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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)

PUBLIC MEETING

- - - - -

IN RE:

ALCOSAN DRAFT WET  
WEATHER PLAN  
PRESENTATION AND  
PUBLIC COMMENTS

- - - - -

Sheraton Station Square Hotel  
300 West Station Square Drive  
Pittsburgh, PA 15219  
Wednesday; October 17, 2012;  
10:00 a.m.

- - - - -

PRESENT: Nancy Barylak, Manager of Public  
Relations of ALCOSAN and Moderator  
David W. Borneman, P.E., Director of  
Engineering and Construction, ALCOSAN

- - - - -

TRANSCRIPT OF PROCEEDINGS

- - - - -

Reported by:

Ronda J. Weinell  
Registered Professional  
Reporter

- - - - -

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AGENCY

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P R O C E E D I N G S

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(At 10:00 a.m., the public comments session commenced. No comments were made until 10:55 a.m.)

6

10: 55: 02

7

MR. McCLELLAND: I'm Dick

10: 55: 04

8

McClelland, a 30-year homeowner in Ross

10: 55: 10

9

Township. My address is 220 Tombey Drive,

10: 55: 13

10

Pittsburgh, PA 15237.

10: 55: 25

11

As a way of background, I have a

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12

bachelor's degree in civil engineering and a

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master's degree in engineering administration.

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Both are from Case Institute of Technology. I

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15

have many substantial gas utility management

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16

experience from which I retired.

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17

I've also put on the web,

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18

[www.alcosancost.com](http://www.alcosancost.com). That's alcosancost all

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19

stuck together. My comments today can be

10: 55: 57

20

viewed and even downloaded from that site.

10: 56: 02

21

Thank you for the opportunity to

10: 56: 03

22

briefly comment on ALCOSAN's \$2 billion Wet

10: 56: 10

23

Weather Plan. It's 1200 plus pages are a

10: 56: 13

24

comprehensive and impressive document.

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25

Obviously, a lot of work went into it.

1

RICHARD McCLELLAND

10: 56: 21

2

However, I think there is a significant danger

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3

that it will cost more than \$2.8 billion when

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4

the construction dust settles, but I'll get

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5

into that later.

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6

In my written comments color

10: 56: 35

7

graphics are included that make them more

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understandable. To make life easier, they are

10: 56: 40

9

in the hard copy and on the CD that I've

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10

submitted.

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11

To those of you in the audience, who

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12

are minimal at the moment, I have a few copies

10: 56: 54

13

you can look at, and I'll be around to answer

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14

any questions.

10: 57: 04

15

Probably more usefully, I have put

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16

these remarks with full color graphics on the

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17

web at [alcosancost.com](http://alcosancost.com). Simply Google

10: 57: 16

18

[alcosancost](http://alcosancost.com) all stuck together. The site will

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be your first hit. Then go to its main page

10: 57: 20

20

and look at the top for the red arrow with the

10: 57: 23

21

yellow type.

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22

Clicking will enable you to view and

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23

even print these documents as well as even

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24

supporting materials like the reading list

10: 57: 33

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documents in Figure 11.

1

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10: 57: 38

2

As a start it must be useful to

10: 57: 41

3

those of you who are new to get a bit of an

10: 57: 45

4

understanding of how we got here.

10: 57: 48

5

Figure 1 shows a typical ALCOSAN

10: 57: 50

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home and residential user. In this case I've

10: 57: 53

7

shown the typical 30-year residence. It's

10: 57: 56

8

two-story with 1700 square feet of living area.

10: 58: 00

9

As an average customer it puts up to 52,000

10: 58: 05

10

gallons a year into the sewer. That's tough to

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11

visualize. However, imagine its living area

10: 58: 13

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filled with four feet of water. That's 52,000

10: 58: 18

13

gallons worth.

10: 58: 20

14

As shown, all that water that's

10: 58: 21

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going into the sewers is supplied through a

10: 58: 23

16

water meter. If, like me, you live in the

10: 58: 27

17

North Hills, your water company is West View

10: 58: 32

18

Water. They're an efficient, competent,

10: 58: 34

19

low-cost supplier. They pump your water from

10: 58: 38

20

the river, filter it, chlorinate it, pump it

10: 58: 43

21

through pipes they own, and also own and read

10: 58: 45

22

the water meter. Those 52,000 gallons cost me

10: 58: 49

23

\$295 a year.

10: 58: 53

24

For the average ALCOSAN customer

10: 58: 56

25

shown in Figure 1, this sewer service costs

1 RICHARD McCLELLAND

10: 59: 04 2 \$440 a year. An average of \$180 a year of this  
10: 59: 11 3 goes to your local municipality or sewer  
10: 59: 13 4 authority. Some municipalities take more than  
10: 59: 17 5 \$300 a year.

10: 59: 19 6 In any event, ALCOSAN gets \$260 of  
10: 59: 23 7 your sewer bill, and all their customers pay  
10: 59: 28 8 the same rate for a thousand gallons of water  
10: 59: 32 9 use.

10: 59: 32 10 The bottom line is that the water  
10: 59: 34 11 which costs you \$295 to buy will cost you \$440  
10: 59: 41 12 to throw away back into the river from which it  
10: 59: 44 13 came.

