrick - Yes
 Commissioner Christy - Yes
SECONDED: Commissioner Cawley
 Commissioner Pizzingrilli - Yes

CONTENT OF MOTION: Staff recommendation adopted.

BTL



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

IN REPLY PLEASE
REFER TO OUR FILE

July 27, 2007

C-20054919
C-20054746
C-20055371

NEIL RAHN PRESIDENT
WGNER COMMUNITY WFHA
3119 SOUTH WAGNER CIRCLE
SINKING SPRING PA 19608

DOCUMENT
FOLDER

Neil R. Rahn, David Singerling, et al.
v.
Pennsylvania-American Water Company
(C-20054919)

Township of Spring
v.
Pennsylvania-American Water Company
(C-20054746)

Wilson School District
v.
Pennsylvania-American Water Company
(C-20055371)

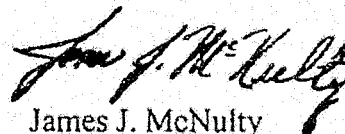
DOCKETED
SEP 12 2007

To Whom It May Concern:

This is to advise you that the Commission in Public Meeting on July 25, 2007 has adopted an Opinion and Order in the above entitled proceeding.

An Opinion and Order has been enclosed for your records.

Very truly yours,


James J. McNulty
Secretary

encls
cert. mail
jf

See attached list for additional parties of record.

C-20054919 NEIL R. RAHN, DAVID SINGERLING ET AL V. PENNSYLVANIA-AMERICAN WATER COMPANY

C-20054746 TOWNSHIP OF SPRING V. PENNSYLVANIA-AMERICAN WATER COMPANY

C-20055371 WILSON SCHOOL DISTRICT V. PENNSYLVANIA-AMERICAN WATER COMPANY

NEIL RAHN PRESIDENT
WAGNER COMMUNITY WFHA
3119 SOUTH WAGNER CIRCLE
SINKING SPRING PA 19608

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PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held July 25, 2007

Commissioners Present:

Wendell F. Holland, Chairman
James H. Cawley, Vice Chairman
Terrance J. Fitzpatrick
Tyrone J. Christy
Kim Pizzingrilli

DOCUMENT
FOLDER

Neil R. Rahn, David Singerling *et al.*
v.
Pennsylvania-American Water Company

DOCKETED
SEP 12 2007

C-20054919

Township of Spring
v.
Pennsylvania-American Water Company

C-20054746

Wilson School District
v.
Pennsylvania-American Water Company

C-20055371

OPINION AND ORDER

BY THE COMMISSION:

Before the Commission for consideration and disposition are the Initial Decision of Administrative Law Judge (ALJ) Wayne L. Weismandel issued October 4, 2006, and the Exceptions filed thereto. Exceptions were filed on October 24, 2006, by

the Wilson School District (School District), Robert Soto and Anna K. Stubenrauch-Soto, Neil Rahn and David Singerling, *et al.* (Rahn *et al.*), the Office of Consumer Advocate (OCA), and the Township of Spring (Township).¹ Pennsylvania-American Water Company (PAWC) filed Reply Exceptions on November 3, 2006.

This matter pertains to a water main break that occurred on February 5, 2005, in the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania.

Approximately 1.5 million gallons of water were released during the incident. PAWC became aware of the main break at approximately 10:45 p.m. on February 5, 2005, located the break at approximately 11:00 a.m. on February 6, 2005, and restored service to customers by 3:00 p.m. on February 6, 2005. (I.D. at 10). Twenty-three customers originally signed on to the Complaint. In the course of the proceeding, the OCA determined that only nineteen properties were in the path of the water that spilled from the main. (OCA Exc. at 6, n. 1). The Complainants seek an order from the Commission directing PAWC to perform a geophysical study of the area affected by the main break. The Complainants want assurance that the high-pressure water that was released from the main did not create voids beneath roads and structures. (OCA Exc. at 2).

Background

Robert Creveling

At about 10:30 p.m. on February 5, 2005, Mr. Robert Creveling noticed lower water pressure combined with creaking and popping noises in the walls of his residence. (Tr. at 15). The next morning, Mr. Creveling noticed that there was no

¹ Wagner Farms Homeowners' Association membership is comprised of residents of the Stonegate development in Sinking Spring, Berks County, Pennsylvania. Neal Rahn and David Singerling are the designated representatives of the customer group. The Stonegate community consists of 155 homes on North and South Wagner Circle, Nash Road, Shelley Drive, and a portion of Martin's Road in Spring Township, Berks County. (Tr. at 123-124, 173).

running water and also noticed a crack above the basement door. (Tr. at 16-17). Around noon on February 6, 2005, a representative from PAWC approached the house and pointed out a pipe that came out of the ground on the right hand side of the driveway. (Tr. 17-18). This began an investigation of the property during which it was noticed that there had been water in the basement; the sump pump was running causing water to come out of the pipe next to the driveway; there were more structural cracks throughout the house and a hole had opened up in the backyard causing some trees to sink into the ground. (*Id.*) It was after this investigation that a PAWC representative advised Mr. Creveling to vacate the premises. (Tr. at 18-20). Over time, major structural damage became evident including a total of six holes opening up on the premises, the deck of the house warping and bending, and either the foundation of the house raising or the ground around the house sinking. (Tr. at 22-23).

Mr. Creveling is currently pursuing a civil action in the Court of Common Pleas of Berks County for property damage. (Tr. at 38-39).

David Singerling

During the evening of Saturday February 5, 2005, Mr. David Singerling noticed that the water pressure to his home was low. (Tr. at 47). Around 3:00 a.m. on February 6, 2005, Mr. Singerling noticed that he did not have any running water. (Tr. at 47-48). It was not until April 8, 2005, that a sinkhole opened up on Mr. Singerling's property between the curb and the sidewalk. (Tr. at 50). Mr. Singerling contacted the township, which in turn had PAWC come out and inspect the hole. PAWC placed a rod down in the hole and determined that there was no water flow there, which ruled out the possibility that a broken pipe caused the hole. (Tr. at 51). As a result, Mr. Singerling contacted his insurance company and organized the repair of the hole at his expense. (Tr. at 52).

Anna Stubenrauch-Soto

Ms. Anna Stubenrauch-Soto did not experience any damage to her property as a result of the main break. However, Mr. Singerling is her next door neighbor, and her children play in the area where the sinkhole developed on his property. She became involved in this proceeding because of her concerns of voids opening up at any time. She wants PAWC to provide safe water and to keep their homes safe from damage. (Tr. at 72-73). Ms. Stubenrauch-Soto testified that her water was back on around 2:00 p.m. on Sunday, February 6th. (Tr. at 72, 74).

Neil Rahn

Mr. Neil Rahn testified that there was a boil water advisory printed in the newspaper due to the main break. (Tr. at 135, 136). Ms. Rose Ruggiero (lives with Neil Rahn at 3119 South Wagner Circle) testified that her water was turned on between 2:00 p.m. and 3:00 p.m. on Sunday, February 6th. (Tr. at 86). Mr. Rahn testified that no damage was done to his property or on his lot. (Tr. at 125). However, he expressed concerns of possible voids opening up under the neighborhood. (Tr. at 116). He also provided pictures of two sinkholes located close to his property which appeared after the main break. One picture was of a sinkhole in front of his neighbor's house at 3117 South Wagner Circle (Rahn Exh. 3A) which appeared on April 6, 2005, and one was a sinkhole in between 3117 and his property at 3119 South Wagner Circle (Rahn Exh. 5) which appeared on September 4, 2005. (Tr. at 112-113).

History of Proceeding

On June 22, 2005, the Township filed a formal Complaint (Township Complaint) with the Commission against PAWC, Docket Number C-20054746.² The Township Complaint relates to a water main break that occurred on February 5, 2005, on the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania. The Township Complaint was served on PAWC on July 26, 2005, by the Commission. On August 12, 2005, PAWC filed a timely Answer and New Matter to the Township Complaint. On August 23, 2005, the Township filed an Answer In Opposition To Preliminary Motion to Dismiss Formal Complaint. On August 29, 2005, the Township filed its Reply to PAWC's New Matter.

On June 29, 2005, Stonegate Community (Wagner Farms Homeowners Association) WFHA (Wagner Farms) filed a formal Complaint (Wagner Complaint) against PAWC with the Commission at Docket Number C-20054919.³ The Complaint also relates to a water main break that occurred on February 5, 2005, on the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania. The Wagner Complaint was served on PAWC by the Commission's Secretary on August 18, 2005. On September 7, 2005, PAWC filed a timely Answer and New Matter to the Wagner Complaint.

On September 27, 2005, the School District filed a formal Complaint (School District Complaint) with the Commission against PAWC, Docket Number

² The Township Complaint was served on PAWC by the Commission's Secretary's Bureau on July 26, 2005.

³ In reviewing the pleadings and the records maintained by the Commonwealth of Pennsylvania, Department of State, Corporation Bureau, it appeared that Wagner Farms is a Pennsylvania non-stock, non-profit corporation properly denominated "Wagner Farms Homeowners' Association, Inc." (I.D. at 2).

C-20055371. The School District Complaint was served on PAWC by the Commission's Secretary's Bureau on September 29, 2005. The School District Complaint also relates to a water main break that occurred on February 5, 2005, on the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania. On November 7, 2005, PAWC filed a timely Answer and New Matter (School District Answer). On November 4, 2005, the School District filed its Answer To New Matter.

On December 6, 2005, the OCA filed a Notice of Intervention and a Public Statement, becoming a statutory party to the case. On January 12, 2006, Neil R. Rahn, David Singerling, *et al.*, (Rahn *et al.*) filed an Amended Formal Complaint (Amended Complaint) indicating their status as the designated representatives of the Wagner Homeowner Association at Docket Number C-20054919. By Order Consolidating Proceedings dated January 19, 2006, the cases bearing Docket Numbers C-20054919, C-20054746 and C-20055371 were consolidated for hearing. On January 26, 2006, PAWC filed a timely Answer to the Amended Complaint.

On April 13, 2006, a Protective Order and Confidentiality Agreement which was agreed to by all Parties, was issued. The Initial and Further Hearings occurred on June 26, 27, 28, and 30, 2006, before ALJ Weismandel. A transcript of the proceeding containing 770 pages was produced.

The record was closed on September 1, 2006. By Initial Decision issued October 4, 2006, ALJ Weismandel found that the Complainants did not meet their burdens of proof and dismissed all three Complaints. Exceptions and Replies were then filed as noted above.

Discussion

As the proponent of a rule or order, the Complainants in this proceeding bear the burden of proof pursuant to Section 332(a) of the Public Utility Code (Code), 66 Pa. C.S. § 332(a), which provides that the party seeking a rule or order from the Commission has the burden of proof in that proceeding. It is axiomatic that “[a] litigant’s burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible.” *Samuel J. Lansberry, Inc. v. Pa. PUC*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990).

As a preliminary matter, we note that any issue or Exception that we do not specifically address has been duly considered and will be denied without further discussion. It is well settled that we are not required to consider, expressly or at length, each contention or argument raised by the parties. *Consolidated Rail Corp. v. Pa. PUC*, 625 A.2d 741 (Pa. Cmwlth. 1993); *see also, generally, Univ. of Pennsylvania v. Pa. PUC*, 485 A.2d 1217 (Pa. Cmwlth. 1984).

The following Findings of Fact explain the events which precipitated the filing of the Complaints:

1. The complainants in the Amended Complaint, Township Complaint and School District Complaint are all water service customers of the respondent.
2. The Amended Complaint, Township Complaint and School District Complaint all relate to a water main break that occurred on February 5, 2005, in the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania.
3. The water main that broke on February 5, 2005, was an 8-inch cast iron pipe, and was part of the facilities belonging to respondent.

4. As a result of the water main break that occurred on February 5, 2005, approximately 1.5 million gallons of water were lost.

5. As a result of the water main break that occurred on February 5, 2005, respondent's Blandon Tanks (two standpipes, each with a 500,000 gallon capacity) completely drained in approximately twenty minutes.

6. Though some of the approximately 1.5 million gallons of lost water appeared in the basements of homes two blocks from the site of the break, no one knows where all of the lost water went.⁴

7. Water from the main break did not surface at the site of the main break.

8. Respondent became aware of a significant loss of water from the Blandon Tanks at approximately 10:45 p.m. on Saturday, February 5, 2005.

9. Respondent attempted to locate the cause of the significant loss of water from the Blandon Tanks continuously throughout the night of February 5 – 6, 2005, and on Sunday, February 6, 2005, until the water main break was located.

10. The first evidence of surfacing water from the water main break was on Sunday morning, February 6, 2005, on Shelley Drive, two blocks North of the water main break site.

11. Respondent located the site of the water main break approximately 12 to 13 hours after becoming aware of the significant loss of water from the Blandon Tanks.

⁴ PAWC's witness, geologist Richard L. Kanaskie, testified that following the main break, the approximately 1.5 million gallons of water would have likely entered the subsurface conduits that previously existed within the karst landscape and followed a roughly east-west direction corresponding with the strike of the local bedrock. (PAWC Exh. 2 at 12). The interconnecting subsurface voids and channels move the water down gradient. (*Id.*).

12. By 3:00 p.m. on Sunday, February 6, 2005, water service had been restored to the customers affected by the water main break.

13. A boil water advisory was published in the newspaper and remained in effect until laboratory results were received. Potable water was available through respondent's facilities on Wednesday, February 9, 2005.

14. The water main that broke on February 5, 2005, and the Blandon Tanks are located in what is referred to as respondent's Penn Water District.

15. The Penn Water District and its water service facilities were acquired by respondent from Citizens Utilities Water Company of Pennsylvania (Citizens) on January 15, 2002.

16. The water main that broke on February 5, 2005, was installed by Citizens in approximately 1970.

17. Ductile iron pipe, as opposed to cast iron pipe, did not become an industry standard for water mains until the mid- to late-1970's.

18. To repair the water main that broke on February 5, 2005, respondent first patched the break with a clamp and subsequently removed approximately 125 feet of cast iron pipe and replaced it with ductile iron pipe.

19. Respondent retained approximately 54 feet of the removed pipe and scrapped the remaining approximately 71 feet of pipe.

* * *

40. When the site of the water main break was excavated, the bottom of the trench under the water main appeared solid.

41. When the site of the water main break was excavated, a throat of a sinkhole was found adjacent and laterally oriented to the broken pipe.

42. When the site of the water main break was excavated, a concrete plug that had been used to remediate a prior sinkhole was found adjacent to the broken pipe.

43. Neither the Township nor respondent know who placed the concrete plug, nor when it was placed.

44. In September, 2004, a sinkhole appeared on the fence line between 3113 and 3115 Wagner Circle, which is less than one block from the site of the water main break of February 5, 2005.

45. From January 1, 2003, to March 13, 2006, 30 to 40 sinkholes have appeared in Spring Township.

46. In the eight months immediately following the February 5, 2005, water main break, four sinkholes appeared within one block of the site of the water main break.

(I.D. at 9-11, 13-14).

Section 1501 of the Code, 66 Pa. C.S. § 1501, states, in pertinent part, that:

Every public utility shall furnish and maintain adequate, efficient, safe, and reasonable service and facilities, and shall make all such repairs, changes, alterations, substitutions, extensions, and improvements in or to such service and facilities as shall be necessary or proper for the accommodation, convenience, and safety of its patrons, employees, and the public. Such service also shall be reasonably continuous and without unreasonable interruptions or delay. Such service and facilities shall be in conformity with the regulations and orders of the commission.

ALJ Weismandel concluded that the Complainants failed to prove that PAWC violated its duty under 66 Pa. C.S. § 1501 to provide adequate service, or the

Commission's Regulations regarding water main breaks at 52 Pa. Code §§ 56.71, 65.2, or 67.1. (I.D. at 26). The ALJ concluded that, "[t]he mere fact that a water main broke does not, in and of itself, prove that the public utility owning the water main did not provide adequate, efficient, safe, and reasonable service and facilities." (I.D. at 26, Conclusion of Law 17). Accordingly, the ALJ dismissed the Complaints.

The OCA takes exception to the dismissal of the Complaints and argues that this is an unusual case, in that for one customer, the Crevelings, damages are extensive and readily visible, but the extent of the damage to other properties is unknown.⁵ (OCA Exc. at 7). According to the OCA, the Commission's ability to order a ground penetrating radar (GPR) study of the other property [that might have been affected by the main break] does not hinge upon determining what caused the main break, but upon whether a GPR study is necessary and prudent to ensure public safety under 66 Pa. C.S. § 1501. (*Id.*). The OCA seeks an order requiring PAWC to undertake a geophysical survey of the affected area, South Wagner Circle, Shelley Drive and the southern side of Nash Road, to assess further sinkhole risk and to repair any damage caused by the main break. (OCA M.B. at 5). The cost of studying the area, which consists of nineteen homes, portions of three streets and an open lot, is estimated to be \$29,000. (*Id.*). The OCA contends that to accept the ALJ's finding that main breaks are inevitable and that water utilities should not be required to investigate and remediate would require ignoring the duty imposed under Section 1501 of the Code. (OCA Exc. at 7).

The School District posits that the ALJ erred in finding that PAWC provided safe and adequate service before, during and after the main break because: the utility failed to follow its own plan for leak detection in the affected area of the system; the utility does not know if 100% of its hydrants in the affected system were sounded; the

⁵ On October 23, 2006, Complainants, Robert Creveling and Thomas Schmitz, filed their Notice to Join the Exceptions filed by the OCA.

utility does not know if 20% of all system valves were sounded annually as is company policy. (School Dist. Exc. at 10). The School District contends that PAWC's decision to walk the system as opposed to deploying its leak detection team for southeast Pennsylvania was unacceptable. (*Id.*). The School District also argues that the ALJ erred by failing to direct PAWC to conduct a GPR study. (School Dist. Exc. at 8).

Rahn *et al.* argues that the ALJ did not give adequate consideration to the plight of the Stonegate Development and the Wagner Farms subdivision. Rahn *et al.* states that the ALJ did not consider the actual and potential damage caused by the 1.5 million gallons of water on the infrastructure and property in the community. Rahn *et al.* claims that the sinkholes that have appeared since the main break are not covered by homeowners' insurance to the extent the sinkhole is not within the footprint of permanent structural property. (Rahn *et al.* Exc. at 2).

The Township argues that PAWC's failure to deploy a leak detection team was unreasonable and delayed discovery of the location of the main break. (Township Exc. at 2). The Township contends that the ALJ erred by failing to address the issue of the necessity and feasibility of subsurface testing throughout the Wagner Farms development. (Township Exc. at 3-5).

PAWC replies that the Commission has no authority under the circumstances of this case to order it to undertake testing and remediation. (PAWC R.Exc. at 5). The utility argues that absent a finding that it rendered inadequate or unreasonable service in contravention of 66 Pa. C.S. § 1501, the Commission has no basis upon which to order PAWC to carry out remedial actions. (PAWC R.Exc. at 6-7). PAWC admits that it was responsible for the main break itself but states that it managed that responsibility by locating the main break, excavating the site and immediately clamping the break and replacing the damaged portion of main. (PAWC R.Exc. at 9). PAWC argues that while its duty under Section 1501 of the Code is to provide reasonable

service, the Code does not task it with providing perfect service. *Re Metropolitan Edison Co.*, Pa. P.U.C. 662 (1993). (PAWC R.Exc. at 8).