10: 59: 47 14 As shown on the bottom left, by 2027  
10: 59: 52 15 that throw-away sewer cost will be \$1,340 a  
10: 59: 58 16 year. In other words, what cost you \$295 to  
11: 00: 02 17 buy today will cost you almost five times as  
11: 00: 05 18 much to throw away.

11: 00: 07 19 As shown, \$600 or almost 50 percent  
11: 00: 13 20 of that \$1,340 a year are the Wet Weather Plan  
11: 00: 17 21 costs we're discussing today.

11: 00: 21 22 Before we leave Figure 1, look at  
11: 00: 23 23 the right-hand side. This shows the home's  
11: 00: 26 24 roof. Rain will make about 19,000 gallons a  
11: 00: 30 25 year into your downspouts. That's 40 percent

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11:00:32 2 of your sewer flow.

11:00:35 3 Indeed, the annual run-off from your  
11:00:38 4 roof on a 70-foot driveway would about equal  
11:00:41 5 the sewer flow from your home. Moreover, just  
11:00:46 6 the rain on seven parking spaces at a local  
11:00:50 7 store or mall will equal a home's sewer  
11:00:58 8 discharge.

11:00:58 9 Furthermore, the rain flows occur in  
11:00:59 10 only a few hours, rather than spread over a  
11:01:02 11 month like your sewer use. If rain flows get  
11:01:06 12 into a sewer carrying your home's own sewer  
11:01:12 13 discharge, that's a serious change.

11:01:19 14 Figure 2 shows a typical ALCOSAN  
11:01:22 15 home and its sewer connections. The upper half  
11:01:25 16 shows potential sewer inputs. They are a  
11:01:29 17 typical ALCOSAN home, its roof, and nearby  
11:01:35 18 roads and parking lots. The arrows show how  
11:01:40 19 these flows are connected to the region's sewer  
11:01:44 20 types and the resulting issues, if any.

11:01:47 21 The bottom half of the figure shows  
11:01:49 22 our area's two sewer types. The left half is a  
11:01:54 23 typical county suburb. As shown, suburbs  
11:02:06 24 typically have a separate sanitary sewer and  
11:02:09 25 also a storm sewer for rainwater. There are

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11:02:13 2 about 145,000 households using this type of  
11:02:19 3 separate system in ALCOSAN's service territory.

11:02:25 4 Most were built after the 1940s as  
11:02:29 5 suburban population boomed and environmental  
11:02:33 6 sewer rates started to tighten.

11:02:36 7 Moreover, just the rain from seven  
11:02:39 8 parking places at your local store or shopping  
11:02:45 9 mall will equal a home's sewer use. These  
11:02:48 10 flows go into a separate storm sewer.

11:02:52 11 The bottom half, the bottom  
11:02:56 12 right-hand half side of Figure 2 shows an older  
11:02:59 13 combined sewer system. Here both the sewage  
11:03:04 14 from your home and the rain from street curbs  
11:03:07 15 go into a single pipe. This applies to about  
11:03:11 16 155,000 households in ALCOSAN's service area.

11:03:17 17 Up to the 1900s these old pipes ran  
11:03:21 18 directly into the river without treatment. In  
11:03:25 19 the 1950s ALCOSAN was formed due to  
11:03:30 20 environmental pressure. It built tunnels along  
11:03:34 21 the river to pick up sewer flows and transport  
11:03:38 22 them downstream to a new treatment plant. It's  
11:03:42 23 on the north shore of the Ohio River near  
11:03:44 24 Pittsburgh's Brunot Island.

11:03:50 25 Diverters called regulators were

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11:03:52 2 then installed in the region's combined river  
11:03:56 3 sewer outlets. A regulator is a fancy version  
11:03:59 4 of a flat, horizontal plate in the sewer.  
11:04:02 5 Flows underneath the plate go to ALCOSAN for  
11:04:07 6 treatment.

11:04:08 7 During rainstorms known as wet  
11:04:10 8 weather, the excess flow of mixed sewage and  
11:04:15 9 rainwater are discharged into the rivers. This  
11:04:18 10 might be from a few to over 50 locations,  
11:04:22 11 depending on the rainfall event.

11:04:26 12 Depending on the specific combined  
11:04:29 13 sewer, the total annual overflow duration could  
11:04:32 14 range from a half a day to over ten days.

11:04:36 15 Obviously, in combined sewer areas,  
11:04:40 16 a major problem are roofs, parking lots, and  
11:04:42 17 streets feeding into the sewers. Remember, an  
11:04:47 18 area equalling only seven parking spaces  
11:04:51 19 produces as much sewer input as a home.

11:05:03 20 Figure 3 shows the seven ALCOSAN  
11:05:06 21 planning basins. These include Pittsburgh,  
11:05:10 22 known as Main Rivers, in the center. The six  
11:05:16 23 surrounding basins border rivers like slices of  
11:05:19 24 a pie. They are named for the key river or  
11:05:22 25 creek in them.

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If you want to know which basin

11:05:27

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you're in, you can go to Figure 3 or look up

11:05:32

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the plans, Figure 1-7 on Page 1-10.