First, we will address the Complainants' argument that PAWC's failure to deploy its leak detection unit was unreasonable. (Township Exc. at 2-3, Wilson S.D. Exc. at 10). It took PAWC approximately thirteen hours to locate the main break because the water which escaped did not surface at the main break as is usually the case. (Tr. at 576). We do not consider the company's decision not to deploy the team unreasonable. It was logical to assume that 1.5 million gallons of water would surface and be fairly easy to locate by walking the mains. Under the "management discretion doctrine," the Commission may not interfere with or micromanage utility management decisions, unless there is a manifest abuse of discretion or some showing of arbitrary utility action. *Pa. PUC v. Philadelphia Electric Co.*, 522 Pa. 338, 561 A.2d 1224 (1989); and *Petition of Frank Bankard*, Docket No. P-00052172 (April 21, 2006). A public utility is not a guarantor of either perfect service or the best possible service. *Re: Metropolitan Edison Co.*, 80 Pa. P.U.C. 662 (1993), and *Troutman v. Somerset Rural Electric Cooperative*, 65 Pa. P.U.C. 170 (1987). A spectrum of acceptable behavior exists based upon the particular facts of each case. *Borough of Sewickley v. Verizon Pennsylvania Inc.*, Docket No. C-00003256, 2001 Pa. PUC LEXIS 29 (June 21, 2001). The Complainants' Exceptions on this issue are denied.

Next, we wish to address the Complainants' request for a GPR study of the properties in the Stonegate community. If we were to order PAWC to conduct testing of the property in the Stonegate community, we would have to base that order on credible evidence that some act or omission by PAWC in violation of the Code or our Regulations would be remedied by the testing. *See, West Penn Power Co. v. Pa. PUC*, 478 A.2d 947 (Pa. Cmwlth. 1984) (holding that for the PUC to sustain a customer's Section 1501 complaint against a utility, the utility must have violated its duty under the Code and that absent such a violation, the PUC has no authority to require the utility to recompense the

customer). The Complainants have not proven on this record that PAWC violated its duty under the Code, and that the violation led to the sinkholes. The experts on both sides of this proceeding agree that geophysical testing of the Sinking Spring area will reveal sinkholes, an inherent characteristic of the limestone formation geography throughout the Sinking Spring area. However, the Complainants have not presented any evidence supporting the theory that the cause of the sinkholes would be attributable to any one contributor, much less to PAWC. "Any such testing would reveal extensive limestone geology formations riddled with sinkholes, some of which have existed for thousands of years, and some of which were caused simply by the nature of urbanization. Simply because of the nature of this geological formation, it would be impossible to identify what, if any, sinkhole conditions are attributable to the water main break and what conditions are simply pre-existing, or what are attributable to other man-made sources." (PAWC R.B. at 20; PAWC Exh. 2 at 12, 13; Tr. at 467).

The OCA estimates that the cost of testing the nineteen affected properties would be approximately \$29,000. (OCA M.B. at 5, 54; OCA Exc. at 2, n. 2). We are not persuaded that assigning this cost to PAWC (a cost that would likely be recoverable from the ratepayers) when there is not a way to verify that PAWC in some way caused the formation of the sinkholes that will undoubtedly be found throughout these properties. Therefore, we will not direct PAWC to carry out the GPR testing that the Complainants seek. Accordingly, the Complainants' Exceptions on this issue are denied.

That being said, we nonetheless believe that, given the manner in which the February 2005 main break occurred, a study of PAWC's facilities in the affected area is warranted. The Township's witness, geologist Felicia Kegel Bechtel, testified that, "any probability of leakage needs to be monitored, and leakage needs to be remediated." (Bechtel Exh. 1A at 3). Ms. Bechtel opined that even an acceptable level of leakage from water lines can cause sinkholes and that in an area of known limestone rock and known sinkhole activity, leakage prevention should have been a priority. (*Id.* at 3-4). "This can

be accomplished by either double piping lines and mains in areas known for sinkhole formation, or by, at very least, monitoring the system through methods such as acoustic leak detection, and tightening the system w[h]ere necessary to prevent leaks causing this type of event. The methods that Pennsylvania-American was using at the time, such as monitoring tank levels and sounding of lines, were not sufficient.” (Bechtel Exh. 1A at 4). Where issues of community safety are concerned, this Commission possesses irrefutable authority to exercise its jurisdiction. *Re: Consolidated Rail Corp.*, 56 Pa. P.U.C. 367 (1974). As PAWC itself acknowledges, the area is riddled with sinkholes; therefore, we assume that it is only a matter of time before another sinkhole-related main break occurs. However, in order to determine what kind, if any, testing of PAWC’s facilities is necessary, we will first direct the utility to submit the following information with the Secretary’s Bureau:

- (1) provide detailed information regarding main breaks affecting 250 customers for six hours or more in the Penn Water district for the years 2002-2006 pursuant to 52 Pa. Code § 65.5, 52 Pa. Code § 56.71, and Chapter 67;
- (2) provide an overview of PAWC’s field data collected in relation to those main breaks and a trend analysis of the water main breaks;
- (3) indicate how the frequency of the main breaks in the affected area in the years 2002-2006 compares to main breaks in other PAWC service territories;
- (4) indicate any DSIC-eligible investment in the Penn Water District since 2002, if none, explain;
- (5) provide information showing the hourly water levels at the Blanton tanks that supply water to the Iroquois Avenue main and the Stonegate community during for the period of January 1, 2005-February 28, 2005;
- (6) provide detailed information regarding how low-tank alarms were handled during this time period and whether public safety officials were notified of low water levels at the storage facility;

(7) provide information on leak detection procedure and compliance employed in the Penn Water District during the years 2002-2006; and,

(8) given the unique limestone formations of the area, provide a description of all steps taken by PAWC to minimize future main breaks in the Penn Water District.

The Commission will determine what, if any, further actions will be taken regarding the February 5, 2005 main break and water service in the Penn Water District;

THEREFORE,

IT IS ORDERED:

1. That the Amended Formal Complaint filed on January 12, 2006, by Neil R. Rahn, David Singerling, *et al.* with the Pennsylvania Public Utility Commission against Pennsylvania-American Water Company, Docket Number C-20054919, is dismissed.

2. That the Complaint filed on June 22, 2005, by the Township of Spring with the Pennsylvania Public Utility Commission against Pennsylvania-American Water Company, Docket Number C-20054746, is dismissed.

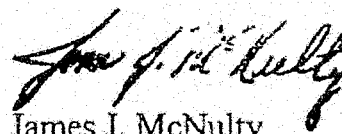
3. That the Complaint filed on September 27, 2005, by the Wilson School District with the Pennsylvania Public Utility Commission against Pennsylvania-American Water Company, Docket Number C-20055371, is dismissed.

4. That the Exceptions filed by the Wilson School District, the Office of Consumer Advocate, the Township of Spring, Neil Rahn and David Singerling, Robert Creveling and Thomas Schmitz, and Roberto Soto and Anna K. Stubenrauch-Soto to the October 4, 2006 Initial Decision of Administrative Law Judge Wayne L. Weismandel are denied.

5. That, consistent with this Opinion and Order, within forty-five (45) days of the entry of a final Order in this proceeding, Pennsylvania American Water Company shall file with the Secretary's Bureau, information responsive to the questions posed in this Opinion and Order.

6. That the Commission's Secretary mark this consolidated case as closed.

BY THE COMMISSION,



James J. McNulty
Secretary

(SEAL)

ORDER ADOPTED: July 25, 2007

ORDER ENTERED: JUL 27 2007

BINGAMAN HESS

ATTORNEYS AT LAW

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JAMES F. BELL
1921-1988

September 7, 2007

VIA FEDERAL EXPRESS

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120

ORIGINAL

RE: Neil R. Rahn, David Singerling, et al v. PA American Water; No.: C-20054919
Township of Spring v. PA American Water; No.: C-20054746
Wilson School District v. PA American Water, No.: C-20055371
Our File No.: 10176-1041

Dear Secretary McNulty:

Enclosed please find an original and 10 copies of Pennsylvania American Water Company's Response to the Pennsylvania Public Utility Commission's Order and Opinion entered on July 27, 2007 for filing. Kindly file the original, time-stamp the extra copies and return one copy to the undersigned.

Should you have any questions or comments, please feel free to contact me.

**DOCUMENT
FOLDER**

Very truly yours,

BINGAMAN HESS

Patrick T. Bennett Esq. for
Harry D. McMunigal

HDM:PLT:mny
Enclosures

RECEIVED

SEP - 7 2007

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

BTL

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

RECEIVED

SEP - 7 2007

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

TOWNSHIP OF SPRING,
Complainant

v.

Docket No. C-20054746

PENNSYLVANIA AMERICAN WATER
COMPANY,
Respondent

ORIGINAL

NEIL R. RAHN, DAVID SINGERLING, ET AL
Complainants

v.

Docket No. C-20054919

PENNSYLVANIA AMERICAN WATER
COMPANY,
Respondent

DOCUMENT
FOLDER

WILSON SCHOOL DISTRICT,
Complainant

v.

Docket No. C-20055371

PENNSYLVANIA AMERICAN WATER
COMPANY,
Respondent

DOCKETED
SEP 12 2007

**PENNSYLVANIA AMERICAN WATER COMPANY'S
RESPONSE TO PENNSYLVANIA PUBLIC UTILITY COMMISSION
ORDER AND OPINION ENTERED ON JULY 27, 2007**

(1) Provide detailed information regarding main breaks affecting 250 customers for six hours or more in the Penn Water district for the years 2002-2006 pursuant to 52 Pa. Code §65.5, 52 Pa. Code §56.71, and Chapter 67:

RESPONSE: The only main break that affected 250 customers for 6 hours in the Penn Water District for the years 2002-2006 was the subject water main break that occurred in this matter on February 5, 2005 on the 3100 block of Iroquois Avenue, Spring Township, Berks County, Pennsylvania. The subject incident occurred as the result of the sinkhole developing in and around the main on Iroquois Avenue eroding the support for the main causing the water main to rupture. Furthermore, excavation at the site of the break revealed a large volume of concrete immediately adjacent to the site of the main

break that had been previously poured into that underground area by an unknown entity, which all sources agree represented remediation efforts from a prior sinkhole.

Additionally, see Pennsylvania American Water Company's Disruptions Greater Than 6 Hours and Greater Than 250 Customers for 2001-2006 attached hereto as Exhibit A and the document entitled Number of Main Leaks/Breaks 2002-2006 for Pennsylvania American Water Districts attached hereto as Exhibit B.

(2) Provide an overview of PAWC's field data collected in relation to those main breaks and a trend analysis of the water main breaks:

RESPONSE: See Pennsylvania American Water Company's Main Break Report attached hereto as Exhibit C. Additionally, see Pennsylvania American Water Company's Disruptions Greater Than 6 Hours and Greater Than 250 Customers for 2001-2006 attached hereto as Exhibit A and the document entitled Number of Main Leaks/Breaks 2002-2006 for Pennsylvania American Water Districts attached hereto as Exhibit B.

(3) Indicate how the frequency of the main breaks in the affected area in the years 2002-2006 compares to main breaks in other PAWC service territories:

RESPONSE: See Pennsylvania American Water Company's Disruptions Greater Than 6 Hours and Greater Than 250 Customers for 2001-2006 attached hereto as Exhibit A and the document entitled Number of Main Leaks/Breaks 2002-2006 for Pennsylvania American Water Districts attached hereto as Exhibit B.

(4) Indicate any DSIC-eligible investing in the Penn Water District since 2002, if none, explain.

RESPONSE: See document entitled 2463 DSIC Eligible Work Orders Sorted by Date Report attached hereto as Exhibit D.

(5) Provide information showing the hourly water levels at the Blanton tanks that supply water to the Iroquois Avenue main and the Stonegate community during the period of January 1, 2005 through February 28, 2005:

RESPONSE: See document entitled Hourly Water Levels Blanton Tanks for January 1, 2005 through February 28, 2005 attached hereto as Exhibit E.

(6) Provide detailed information regarding how low-tank alarms were handled during this time period and whether public safety officials were notified of low water levels at the storage facility.

RESPONSE: A low tank call is placed to the dispatching center. The dispatching center immediately places a call to Pennsylvania American Water Company Network Supervisor for the Penn District, John A. Rothwell. Mr. Rothwell speaks either directly or by telephone to a serviceman to make sure the tank is checked for the cause of the low tank alarm. The serviceman makes an examination of the tank levels and recently hourly readings. An evaluation and determination is made to contact safety officials based on the safety and welfare of the general public.

(7) Provide information on leak detection procedure and compliance employed in the Penn Water District during the years 2002-2006; and,

RESPONSE:

1. Every time a Pennsylvania American Water service call is made at a residence the service technician sounds out the service line inside.
2. Meter readings are flagged for high consumption to determine a possible cause.
3. When a serviceman responds to a Pennsylvania One Call, the valves in the area are sounded out.
4. Respond to customer complaints, i.e., low water pressure, water running down the street, no water service.
5. Fire hydrants sounded out and flushed two times a year.
6. Leak survey conducted of the entire system.
7. During shutdowns of mains and tie-ins to the mains, the valves are sounded out by the service technician.
8. If the main is exposed during construction or excavation, a service technician sounds out the valves.
9. During new installations in new developments, the new mains are pressure tested.

Additionally, Brian Hassinger (Director of Network for PAWC) testified at Hearing before Judge Weismandel concerning its leak detection program. (NT 6/30/06 at 497) He discussed the routine practice maintained by PAWC to undertake leak detection surveys,

and to immediately repair any such leaks that are detected. (514) PAWC surveys certain areas at a time, and in the Sinking Spring area, it sounds the entire fire hydrant system and all service line control valves as part of its leak detection program. (516-17, 518, 519) Hassinger describes PAWC's leak detection program as aggressive, with at least eight maintenance service employees specialized in and dedicated to leak protection. (519)

John Rothwell (Network Supervisor for PAWC) likewise testified as to PAWC's leak detection program. (615) PAWC employs a computer-based SCADA system that monitors water tank levels and which updates every 15 minutes. (623, 624) PAWC also performs manual checks on a daily basis to measure the level of the tanks. When the water level in the tanks drops to a predetermined level, the setting of which varies, the tank alarms sound, and Rothwell is immediately notified. (624, 625) He further testified that in addition to checking hydrants and valves as part of a leak detection program, PAWC also recently installed Permalogs, leak detection units that listen for the presence of noise between 2:00 and 2:15 a.m. to detect the presence of any leak. (669, 670, 681) This technology was only recently acquired by PAWC for Sinking Spring, and was not in place on February 5, 2005. (682) However, the use of the Permalog on February 5, 2005 would not have sped up the leak detection process, because the 40 Permalogs would not have been able to isolate the source of the leak any faster. (683) Additionally, the Permalogs automatically turn on from 2:00 to 2:15 a.m., at which point PAWC had already been advised of the broken main. (683).

(8) Given the unique limestone formations of the area, provide a description of all steps taken by PAWC to minimize future main breaks in the Penn Water district

RESPONSE: Several different strategies and/or projects were developed to reduce main breaks in the Penn Water District. They include the following:

1. Approximately 80 permaloggers utilizing the permanent leak detection system were installed throughout the district at possible hot spots containing cast iron pipe;
2. Installation of a clay-val metered valve between Blanton and low zone in the vicinity of Route 724 and Spohn Road;
3. The AccuCorr 3000 Digital Leak Noise Correlator has been purchased and utilized throughout the system;
4. Cast iron pipe is replaced with ductile iron pipe systematically based on breaks to a main, water quality as well as volume and flow;
5. Higher-class ductile iron pipe with greater flexibility is installed in the area;
6. Field lock gaskets are installed during main replacements;

7. Concrete bridging is installed in active and /or sinkhole prone areas in order to assist in supporting the main;

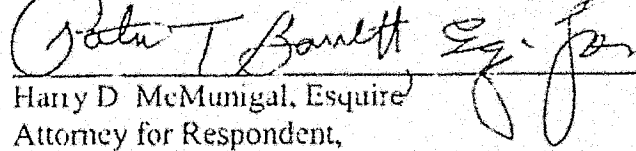
8. Meters, mains and fire hydrants are replaced under the Company's PUC approved DSIC program.

9. Upgrades to the Verbatim system that provides computer generated verbal reporting of tank levels.

10. Upgrades to SCADA Systems including:

- * Permit monitoring of tank levels more frequently;
- * Upgrade to Data Concentrator by moving unit to the Penn Water District office to improve communications;
- * Permit remote downloads of SCADA information;
- * Added an Ethernet CPU;
- * Added fiber optic link at the high tank to improve protection from lightning strikes and/or power surges;
- * Added circuitry at the Grings Hill tank to improve protection from lightning strikes and/or power surges.

BINGAMAN, HESS, COBLENTZ & BELL, P.C.



Harry D. McMunigal, Esquire
Attorney for Respondent,
Pennsylvania American Water Company

PA WATER DISRUPTIONS GREATER THAN 6 HOURS AND GREATER THAN 250 CUSTOMERS

DISTRICT	12/21/01 to 12/21/02 # of Outages greater than 6 Hours & more than 250 Customers	12/21/02 to 12/21/03 # of Outages greater than 6 Hours & more than 250 Customers	12/21/03 to 12/21/04 # of Outages greater than 6 Hours & more than 250 Customers	12/21/04 to 12/21/05 # of Outages greater than 6 Hours & more than 250 Customers	12/21/05 to 12/21/06 # of Outages greater than 6 Hours & more than 250 Customers
PENNSYLVANIA					
PA. BERWICK	0	0	0	0	0
PA. FRACKVILLE	0	0	0	0	0
PA. HERSHEY	0	0	0	0	0
PA. LAKE HERITAGE	0	0	0	0	0
PA. MECHANICSBURG	0	0	0	0	0
PA. MILTON	0	0	0	0	0
PA. PHILIPSBURG	0	0	0	0	0
PA. COATESVILLE	not tracked	not tracked	0	0	0
PA. MOHRIS TOWN	0	0	0	0	0
PA. YARDLEY	0	0	0	0	0
PA. ABINGTON	0	0	0	0	0
PA. BANGOR	0	0	0	0	0
PA. BLUE MOUNTAIN / NAZARETH	0	0	0	0	0
PA. LEHMAN PIKE	0	0	0	0	0
PA. POCONO	0	0	0	0	0
PA. ROY-ERSFORD	0	0	0	0	0
PA. SUSQUEHANNA	0	0	0	0	0
PA. WYOMISSING Penn	0	0	0	0	0
PA. Glen Alsaco	0	0	0	0	0
PA. WILKES BARRE/ SCRANTON	5	5	5	5	5
PA. PITTSBURGH	N/A	N/A	4	3	3
PA. BROWNSVILLE	0	0	0	0	0
PA. BUTLER	0	0	0	0	0
PA. CLARION	0	0	0	0	0
PA. INDIANAPOLIS	0	0	0	0	0
PA. KANE	0	0	0	0	0
PA. KITTANNING	0	0	0	0	0
PA. MCMAURAY	not tracked	not tracked	not tracked	not tracked	3
PA. MON VALLEY	0	0	0	0	0
PA. NEW CASTLE/ ELWOOD	0	0	0	0	0
PA. UNIONTOWN/ CONNELLSVILLE	0	0	0	0	0
PA. WARREN	0	0	0	0	0
TOTALS	6	7	9	16	21