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Table 1 shows the ALCOSAN planning

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6

basins and highlights their profiles. It's

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pulled together from key information scattered

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throughout the Plan.

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The data shows that 23 percent of

11:06:09

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the households are in the main river's

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11

Pittsburgh basin. As could be expected, houses

11:06:13

12

in the Main Rivers are 90 percent on older

11:06:18

13

combined sewers, the main source of river

11:06:22

14

pollution.

11:06:22

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The other six basins individually

11:06:26

16

range from 7 to 15 percent of the ALCOSAN

11:06:30

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households. Within this ring of six basins,

11:06:35

18

two-thirds of the households are on far less

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polluting separate sewers.

11:06:42

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The next columns show combined and

11:06:45

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separate sewer flows to the rivers. This is

11:06:48

22

the cause of the Wet Weather Treatment Plan

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that we're talking about today.

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Combined sewer overflows total over

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8,300 million gallons a year. In comparison,

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11:07:05 2 overflows from separate sewers are only 672  
11:07:10 3 million gallons a year. Thus, combined sewers  
11:07:14 4 represent an astonishing 93 percent of the  
11:07:18 5 problem.

11:07:20 6 Main Rivers, Pittsburgh, represents  
11:07:26 7 nearly 30 percent of the problem, but the Upper  
11:07:33 8 Allegheny Basin is not far behind at 23  
11:07:33 9 percent.

11:07:33 10 Essentially, ALCOSAN proposes in  
11:07:39 11 2027 that all of today's homeowners will have a  
11:07:42 12 sewer bill averaging \$1,340 a year. As shown  
11:07:46 13 on Table 1, all would pay the same for equal  
11:07:52 14 water meter use. This is how things are done  
11:07:55 15 now.

11:07:58 16 Alternately, you could imagine a  
11:08:01 17 concept where the new Wet Weather costs are  
11:08:05 18 allocated back to the basins based on their  
11:08:07 19 sewer overflows. This, after all, is what  
11:08:13 20 caused a problem in the first place and its  
11:08:15 21 total cost.

11:08:16 22 Table 1 shows the resulting cost to  
11:08:19 23 homeowners if allocated by basin overflows.  
11:08:23 24 Then the annual homeowner cost would range from  
11:08:27 25 \$842 a year in Turtle Creek to over \$1,850 a

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11:08:34 2 year in Chartiers. Thus, in the equal  
11:08:39 3 homeowner ALCOSAN billing lottery, some basins  
11:08:43 4 win and some loss. The winners are Chartiers,  
11:08:50 5 Main Rivers, Upper Allegheny, and Upper Mon  
11:08:56 6 Basins, all shown in green. Each sees their  
11:08:59 7 basin's total household costs go down by some  
11:09:03 8 ten million annually per basin.

11:09:08 9 Under equal household cost billing,  
11:09:10 10 the losers subsidizing other basins are Lower  
11:09:23 11 Ohio/Girty's, Saw Mill River Run, and Turtle  
11:09:27 12 Creek. Their total household subsidization of  
11:09:33 13 other basins ranges from 10 to 18 million per  
11:09:36 14 year.

11:09:38 15 The third-party review of ALCOSAN's  
11:09:41 16 Regional Long Term Wet Weather Control Concept  
11:09:47 17 Plan is a remarkable 2002 report. It is an  
11:09:52 18 innovative and thoughtful report where  
11:09:55 19 Section 9 addressed cost issues like uniform  
11:10:00 20 household cost versus inter-basin overflow  
11:10:08 21 allocation billing. While no longer available  
11:10:13 22 on the ALCOSAN site, it remains available at  
11:10:16 23 [alcosancost.com](http://alcosancost.com).

11:10:21 24 However, and as ALCOSAN indicates in  
11:10:24 25 the Plan, essentially nothing has been done to

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11: 10: 28 2 consider anything other than uniform billing  
11: 10: 31 3 throughout the basins using homeowner water  
11: 10: 36 4 meters.

11: 10: 38 5 Alcosancost has looked at a couple  
11: 10: 39 6 of options. For example, a \$250 a year vehicle  
11: 10: 45 7 tax would bring in about 40 percent of  
11: 10: 49 8 ALCOSAN's 2027 consumer revenues.

11: 10: 55 9 This would essentially start to  
11: 10: 56 10 address the runoff to combined sewers from  
11: 10: 59 11 parking lots and streets. It might also take  
11: 11: 03 12 some pressure off seniors, who are unlikely to  
11: 11: 07 13 own multiple cars per household.

11: 11: 13 14 Alternatively, an impervious area  
11: 11: 16 15 combined sewer tax of \$600 per year per  
11: 11: 22 16 thousand square feet on commercial and  
11: 11: 24 17 industrial sites would bring in the same amount  
11: 11: 30 18 per gallon that residential owners are paying  
11: 11: 33 19 for their own sewer use.

11: 11: 38 20 Another option would be to say to  
11: 11: 40 21 the state or federal government, quote, "You  
11: 11: 46 22 have X miles of roads whose runoff contributes  
11: 11: 51 23 Y gallons of combined sewer overflows. Our  
11: 11: 56 24 homeowners will be paying Z million dollars a  
11: 12: 00 25 year to fix their share. Send ALCOSAN a check

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11: 12: 03 2 of D dollars each year for your share."

11: 12: 08 3 However, given the current state of  
11: 12: 11 4 play and the lack of interest by any of the  
11: 12: 14 5 other parties, it is unlikely that any  
11: 12: 18 6 innovative revenue approaches will be  
11: 12: 21 7 considered unless one or more key  
11: 12: 23 8 municipalities aggressively seize this issue.

11: 12: 29 9 Lastly, the far right-hand column of  
11: 12: 32 10 Table 1 shows the related ALCOSAN and municipal  
11: 12: 36 11 Wet Weather Plan capital costs. These total  
11: 12: 42 12 1.981 billion, essentially, for all intents and  
11: 12: 47 13 purposes, two billion dollars in 2012 dollars.

11: 12: 52 14 Inflation and escalation will bring  
11: 12: 56 15 this to at least 2.8 billion by 2027. It's  
11: 13: 01 16 tough to grab all of these kinds of costs.  
11: 13: 04 17 Here are a couple ways to put the billions of  
11: 13: 07 18 dollars into perspective.

11: 13: 09 19 That 2.8 billion is equivalent to an  
11: 13: 13 20 eight and one half thousand dollar investment  
11: 13: 15 21 for you that you must pay off in 20 years.  
11: 13: 19 22 Alternatively, the cost and complexity is  
11: 13: 23 23 equivalent to building a new Hoover Dam and  
11: 13: 26 24 related canal to California.

11: 13: 30 25 However, Hoover was the largest and

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11: 13: 33 2 most complex construction of the 1930s decade,  
11: 13: 39 3 except Hoover Dam was paid for by 30 million  
11: 13: 45 4 households. It had design, planning, and  
11: 13: 49 5 construction legends during it.

11: 13: 52 6 The Pittsburgh Hoover Dam is going  
11: 13: 54 7 to be paid for by only 330,000 families,  
11: 13: 58 8 including yours. The previous table provided a  
11: 14: 04 9 sneak preview of the \$1,340 annual homeowner  
11: 14: 12 10 sewer bill in 2027. Table 2 surfaces a few  
11: 14: 17 11 initial issues to that proposed bill.

11: 14: 20 12 The upper bullet section of Table 2  
11: 14: 22 13 has to do with ALCOSAN's normal non Wet Weather  
11: 14: 28 14 cost. It is expected to increase from \$260 a  
11: 14: 32 15 year now to \$410 a year by 2027.

11: 14: 37 16 This is principally due to normal  
11: 14: 41 17 ALCOSAN operation and maintenance expenses that  
11: 14: 44 18 are increasing at four percent a year. Indeed,  
11: 14: 48 19 during the previous ten years to 2009, these  
11: 14: 51 20 costs actually grew at a 4.7 percent rate.

11: 14: 56 21 In contrast, future customer incomes  
11: 14: 59 22 are projected to grow at two and a half percent  
11: 15: 03 23 a year. As shown by the upper red action  
11: 15: 07 24 arrow, ALCOSAN needs to better control its O&M  
11: 15: 10 25 expense growth.

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11: 15: 13 2 The lower bullet has to do with how  
11: 15: 16 3 municipal and ALCOSAN Wet Weather Plan costs  
11: 15: 20 4 yield different homeowner sewer bill markups.

11: 15: 26 5 There are \$530 million of projected  
11: 15: 31 6 municipality capital costs in the Wet Weather  
11: 15: 34 7 Plan. Yet the Wet Weather Plan outlays by  
11: 15: 38 8 municipalities are estimated to cost  
11: 15: 40 9 residential households a new \$210 a year in  
11: 15: 45 10 2027.

11: 15: 47 11 However, this projected consumer  
11: 15: 50 12 bill is almost 50 percent higher when a  
11: 15: 53 13 municipality spends a dollar on Wet Weather  
11: 15: 58 14 Plan construction compared to when ALCOSAN  
11: 16: 00 15 spends the same dollar on its Wet Weather Plan  
11: 16: 04 16 construction.

11: 16: 07 17 Why the difference? Is it municipal  
11: 16: 11 18 operating costs, or is it inefficiency? There  
11: 16: 17 19 is essentially no cost details for these  
11: 16: 21 20 municipal outlays in the Plan.

11: 16: 23 21 Indeed, they are not even labeled by  
11: 16: 26 22 municipality, nor is there any indication of  
11: 16: 29 23 the cost impacts on consumers by municipality.

11: 16: 34 24 As the red action arrow indicates,  
11: 16: 38 25 ALCOSAN should promptly tabulate and release

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11: 16: 42 2 the preliminary projected municipal cost  
11: 16: 46 3 portion of the Plan. For each municipality  
11: 16: 49 4 this should include project summaries,  
11: 16: 53 5 estimated capital costs, and projected annual  
11: 16: 56 6 cost to homeowners.

11: 16: 59 7 There will be more on capital costs  
11: 17: 02 8 and reliability in a few minutes, but first a  
11: 17: 05 9 few comments on estimating the affordability of  
11: 17: 08 10 these costs to consumers.