Flooding with water main wash out
 Flooding with water main wash out.
 One outage was a scheduled shutdown to replace valves

Water District	Miles of Main	Number of Main Leaks/Breaks				
		2002	2003	2004	2005	2006
Warren	91	15	22	22	15	14
New Castle/Ellwood	443	185	183	129	173	142
Punxy	85	23	31	42	37	24
Kittanning	25	N/A	N/A	N/A	N/A	13
Clarion	124	6	17	17	21	20
Kane	47	0	6	1	2	3
Butler	270	150	87	78	73	102
Indiana	111	47	49	58	62	40
Brownsville	101	59	59	52	39	53
Uniontown	224	125	159	132	128	175
Norristown	376	79	96	68	119	104
Royersford (Home)	222	7	6	7	7	7
Penn-Wyomissing (ST)	153	9	10	3	22	10
Glen Alsace (A-E)	130	6	6	8	11	10
Coatesville	174		16	22	10	27
Yardley	183	9	10	3	11	5
Abington	105	46	46	36	47	32
Bangor	61	6	24	12	10	4
Nazareth (Blue Mtn)	151	24	10	20	17	17
Pocono	161	14	9	6	26	50
Lehman Pike	90	23	19	12	1	N/A
Susquehanna	61	5	20	16	11	23
Milton	227	21	18	21	34	14
Berwick	84	8	10	13	23	8

Philipsburg	262	42	50	44	43	38
Frackville	27	4	3	8	0	0
Mechanicsburg	478	98	74	74	74	125
Hershey/Palmyra	299	31	38	26	49	25
Lake Heritage	12	3	6	8	3	5
Wilkes-Barre/Scranton	1925	460	460	525	448	404
Pittsburgh	1374	N/A	1127	1269	1519	1447
McMurray	1099	373	310	304	324	373
Mon/Valley	427	295	334	281	255	308