11: 17: 11 11 Median Household Income or MHI for  
11: 17: 14 12 short is the middle household income. For  
11: 17: 22 13 example, assume you've grabbed 21 people from  
11: 17: 25 14 this audience -- we don't have 21 people -- and  
11: 17: 28 15 line them up in the order of increasing  
11: 17: 31 16 incomes. Then the middle person in the line is  
11: 17: 35 17 the median or middle income.

11: 17: 36 18 This is felt to better represent the  
11: 17: 39 19 typical income than calculating an average  
11: 17: 43 20 which would usually be biased upward by a  
11: 17: 45 21 small number of high end incomes.

11: 17: 49 22 The EPA measures cost impact by  
11: 17: 52 23 dividing the applicable sewer bill by the MHI.  
11: 17: 57 24 The first part of the Plan costed the impact by  
11: 18: 01 25 keeping everything in today's 2012 dollars and

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11: 18: 05 2 then using present MHIs. However, the final  
11: 18: 09 3 part of the Plan projected costs out to 2027  
11: 18: 14 4 and then compared these costs with a projected  
11: 18: 16 5 MHI in 2027.

11: 18: 20 6 To make that projection, the Plan  
11: 18: 21 7 assumes that incomes would grow at 2.5 percent  
11: 18: 26 8 a year based on long-term historic data. In  
11: 18: 32 9 comparison, Figure 3 shows MHI growth for  
11: 18: 36 10 Pennsylvania and for Allegheny County from 1999  
11: 18: 40 11 to 2011.

11: 18: 48 12 The growth rates measured 1.9  
11: 18: 51 13 percent a year for Pennsylvania and 2.1 percent  
11: 18: 54 14 a year for Allegheny County. As a matter of  
11: 18: 58 15 fact, Pennsylvania MHI has been flat for the  
11: 19: 02 16 last three reporting years.

11: 19: 06 17 Considering how the economy is still  
11: 19: 08 18 stalled, I think the Plan could have made a  
11: 19: 11 19 convincing case for using 1.9 or 2.1 percent  
11: 19: 15 20 growth a year in MHI incomes, rather than the  
11: 19: 20 21 2.5 percent growth that the Plan used. The  
11: 19: 26 22 result would have been a projected MHI of 61 to  
11: 19: 29 23 63,000, compared to the same 67,000 used in the  
11: 19: 35 24 Plan to measure sewer bill impacts. This would  
11: 19: 40 25 have raised the resulting cost impact by six to

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11: 19: 43 2 nine percent.

11: 19: 47 3 Thus, the ALCOSAN Plan potentially  
11: 19: 49 4 left cost impact dollars, quote, "on the  
11: 19: 53 5 table," unquote, by using too high a projected  
11: 19: 57 6 MHI.

11: 19: 58 7 Furthermore, as noted on the bottom  
11: 20: 00 8 of Figure 4, Allegheny County has an  
11: 20: 04 9 exceptionally large population of fixed income  
11: 20: 14 10 retirees. 65 and older represents 16.6 percent  
11: 20: 14 11 of the population. This was relegated to one  
11: 20: 18 12 page in Section 6 of the Plan. Even more  
11: 20: 21 13 noteworthy but uncovered is that 31.7 percent  
11: 20: 26 14 of the county's households are on some type of  
11: 20: 29 15 Social Security income.

11: 20: 31 16 These factors make our households  
11: 20: 33 17 particularly sensitive to increased costs like  
11: 20: 37 18 sewer bills. It would have been useful to  
11: 20: 41 19 weave these observations into the final  
11: 20: 42 20 affordability section of the Plan.

11: 20: 47 21 The Wet Weather Plan has very  
11: 20: 49 22 impressive maps showing the cost impact with  
11: 20: 53 23 future sewer cost increases. The EPA requires  
11: 21: 04 24 this impact to be measured by sewer cost as a  
11: 21: 09 25 percent of the Median Household Income or MHI

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11: 21: 12 2 for short.

11: 21: 13 3 Impacts are considered objectionably  
11: 21: 16 4 high when the sewer cost is over two percent.  
11: 21: 20 5 Section 11 of the Plan shows that this would  
11: 21: 22 6 apply to about three-fifths of the households.  
11: 21: 26 7 A four-percent impact would apply to one in  
11: 21: 29 8 every 20 households.

11: 21: 31 9 The Plan also looks at 83  
11: 21: 34 10 municipalities in ALCOSAN's service area.  
11: 21: 38 11 About half are rated as high impact, over two  
11: 21: 41 12 percent, and four municipalities have a sewer  
11: 21: 44 13 cost of over four percent. However, a look at  
11: 21: 48 14 detailed census data reveals much more alarming  
11: 21: 52 15 sewer cost impacts.

11: 21: 54 16 The top of Figure 5 tabulates the  
11: 21: 56 17 household income for Pittsburgh and for  
11: 21: 58 18 suburban owners and renters in ALCOSAN's  
11: 22: 02 19 service area. The red lines are for  
11: 22: 07 20 Pittsburgh, blue lines are for the surrounding  
11: 22: 10 21 suburbs, solid lines are for owners, dashed  
11: 22: 16 22 lines are for renters.

11: 22: 17 23 How is this data developed? Many  
11: 22: 20 24 people don't realize that all of the census  
11: 22: 23 25 data is reported by numbers of people in

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11: 22: 26 2 various categories. Moreover, both Pittsburgh  
11: 22: 29 3 and Allegheny County both report census data.

11: 22: 37 4 Thus, suburban data can be  
11: 22: 39 5 calculated by simply subtracting Pittsburgh  
11: 22: 42 6 numbers from Allegheny County numbers. For  
11: 22: 46 7 example, this yields 130,000 households in  
11: 22: 49 8 Pittsburgh and 390,000 in Allegheny County  
11: 22: 54 9 suburbs.

11: 22: 54 10 Moreover, census tabulations are  
11: 22: 56 11 available for both owners and renters at stated  
11: 23: 01 12 income bands.

11: 23: 03 13 Since ALCOSAN's households are  
11: 23: 07 14 known, the net result is that Pittsburgh plus  
11: 23: 09 15 52.6 percent of Allegheny County's suburbs is  
11: 23: 14 16 an excellent proxy for ALCOSAN's service area  
11: 23: 18 17 households.

11: 23: 19 18 More detailed work yields the  
11: 23: 23 19 resulting household income distribution shown  
11: 23: 26 20 in Figure 5. These curves show the percent of  
11: 23: 31 21 groups that were within \$5,000 income bands.

11: 23: 36 22 Pittsburgh and suburban renter  
11: 23: 38 23 household incomes are the two upper curves on  
11: 23: 41 24 the left. Owners are the lower, flatter  
11: 23: 50 25 curves. Two things are striking.

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11: 23: 52 2 Pittsburgh and suburban renter

11: 23: 55 3 curves look markedly alike, as do owner curves  
11: 23: 58 4 to each other. The difference is that renters  
11: 24: 00 5 have a lot more numbers in households under  
11: 24: 04 6 \$30,000 worth of income. In contrast, the  
11: 24: 08 7 owner curves are much flatter and more spread  
11: 24: 11 8 out at the high end of incomes.

11: 24: 13 9 Given the curves and the  
11: 24: 16 10 percentages, getting an accurate median or  
11: 24: 18 11 middle household income or MHI, for short, is a  
11: 24: 22 12 remarkably trivial exercise.

11: 24: 26 13 The results are tabulated at the top  
11: 24: 29 14 of the chart. This includes the number of  
11: 24: 31 15 households for each group and it's related  
11: 24: 35 16 median Household Income. Pittsburgh owners, as  
11: 24: 38 17 well as suburban owners and renters, are each  
11: 24: 41 18 about equal in size at about 65,000 households  
11: 24: 46 19 each.

11: 24: 47 20 The big contrast is that suburban  
11: 24: 50 21 owners represent twice as many households as  
11: 24: 54 22 each of the other groups. Median incomes for  
11: 24: 57 23 renters are on the 25,000 range but as might be  
11: 25: 01 24 expected, owners have much higher incomes.  
11: 25: 05 25 Owners are in the 50 to \$65,000 a year MHI

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1  
11: 25: 11 2 range.

11: 25: 12 3 Generally, suburban MHIs are about  
11: 25: 17 4 20 percent higher than those of the equivalent  
11: 25: 19 5 Pittsburgh group. Instead of using census  
11: 25: 24 6 tables to roughly approximate the ALCOSAN cost  
11: 25: 27 7 impact, exact census records can be used.

11: 25: 35 8 This powerful tool is a downloadable  
11: 25: 40 9 graphic census database called PUMA, P-U-M-A,  
11: 25: 45 10 short for Public Use Microdata Area. This is a  
11: 25: 52 11 custom set of actual census records for  
11: 25: 56 12 individual households that also include  
11: 25: 59 13 applicable statistical weighting data.

11: 26: 05 14 For example, PUMA household census  
11: 26: 17 15 records for Allegheny County are described by  
11: 26: 17 16 3,600 records with weights ranging from 15 to  
11: 26: 19 17 almost 500 households per record.

11: 26: 23 18 Moreover, unlike census record  
11: 26: 26 19 tables, available companion information can be  
11: 26: 30 20 custom tailored for each record such as own or  
11: 26: 39 21 rent; incomes; number of people living in the  
11: 26: 43 22 household; complete household costs such as  
11: 26: 48 23 rent, mortgage payments, utility bills, and  
11: 26: 52 24 sewer and water; and many other items.

11: 26: 57 25 Because these form a database set,

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11: 27: 04 2 companion calculations can also be performed,  
11: 27: 07 3 For example, sewer bills based on the number of  
11: 27: 10 4 persons in the household. To do this analysis,  
11: 27: 14 5 the \$1,340 annual sewer bill per household in  
11: 27: 23 6 2027 was deescalated back to 2010 dollars by  
11: 27: 28 7 two percent per year and then divided by the  
11: 27: 32 8 average 2.38 persons per household.

11: 27: 36 9 This yields \$402 per year of sewer  
11: 27: 46 10 costs in 2010 per household member.