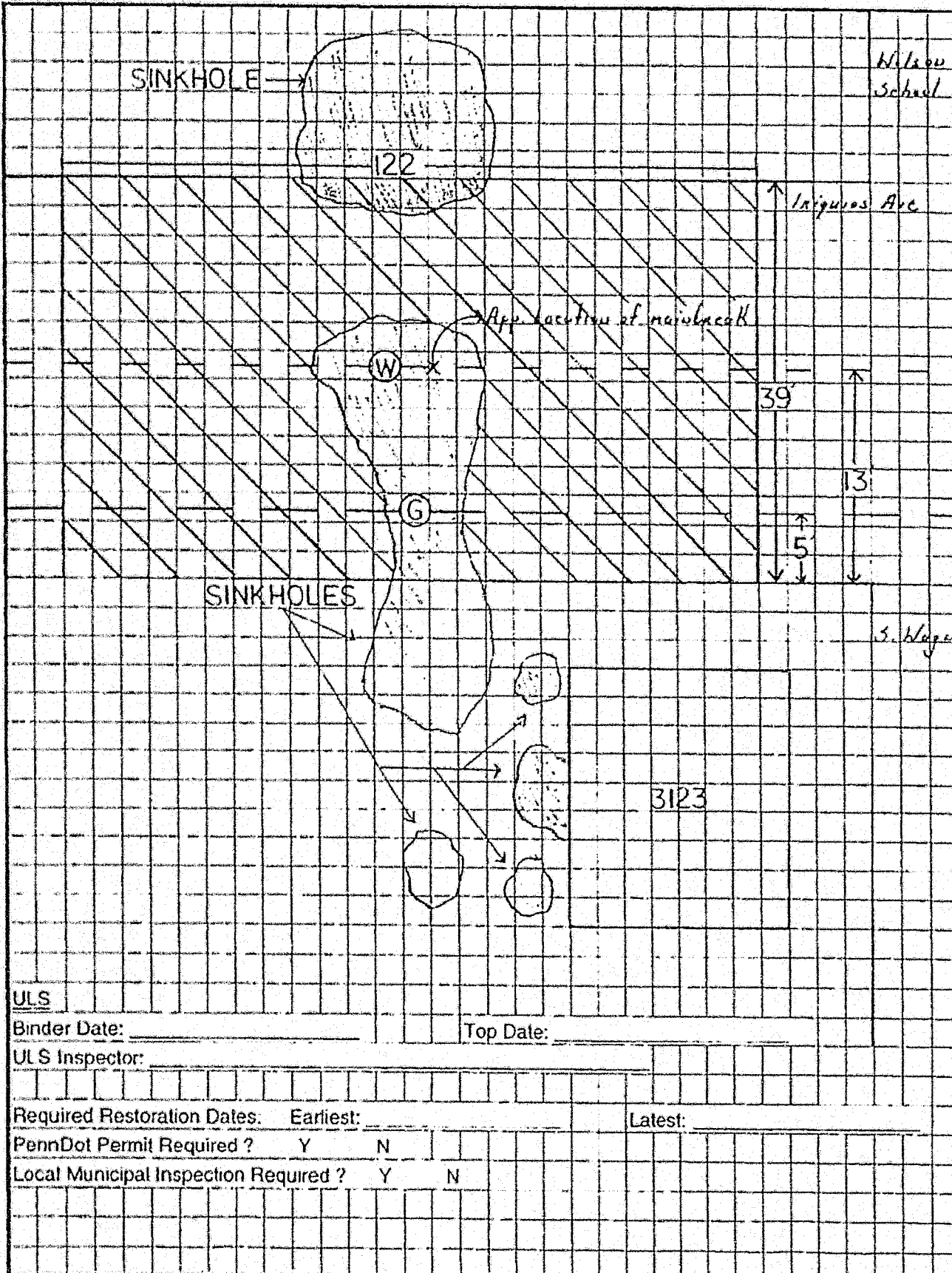
PENNSYLVANIA - AMERICAN WATER COMPANY

Location: C'Ville Penn Glen Home Blue Date: 2-6-05 to 3-6-05

Project: Repair sinkhole - 8" mainline

Excavation Location: Iniquos Ave at S Naguen Circle

Drawn By: Jim Kelly Page: 1 Of 1



ULS

Binder Date: _____

Top Date: _____

ULS Inspector: _____

Required Restoration Dates: Earliest: _____ Latest: _____

PennDot Permit Required? Y N

Local Municipal Inspection Required? Y N

2463 DSIC Eligible Work Orders Sorted by Date

Asset Location	Work order number	Work Order description	2002	2003	2004	2005	2006	2007	est complete date
TOTAL:			\$5,465,373.27	\$746,979.12	\$612,103.60	\$548,106.66	\$906,463.40	\$1,593,011.42	\$1,058,709.07
246306 - PENN-Field Services	24011363	INV BLKT - 5/8 METER REPLAC		\$529,457.17					1/2/02
246306 - PENN-Field Services	24011463	INV BLKT - 3/4" METER REPLAC		\$33,598.47					1/2/02
246306 - PENN-Field Services	24011563	INV BLKT - 1" METER IN PLACE		\$2,718.19					1/2/02
246306 - PENN-Field Services	24011663	INV BLKT - 1 1/2" REPLAC		\$4,065.74					1/2/02
246306 - PENN-Field Services	24013463	INV BLKT - 2" REPLAC		\$19,179.71					1/2/02
246306 - PENN-Field Services	24013563	INV BLKT - 3/4" SERVICE REPLAC		\$74,982.91					1/2/02
246306 - PENN-Field Services	24013663	INV BLKT - 1" SERVICE REPLAC		\$3,894.12					1/2/02
246306 - PENN-Field Services	24013863	INV BLKT - 2" SERVICE REPLAC		\$1,792.83					1/2/02
246306 - PENN-Field Services	24014163	BIKT Min Rep-2 1/2" Wyoconsing		\$2,815.80					1/1/02
246306 - PENN-Field Services	24014263	BIKT Min Rep-2 1/2" Wyoconsing		\$30.76					1/1/02
246306 - PENN-Field Services	24014363	BIKT Min Rep-4" Wyoconsing		\$6,990.89					1/1/02
246306 - PENN-Field Services	24014463	BIKT Min Rep-6" Wyoconsing		\$23,164.95					1/1/02
246306 - PENN-Field Services	24014563	BIKT Min Rep-8" Wyoconsing		\$18,317.37					1/1/02
246306 - PENN-Field Services	24014663	BIKT Min Rep-10" Wyoconsing		\$6,059.86					1/1/02
246306 - PENN-Field Services	24014763	BIKT Min Rep-12" Wyoconsing		\$463.48					1/1/02
246306 - PENN-Field Services	50004722	BIKT Hydrant Rep Wyoconsing		\$20,346.87					1/1/02
246306 - PENN-Field Services	50025088	REP 18" D.I.F. 6" CLIP with 12" D.I.P		\$28,225.13					11/3/03
246306 - PENN-Field Services	50025090	REP (3) 3/4" Services		\$45,075.49					11/3/03
246306 - PENN-Field Services	50025092	REP (2) 1" Services		\$1,890.04					11/3/03
246306 - PENN-Field Services	50025091	REP (2) 2" Services		\$5,818.83					11/3/03
246306 - PENN-Field Services	50025093	REP (1) 6" Service		\$2,767.94					11/3/03
246306 - PENN-Field Services	50025094	REP (3) Fire Hydrants Lateral		\$10,569.57					11/3/03
246306 - PENN-Field Services	50033113	REP 8" LF 12" DIP		\$226,699.98					12/3/03
246306 - PENN-Field Services	50037345	REP 8" LF 8" DIP		\$763.47					12/5/03
246306 - PENN-Field Services	50041748	REP (3) 3/4" Services		\$30,183.25					12/3/03
246306 - PENN-Field Services	50043991	INS 130 FT 12" DIP for P A 222		\$48,760.25					11/10/04
246306 - PENN-Field Services	50045995	INS 2000 LF 12" DIP		\$251,594.92					11/18/04
246306 - PENN-Field Services	50055653	INS 750 LF 12" DIP DSIC		\$141,666.24					11/10/04
246306 - PENN-Field Services	50055585	INS 600 LF 8" DIP DSIC		\$71,449.74					11/19/04
246306 - PENN-Field Services	50062138	INS /REP 365 LF 8" C.I.P		\$31,635.51					12/1/04
246306 - PENN-Field Services	50065907	INS /REP 1200 LF 8" C.I.P		\$201,209.42					6/7/05
246306 - PENN-Field Services	50065460	RE:OCA TE 335 LF 12" DIP		\$63,133.70					11/9/05
246306 - PENN-Field Services	50077714	REP 100 LF 9" C.I.S3 DIP		\$139,139.50					11/14/05
246306 - PENN-Field Services	50082926	REP 880 LF 9" D.I.P - Sphbr Rd		\$62,433.46					11/9/05
246306 - PENN-Field Services	50084399	WEIDMAN AVE DSIC 2005		\$183,698.08					11/29/05
246306 - PENN-Field Services	50086503	REP 500 LF 12" DIP		\$78,035.75					11/29/05
246306 - PENN-Field Services	50086397	INV BLKT - 4" METER REPLAC		\$484.50					9/21/05
246306 - PENN-Field Services	50086998	INV BLKT - 8" METER REPLAC		\$3,011.94					9/21/05
246306 - PENN-Field Services	50098705	WEIDMAN AVE D.I.C 2005		\$25,227.45					11/29/05
246306 - PENN-Field Services	50098758	REP 80 LF 12" DIP - GREEN VAL		\$123,674.31					6/30/06
246306 - PENN-Field Services	50098766	LABOR FOR CHAMBER EXCHANGE		\$2,695.72					6/27/06
246306 - PENN-Field Services	50099042	REPAIR ROAD/REPLACE MAIN/SEWER		\$17,445.72					9/15/06
246306 - PENN-Field Services	50099243	REPAIR ROAD/REPLACE MAIN/SEWER		\$8,029.44					9/15/06
246306 - PENN-Field Services	50099410	VESTER PLACE 2005 DSIC		\$79,731.11					5/19/06
246306 - PENN-Field Services	50099911	VESTER PLACE 2005 DSIC		\$7,275.00					6/26/06
246306 - PENN-Field Services	50100675	CACCOSSING 2006 DSIC		\$32,990.13					12/5/06
246306 - PENN-Field Services	50100874	WADWICK CRIVE 2006 DSIC		\$157,631.81					7/21/06
246306 - PENN-Field Services	50100876	GRANDVIEW BLVD 2006 DSIC		\$478,499.08					8/10/06
246306 - PENN-Field Services	50102243	MAIN BREAK SPOJIN RD		\$83,466.19					10/19/06
246306 - PENN-Field Services	50104548	GRANDVIEW BLVD 2006 DSIC		\$51,527.04					7/14/06
246306 - PENN-Field Services	50104575	GRANDVIEW BLVD 2006 DSIC		\$8,021.40					9/26/06
246306 - PENN-Field Services	50104578	GRANDVIEW BLVD 2006 DSIC		\$3,964.44					8-10/06
246306 - PENN-Field Services	50104579	GRANDVIEW BLVD 2006 DSIC		\$14,495.50					8-10/06
246306 - PENN-Field Services	50134580	GRANDVIEW BLVD 2006 DSIC		\$8,947.75					8/7/06
246306 - PENN-Field Services	50136881	INS 1300 LF 8" MAIN		\$232,414.53					11/29/06
246306 - PENN-Field Services	50136885	INS 700 LF 9" MAIN		\$58,927.64					11/29/06

2463 DSIC Eligible Work Orders Sorted by Date

Asset Location	work order number	Work Order description	2002	2003	2004	2005	2006	2007	est complete date
246306 - PENN-Field Services	50110110	GREEN VALLEY RD 2005 DSIC					\$1,123.98	\$95.49	10/19/06
246306 - PENN-Field Services	50112103	FLOW METER					\$2,171.17	\$92.77	11/20/06
246306 - PENN-Field Services	50113042	2306 DSIC EMERG REPAIR					\$40,838.23	\$53,541.41	11/29/06
246306 - PENN-Field Services	50114527	GRANDVIEW BLVD 2005 DSIC					\$6,552.86	\$31,711.95	8/10/06
246306 - PENN-Field Services	50115597	COLUMBIA AVE 5 th MAIN REPL ACE					\$52,012.21	\$75,687.31	12/4/06
246306 - PENN-Field Services	50117134	MAIN BREAK ON FRANKLIN PL ACE					\$112,377.96	\$112,991.10	11/29/06
246306 - PENN-Field Services	50117615	REP 400LF 12" DIP - GREEN VAL					\$5,117.18	\$19,022.20	2007
246306 - PENN-Field Services	408246	Services Repl-Penn Wtr-Rosewood						\$95.49	2007
246306 - PENN-Field Services	408269	Unsch Main Rep-Penn Wtr					\$92.77	\$5,908.76	2007
246306 - PENN-Field Services	408293	Hyd & Vibs Repl-Penn Wtr					\$5,908.76	\$31,711.95	2007
246306 - PENN-Field Services	408296	Services Repl Penn Wtr					\$53,541.41	\$75,687.31	2007
246306 - PENN-Field Services	408298	Meters-Penn-Penn Wtr					\$31,711.95	\$19,022.20	2007
246306 - PENN-Field Services	408300	Meters-Penn-Penn Wtr					\$75,687.31	\$115,146.37	2007
246306 - PENN-Field Services	50100674	INS 5x0 LF 12" MAIN					\$312,919.10	\$110,494.55	2007
246306 - PENN-Field Services	50105864	INS 5x0 LF 12" MAIN					\$19,022.20	\$26,079.38	2007
246306 - PENN-Field Services	50107361	SHIL JING CON KUI PRV					\$115,146.37	\$34,339.44	2007
246306 - PENN-Field Services	50109204	KRICK LANE TO RAILROAD					\$110,494.55	\$43,034.50	2007
246306 - PENN-Field Services	50116682	2007 36IC WOODSIDE					\$26,079.38	\$26,383.69	2007
246306 - PENN-Field Services	50116683	2007 36IC WOODSIDE					\$26,079.38	\$170,853.85	2007
246306 - PENN-Field Services	50127641	MAIN BREAKS (4)					\$34,339.44	\$23,303.3C	2007
246306 - PENN-Field Services	50127643	MAIN BREAK ONE SINK HOLE					\$43,034.50		2007
246306 - PENN-Field Services	50129152	INS 2500LF 8" MAIN					\$26,383.69		2007
246306 - PENN-Field Services	50129153	INS (46) 3/4" SERVICES					\$170,853.85		2007
TOTAL		\$5,465,373.27	\$746,979.12	\$612,103.60	\$548,106.66	\$965,453.40	\$1,593,011.42	\$1,058,709.07	

Hourly Water Levels
Blanton Tanks

01/01/2005 - 01/07/2005

	Sat. 1/1/05	Sun. 1/2/05	Mon. 1/3/05	Tues. 1/4/05	Wed. 1/5/05	Thurs. 1/6/05	Fri. 1/7/05
12:00 a.m.	30.50	30.50	29.00	26.75	29.00	29.50	31.00
1:00 a.m.	30.75	31.00	29.75	27.00	29.00	30.00	31.25
2:00 a.m.	31.00	31.25	30.00	27.25	29.75	30.75	31.75
3:00 a.m.	31.75	32.00	30.50	28.00	30.00	31.75	32.25
4:00 a.m.	32.00	32.50	31.00	28.25	31.00	33.00	33.00
5:00 a.m.	32.75	33.00	31.75	28.75	31.50	34.50	33.25
6:00 a.m.	34.00	34.75	31.50	29.25	31.50	35.00	33.00
7:00 a.m.	36.00	35.50	31.00	29.50	30.50	35.00	32.00
8:00 a.m.	36.00	35.50	30.50	29.75	30.25	34.75	32.00
9:00 a.m.	35.50	35.25	30.00	30.50	30.00	34.75	31.75
10:00 a.m.	35.00	35.00	30.00	31.00	30.00	34.50	31.75
11:00 a.m.	34.00	34.50	29.75	31.50	30.00	34.00	32.50
12:00 p.m.	33.50	34.00	29.50	31.50	29.50	34.00	33.00
1:00 p.m.	32.50	33.00	29.00	31.00	29.50	33.75	33.00
2:00 p.m.	32.00	32.50	29.00	31.00	29.75	33.50	32.75
3:00 p.m.	31.75	32.00	29.00	30.75	30.50	33.50	32.75
4:00 p.m.	31.25	31.75	29.00	31.00	31.00	33.25	32.75
5:00 p.m.	31.00	31.25	28.75	30.75	31.00	33.00	32.50
6:00 p.m.	30.75	31.00	28.50	30.50	31.00	32.75	32.00
7:00 p.m.	30.25	30.25	27.75	30.00	30.50	32.00	32.00
8:00 p.m.	30.00	29.75	27.25	29.50	29.75	31.75	31.75
9:00 p.m.	30.00	29.00	27.00	29.00	29.50	31.00	31.50
10:00 p.m.	30.00	29.00	26.50	28.90	29.25	30.60	31.60
11:00 p.m.	30.00	29.00	26.50	28.90	29.00	30.60	31.60

Hourly Water Levels
Blanton Tanks
01/08/2005 - 01/14/2005

	Sat. 1/8/05	Sun. 1/9/05	Mon. 1/10/05	Tues. 1/11/05	Wed. 1/12/05	Thurs. 1/13/05	Fri. 1/14/05
12:00 a.m.	31.79	28.00	29.75	31.50	31.50	32.25	32.00
1:00 a.m.	32.00	28.25	30.00	32.00	32.00	33.00	32.25
2:00 a.m.	33.00	29.00	30.75	32.50	32.75	33.50	32.75
3:00 a.m.	34.50	29.50	31.25	33.00	33.00	34.00	33.25
4:00 a.m.	35.25	30.00	31.75	34.50	34.00	34.50	33.75
5:00 a.m.	36.00	31.00	32.75	35.50	35.50	35.00	34.00
6:00 a.m.	36.00	32.00	34.00	34.75	35.50	35.00	33.50
7:00 a.m.	35.75	33.25	34.00	34.75	35.00	35.00	33.00
8:00 a.m.	35.00	34.00	34.50	34.00	35.00	35.25	32.75
9:00 a.m.	34.00	34.00	34.25	34.50	35.00	35.50	32.25
10:00 a.m.	33.75	34.50	34.00	34.50	35.50	35.25	32.00
11:00 a.m.	32.25	34.50	33.50	34.50	36.00	34.50	32.00
12:00 p.m.	31.75	34.00	33.50	34.00	35.50	34.25	32.00
1:00 p.m.	31.00	33.50	33.25	34.00	35.00	34.00	31.75
2:00 p.m.	30.00	33.00	33.00	33.50	34.50	34.00	31.75
3:00 p.m.	29.75	32.50	33.00	33.50	34.50	34.00	31.75
4:00 p.m.	29.25	32.00	33.00	33.50	34.00	34.00	31.25
5:00 p.m.	28.75	31.50	32.75	33.00	34.00	33.75	31.00
6:00 p.m.	28.25	31.00	32.00	32.75	33.50	33.00	30.75
7:00 p.m.	28.00	30.75	31.75	32.00	32.75	32.50	30.50
8:00 p.m.	27.75	30.00	31.00	31.75	32.25	32.00	30.25
9:00 p.m.	27.50	29.75	31.00	31.50	32.00	31.75	30.00
10:00 p.m.	27.50	29.00	30.75	31.00	32.00	31.25	30.00
11:00 p.m.	27.60	29.00	31.00	31.00	32.00	31.75	30.25

Hourly Water Levels

Blanton Tanks

01/15/2005 - 01/21/2005

	Sat. 1/15/05	Sun. 1/16/05	Mon. 1/17/05	Tues. 1/18/05	Wed. 1/19/05	Thurs. 1/20/05	Fri. 1/21/05
12:00 a.m.	30.75	29.75	30.50	29.50	28.25	32.00	30.00
1:00 a.m.	31.00	30.00	31.00	30.00	29.75	32.50	30.50
2:00 a.m.	32.00	30.75	31.75	30.25	29.75	33.00	31.00
3:00 a.m.	33.00	31.25	32.00	31.00	30.00	33.50	31.50
4:00 a.m.	34.75	32.00	32.75	31.75	30.50	34.00	32.25
5:00 a.m.	35.75	33.75	33.00	32.00	32.00	34.50	33.50
6:00 a.m.	36.00	35.00	34.75	32.00	33.00	34.00	34.50
7:00 a.m.	35.75	35.50	34.25	31.25	33.00	33.75	34.50
8:00 a.m.	35.00	35.25	34.75	30.75	33.25	33.00	34.75
9:00 a.m.	35.00	35.00	35.00	30.50	34.00	32.50	34.25
10:00 a.m.	34.25	34.75	34.00	30.25	34.75	32.25	34.00
11:00 a.m.	33.75	33.75	35.00	30.00	35.25	32.00	33.75
12:00 p.m.	33.00	33.00	34.50	30.00	35.00	32.00	33.75
1:00 p.m.	32.25	32.50	34.00	30.00	34.25	31.75	33.50
2:00 p.m.	31.75	32.00	33.50	30.00	34.25	31.75	33.50
3:00 p.m.	31.25	31.75	33.25	30.00	34.25	31.50	33.25
4:00 p.m.	30.75	31.50	33.00	30.00	34.00	31.25	33.00
5:00 p.m.	30.25	31.00	32.50	29.75	34.00	31.00	32.50
6:00 p.m.	30.00	30.50	32.00	29.50	33.50	31.00	32.50
7:00 p.m.	29.50	30.25	31.25	29.00	33.00	30.50	32.00
8:00 p.m.	29.25	30.00	30.50	28.50	32.00	29.75	31.75
9:00 p.m.	29.00	30.00	29.75	28.00	32.00	29.75	31.75
10:00 p.m.	29.00	30.00	29.50	28.00	31.50	29.75	31.75
11:00 p.m.	29.25	30.00	29.75	28.00	31.50	29.75	31.75

Hourly Water Levels
Blanton Tanks
01/22/2005 - 01/28/2005

	Sat. 1/22/05	Sun. 1/23/05	Mon. 1/24/05	Tues. 1/25/05	Wed. 1/26/05	Thurs. 1/27/05	Fri. 1/28/05
12:00 a.m.	31.75	21.25	29.50	24.75	19.50	18.00	18.25
1:00 a.m.	32.00	21.50	30.50	25.00	20.00	18.50	18.50
2:00 a.m.	32.00	22.00	31.75	25.00	20.50	19.00	19.00
3:00 a.m.	32.25	22.25	33.00	25.50	21.00	19.75	19.50
4:00 a.m.	32.50	22.75	34.00	25.75	21.25	20.25	20.25
5:00 a.m.	33.00	23.25	35.00	26.00	21.50	20.75	20.50
6:00 a.m.	33.00	24.50	35.00	26.00	21.25	20.75	20.25
7:00 a.m.	33.00	25.25	34.75	25.50	20.25	20.00	20.00
8:00 a.m.	32.25	26.00	33.25	25.00	20.00	19.75	19.50
9:00 a.m.	31.00	26.25	32.25	24.00	19.50	19.75	19.25
10:00 a.m.	30.00	26.25	32.00	23.75	19.25	19.50	19.00
11:00 a.m.	29.00	26.00	31.00	23.25	19.00	19.50	19.00
12:00 p.m.	28.00	25.50	30.50	23.00	18.75	19.50	18.75
1:00 p.m.	27.00	25.50	30.00	22.75	18.75	19.50	18.50
2:00 p.m.	26.00	25.50	29.50	22.75	18.75	19.50	18.50
3:00 p.m.	25.00	25.50	29.00	22.50	19.00	19.50	18.50
4:00 p.m.	24.50	26.00	28.75	22.25	19.00	19.50	18.50
5:00 p.m.	24.00	26.25	28.25	22.00	19.00	19.80	18.25
6:00 p.m.	23.25	26.50	27.75	21.75	19.00	19.00	18.00
7:00 p.m.	22.50	26.50	27.00	21.00	18.50	18.75	17.50
8:00 p.m.	22.00	26.75	26.00	20.50	18.25	18.25	17.25
9:00 p.m.	21.50	27.25	25.25	20.00	18.00	18.00	17.00
10:00 p.m.	21.25	27.50	25.00	19.75	17.75	17.75	17.00
11:00 p.m.	21.25	28.50	24.75	19.50	17.75	17.75	17.00

Hourly Water Levels
Blanton Tanks
01/29/2005 - 2/4/2005

	Sat. 1/29/05	Sun. 1/30/05	Mon. 1/31/05	Tues. 2/1/05	Wed. 2/2/05	Thurs 2/3/05	Fri. 2/4/05
12:00 a.m.	17.50	17.25	18.00	21.00	24.25	30.00	31.00
1:00 a.m.	18.00	17.50	18.50	21.25	25.00	31.00	31.50
2:00 a.m.	18.50	18.00	19.50	22.00	25.75	32.00	32.00
3:00 a.m.	19.00	18.75	20.25	23.00	26.75	32.75	32.25
4:00 a.m.	19.50	19.50	21.00	23.75	27.75	33.50	32.75
5:00 a.m.	20.25	20.00	22.00	24.50	28.25	34.25	33.00
6:00 a.m.	21.00	21.00	22.25	25.00	28.50	34.25	32.25
7:00 a.m.	21.25	21.25	22.00	24.75	28.25	34.00	31.00
8:00 a.m.	21.00	21.50	21.50	24.58	28.00	33.50	30.75
9:00 a.m.	20.50	21.25	21.50	24.50	28.00	33.50	30.25
10:00 a.m.	20.00	21.00	21.50	24.50	28.00	33.50	30.00
11:00 a.m.	19.25	20.50	21.50	24.50	28.25	33.50	29.50
12:00 p.m.	19.00	20.00	21.50	24.50	28.50	33.50	29.25
1:00 p.m.	18.50	19.75	21.50	24.50	28.75	33.50	29.00
2:00 p.m.	18.00	19.25	21.50	24.50	29.00	33.50	28.75
3:00 p.m.	17.75	19.00	21.50	24.50	29.25	33.75	28.50
4:00 p.m.	17.50	19.00	21.50	24.75	29.50	33.75	28.25
5:00 p.m.	17.25	18.75	21.50	24.75	29.75	33.50	28.00
6:00 p.m.	17.00	18.25	21.50	24.75	29.75	33.00	27.25
7:00 p.m.	17.00	18.00	21.25	24.50	29.75	32.50	27.00
8:00 p.m.	16.75	17.75	21.00	24.25	29.50	32.00	26.75
9:00 p.m.	16.75	17.50	19.75	24.00	29.50	31.50	26.50
10:00 p.m.	16.75	17.50	20.75	24.00	29.50	31.00	26.25
11:00 p.m.	16.75	17.75	21.00	24.00	29.50	31.00	26.25