11: 27: 52 11 Records can be sorted and totaled by  
11: 27: 54 12 such thing as household income bands. Thus,  
11: 28: 00 13 operating on the PUMA databases yields a very  
11: 28: 05 14 powerful tool for actually opening the hood and  
11: 28: 10 15 inspecting how key parts of the car's engine  
11: 28: 13 16 actually work.

11: 28: 17 17 Based on stated MHIs and own-rent  
11: 28: 23 18 database segregation, very specific ALCOSAN  
11: 28: 26 19 costs impacts can be discovered and refined  
11: 28: 29 20 with remarkable accuracy. The results are  
11: 28: 32 21 shown at the bottom of Figure 5.

11: 28: 36 22 Pittsburgh and suburban owners show  
11: 28: 41 23 a sewer cost impact of 2.2 and 1.9 percent of  
11: 28: 47 24 MHI. The impact on renters is even more  
11: 28: 50 25 dramatic. The ALCOSAN plan's cost impact on

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11: 28: 55 2 renters is 5.1 percent in Pittsburgh and an  
11: 29: 02 3 almost equally excessive 4.1 percent in the  
11: 29: 06 4 suburbs.

11: 29: 10 5 Indeed, the household weighted cost  
11: 29: 12 6 impact on all four groups is a very high 3.0  
11: 29: 19 7 percent. These ALCOSAN cost impact appear to  
11: 29: 45 8 be far more concerning than those actually  
11: 29: 48 9 discussed in the Plan.

11: 29: 50 10 A major reason for the increase is a  
11: 29: 55 11 selected 2.0 percent income adjustment.  
11: 30: 00 12 However, the dominant factor appears to be that  
11: 30: 16 13 persons per household at the Median Household  
11: 30: 21 14 Incomes are generally higher than expected from  
11: 30: 24 15 group census averages.

11: 30: 27 16 This increases all of the applicable  
11: 30: 32 17 ALCOSAN sewers costs in the MHI sectors. Thus,  
11: 30: 37 18 a lot could be gained by a discussion in the  
11: 30: 42 19 Plan about the impact of Pittsburgh and  
11: 30: 44 20 suburban owners and renters.

11: 30: 49 21 Figure 6 shows the water use  
11: 30: 52 22 breakdowns and thus sewer billing for the two  
11: 30: 56 23 key suppliers of water within the ALCOSAN  
11: 31: 00 24 system. These are for Pittsburgh Water and  
11: 31: 04 25 Sewer and for West View Water. Residential use

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11: 31: 09 2 is shown in blue, commercial and local uses are  
11: 31: 13 3 in shades of red. What little industrial use  
11: 31: 18 4 left is shown in yellow.

11: 31: 20 5 In making this analysis, some  
11: 31: 24 6 commercial use in Pittsburgh Water was moved to  
11: 31: 28 7 residential. It was obvious from internal  
11: 31: 31 8 numbers that some apartment building master  
11: 31: 35 9 metering in Pittsburgh Water was classified as  
11: 31: 40 10 commercial. Again, the charts report water  
11: 31: 45 11 meter use and thus show sewer bills.

11: 31: 50 12 Residential households have no  
11: 31: 52 13 recourse when their sewer costs go up.  
11: 31: 56 14 However, most commercial users do and will pass  
11: 32: 01 15 their cost increases through to their own  
11: 32: 03 16 customers. One way or another, due to such  
11: 32: 08 17 cost increases, the chicken will ultimately  
11: 32: 12 18 come home to roost on the doorstep of  
11: 32: 15 19 residential users.

11: 32: 20 20 To the area's taxpayers' chagrin,  
11: 32: 26 21 schools and municipalities have become very  
11: 32: 29 22 good at raising taxes to cover costs, including  
11: 32: 31 23 water and sewers. One reason is that they are  
11: 32: 35 24 not hampered by the inconvenience of tax rate  
11: 32: 39 25 increases being subject to voter approval. The

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11: 32: 43 2 i ncreased sewer cost will rapidly appear on  
11: 32: 47 3 residential users' doorstep from these groups.

11: 32: 53 4 Significant healthcare users exist  
11: 32: 56 5 in the system. These organizations will be  
11: 33: 01 6 just as good at marking up sewer bills as they  
11: 33: 04 7 are at marking up aspirin. The residential  
11: 33: 08 8 consumers will wind up paying that tariff in  
11: 33: 12 9 either insurance costs or direct bills.

11: 33: 15 10 Restaurants and the full gamut of  
11: 33: 18 11 commercial establishments will also pass  
11: 33: 20 12 increased sewer costs along to their consumers.  
11: 33: 28 13 It's a fallacy to assume that any commercial  
11: 33: 28 14 enterprise has excess profits laying around to  
11: 33: 32 15 simply absorb these kinds of costs as the EPA  
11: 33: 36 16 might assume.

11: 33: 38 17 Thus, most, if not all, of the  
11: 33: 41 18 increased commercial sewer bill costs will also  
11: 33: 44 19 come out of the residential household's pocket  
11: 33: 48 20 in the end. The only exceptions to local  
11: 33: 56 21 household impacts might be office buildings and  
11: 33: 58 22 hotels.

11: 34: 00 23 However, a Florida and a national  
11: 34: 03 24 EPA composite survey put office building water  
11: 34: 07 25 use at only ten percent of commercial,

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11: 34: 10 2 hospitality at 10 to 15 percent.