Hourly Water Levels
Blanton Tanks
2/5/2005 - 2/11/2005

	Sat. 2/5/05	Sun. 2/6/05	Mon. 2/7/05	Tues. 2/8/05	Wed. 2/9/05	Thurs. 2/10/05	Fri. 2/11/05
12:00 a.m.	26.25	0.00	3.50	21.00	34.75	32.00	30.25
1:00 a.m.	26.50	0.00	4.25	22.25	35.25	32.75	30.75
2:00 a.m.	26.75	0.00	5.25	24.00	36.00	34.00	32.00
3:00 a.m.	27.25	0.00	6.50	25.75	36.25	35.50	33.75
4:00 a.m.	28.00	0.00	7.00	27.00	36.50	36.50	35.00
5:00 a.m.	29.00	0.00	8.00	28.50	36.25	36.25	36.00
6:00 a.m.	30.00	0.00	9.25	29.25	35.25	35.00	36.00
7:00 a.m.	30.25	0.00	9.50	29.50	34.50	34.50	35.50
8:00 a.m.	30.50	0.00	9.80	30.00	34.00	34.00	34.75
9:00 a.m.	30.00	0.00	10.20	30.75	34.00	33.25	34.25
10:00 a.m.	29.50	0.00	10.80	31.50	33.50	33.00	34.00
11:00 a.m.	28.25	0.00	11.50	32.50	33.50	33.00	33.50
12:00 p.m.	27.25	0.00	12.50	33.50	33.50	32.75	33.25
1:00 p.m.	26.25	0.00	13.25	34.00	33.25	32.50	33.00
2:00 p.m.	25.75	0.00	14.00	35.00	33.00	32.25	33.00
3:00 p.m.	25.00	0.00	15.00	35.75	33.00	32.00	32.75
4:00 p.m.	24.50	0.00	15.75	36.00	33.00	32.00	32.50
5:00 p.m.	23.75	0.00	16.50	35.75	32.75	31.75	32.00
6:00 p.m.	23.00	1.00	17.00	35.25	32.25	31.25	31.75
7:00 p.m.	22.50	1.25	17.25	35.00	32.00	30.75	31.50
8:00 p.m.	22.00	1.75	17.75	34.50	31.50	30.25	31.00
9:00 p.m.	21.50	2.25	18.00	34.00	31.25	30.00	31.00
10:00 p.m.	10.50	2.75	19.00	34.00	31.25	29.75	31.00
11:00 p.m.	0.00	3.25	20.00	34.25	31.50	30.00	31.25

Hourly Water Levels
Blanton Tanks
2/12/2005 - 2/18/2005

	Sat. 2/12/05	Sun. 2/13/05	Mon. 2/14/05	Tues 2/15/05	Wed. 2/16/05	Thurs. 2/17/05	Fri. 2/18/05
12:00 a.m.	31.75	27.75	29.00	27.75	26.00	29.25	30.75
1:00 a.m.	32.25	28.25	29.50	28.00	26.25	29.75	31.25
2:00 a.m.	32.75	29.00	30.00	28.75	27.00	31.00	32.00
3:00 a.m.	33.75	29.75	30.25	29.25	27.50	32.75	33.25
4:00 a.m.	35.00	30.25	31.00	29.75	28.25	34.00	34.75
5:00 a.m.	36.25	31.25	31.25	30.25	29.75	35.00	36.00
6:00 a.m.	36.00	33.00	31.00	30.00	30.25	35.25	36.00
7:00 a.m.	35.25	33.75	30.00	29.25	30.50	35.25	35.25
8:00 a.m.	34.50	34.25	30.00	28.75	31.00	34.75	35.00
9:00 a.m.	33.50	34.50	29.75	28.50	31.75	34.50	34.25
10:00 a.m.	32.50	34.25	29.50	28.50	31.75	34.00	34.00
11:00 a.m.	31.50	33.50	29.25	28.25	31.50	34.00	33.75
12:00 p.m.	30.75	33.00	29.00	28.00	31.25	33.75	33.25
1:00 p.m.	30.25	32.25	29.00	28.00	31.25	33.50	33.00
2:00 p.m.	29.75	31.75	29.00	28.00	31.25	33.25	33.00
3:00 p.m.	29.25	31.25	29.00	27.75	31.00	33.00	32.75
4:00 p.m.	28.75	31.00	28.75	27.75	31.00	33.00	32.25
5:00 p.m.	28.25	30.25	28.75	27.50	30.50	32.75	31.75
6:00 p.m.	28.00	30.00	28.25	27.25	30.25	32.00	31.25
7:00 p.m.	27.75	29.25	28.00	26.75	29.75	31.75	30.75
8:00 p.m.	27.25	28.75	27.50	26.00	29.00	31.00	30.50
9:00 p.m.	27.25	28.50	27.25	25.75	28.75	30.75	30.25
10:00 p.m.	27.25	28.50	27.00	25.50	28.75	30.50	30.25
11:00 p.m.	27.25	28.75	27.00	25.50	28.75	30.50	30.50

Hourly Water Levels
Blanton Tanks
2/19/2005 - 2/25/2005

	Sat. 2/19/05	Sun. 2/20/05	Mon. 2/21/05	Tues. 2/22/05	Wed. 2/23/05	Thurs. 2/24/05	Fri. 2/25/05
12:00 a.m.	31.00	25.50	24.25	28.50	31.75	33.50	34.00
1:00 a.m.	31.75	25.75	25.00	29.00	32.00	34.00	34.50
2:00 a.m.	33.00	25.25	25.50	30.00	33.00	34.75	35.25
3:00 a.m.	34.75	23.75	26.00	30.50	33.75	35.00	36.00
4:00 a.m.	36.00	27.25	27.50	31.50	34.25	35.50	35.50
5:00 a.m.	36.00	28.00	28.75	32.00	35.00	35.25	35.00
6:00 a.m.	35.25	28.75	29.75	32.00	34.75	34.75	34.25
7:00 a.m.	34.75	28.75	30.50	31.25	34.00	34.00	33.75
8:00 a.m.	33.50	28.50	31.00	31.00	33.75	34.00	32.50
9:00 a.m.	32.25	28.00	31.50	31.00	33.75	34.00	32.00
10:00 a.m.	31.25	27.25	31.25	31.00	33.75	34.00	31.75
11:00 a.m.	30.25	26.75	30.50	31.00	33.75	34.00	31.75
12:00 p.m.	29.50	26.00	30.00	31.25	33.75	34.00	31.75
1:00 p.m.	29.00	25.50	29.75	31.25	33.75	34.00	31.75
2:00 p.m.	28.50	25.25	29.50	31.50	34.00	34.00	31.75
3:00 p.m.	27.75	25.00	29.25	31.75	34.00	34.00	31.75
4:00 p.m.	27.25	24.75	29.25	31.75	34.00	33.75	31.75
5:00 p.m.	26.75	24.50	29.00	31.75	33.75	33.75	31.75
6:00 p.m.	26.25	24.00	28.75	31.50	33.50	33.50	31.50
7:00 p.m.	26.00	23.75	28.50	31.00	33.25	33.00	31.25
8:00 p.m.	25.50	23.50	28.00	30.75	33.00	33.00	31.25
9:00 p.m.	25.25	23.50	28.00	30.75	32.75	33.00	31.50
10:00 p.m.	25.00	23.50	28.00	30.75	32.75	33.00	31.50
11:00 p.m.	25.25	23.75	28.00	31.25	33.00	33.25	31.75

Hourly Water Levels
Blanton Tanks
2/26/2005 - 2/28/2005

	Sat. 2/26/05	Sun. 2/27/05	Mon. 2/28/05
12:00 a.m.	32.25	31.00	29.75
1:00 a.m.	32.75	31.25	30.25
2:00 a.m.	33.25	32.00	30.75
3:00 a.m.	34.00	32.50	31.00
4:00 a.m.	35.25	33.00	31.75
5:00 a.m.	35.75	33.75	32.25
6:00 a.m.	35.25	34.00	32.50
7:00 a.m.	34.50	34.25	32.25
8:00 a.m.	33.75	34.00	32.50
9:00 a.m.	32.75	33.50	32.50
10:00 a.m.	32.25	33.00	32.50
11:00 a.m.	32.00	32.25	32.25
12:00 p.m.	31.50	32.00	32.00
1:00 p.m.	31.50	31.75	32.00
2:00 p.m.	31.50	31.25	32.00
3:00 p.m.	31.25	31.00	31.75
4:00 p.m.	31.00	31.00	31.75
5:00 p.m.	30.75	30.50	31.50
6:00 p.m.	30.50	30.25	31.00
7:00 p.m.	30.25	30.00	30.50
8:00 p.m.	30.25	29.50	30.00
9:00 p.m.	30.25	29.25	30.00
10:00 p.m.	30.25	29.25	29.75
11:00 p.m.	30.50	29.50	29.75