11: 34: 15 3 These household pass-through  
11: 34: 18 4 commercial sewer costs are significant. They  
11: 34: 20 5 total another 44 percent of the direct sewer  
11: 34: 24 6 cost to households. In other words, the  
11: 34: 28 7 planned \$1,340 dollars per year in 2027 may  
11: 34: 35 8 actually become something like a \$1,930 cost to  
11: 34: 40 9 residential households.

11: 34: 42 10 As Figure 6 indicates, ALCOSAN can and  
11: 34: 48 11 should make the argument in the Plan that these  
11: 34: 52 12 indirect costs add another potential \$590 a  
11: 34: 58 13 year on residential households and that the  
11: 35: 03 14 \$590 addition is both real and significant.

11: 35: 10 15 Failure to cite this adder also  
11: 35: 14 16 misleads consumers as to what the real cost  
11: 35: 17 17 actually is when the plan's construction is  
11: 35: 19 18 complete.

11: 35: 22 19 An interesting side note is the  
11: 35: 24 20 possible impact on home prices as shown in the  
11: 35: 28 21 bottom of Figure 6. If the Wet Weather Plans  
11: 35: 31 22 increase a homeowner's sewer cost by a thousand  
11: 35: 36 23 dollars, then all of the other things being  
11: 35: 39 24 equal, a smart home buyer would pay \$14,000  
11: 35: 44 25 less for a home inside ALCOSAN's service

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11: 35: 49 2 territory as compared to a similar home outside  
11: 35: 53 3 ALCOSAN's service territory.

11: 36: 05 4 As if all of this wasn't enough, I  
11: 36: 08 5 would like to spend the last few minutes  
11: 36: 10 6 discussing a significant concern that overhangs  
11: 36: 14 7 all of the aforesaid issues: The Plan and its  
11: 36: 21 8 cost to households is based on a projected  
11: 36: 24 9 construction cost of \$1.981 billion today,  
11: 36: 28 10 which will cost \$2.772 billion in 2026 when the  
11: 36: 32 11 construction is complete at the work sites.

11: 36: 37 12 What if this estimated cost is  
11: 36: 39 13 wrong? What if there are substantial cost  
11: 36: 42 14 overruns? Is either likely? How have other  
11: 36: 48 15 projects fared? This is, indeed, the elephant  
11: 36: 51 16 in the room. What could go wrong, and how bad  
11: 36: 55 17 could it get?

11: 36: 57 18 Remember that projected future  
11: 36: 59 19 homeowner costs are the direct result of  
11: 37: 01 20 construction costs. If construction costs go  
11: 37: 04 21 up 40 percent, then the projected \$600 a year  
11: 37: 11 22 of the Wet Weather component increases to \$240  
11: 37: 19 23 a year, and your annual household sewer bill is  
11: 37: 24 24 no longer \$1,340 a year but rather \$1,600 a  
11: 37: 30 25 year.

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11: 37: 33 2 Figure 7 shows how some key projects  
11: 37: 37 3 have fared, two of which are of local interest.  
11: 37: 41 4 The poster child of what can go wrong with an  
11: 37: 46 5 EPA consent decree is Jefferson County,  
11: 37: 50 6 Alabama. When they signed the consent decree,  
11: 37: 52 7 they thought the project cost was 1.2 billion.  
11: 37: 55 8 When the dust settled, their construction cost  
11: 37: 57 9 was 3.3 billion, 175 percent cost overrun.

11: 38: 04 10 Their project implementation was  
11: 38: 06 11 plagued with mismanagement, cronyism, and  
11: 38: 11 12 questionable financial practices. Moreover,  
11: 38: 17 13 their new treatment plant had to be rebuilt,  
11: 38: 21 14 and under-river tunneling costs increased 67  
11: 38: 26 15 percent before being abandoned. Jefferson  
11: 38: 30 16 County is now bankrupt.

11: 38: 32 17 The second is of significant local  
11: 38: 37 18 interest, PAT's North Shore Connector. It is  
11: 38: 40 19 only 1.2 miles long and was initially estimated  
11: 38: 44 20 at \$350 million. The final cost will be \$550  
11: 38: 52 21 million, even after deleting parts of the  
11: 38: 56 22 project. This is an 80-percent overrun.

11: 39: 01 23 More significantly is a significant  
11: 39: 12 24 warning to ALCOSAN. 30 percent of ALCOSAN's  
11: 39: 17 25 projected construction cost is for deep

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11: 39: 22 2 conveyance tunnels along Pittsburgh rivers. A  
11: 39: 24 3 similar overrun would increase ALCOSAN's  
11: 39: 27 4 projected 2026 construction costs by almost  
11: 39: 32 5 \$700 million. Not a happy prospect.

11: 39: 38 6 The third project is the infamous  
11: 39: 41 7 Harrisburg incinerator. Estimated to cost \$104  
11: 39: 52 8 million, it failed new environmental  
11: 39: 54 9 regulations. After a revamp and expansion  
11: 39: 59 10 project projected at \$80 million and even  
11: 40: 05 11 switching contractors, Harrisburg is now \$320  
11: 40: 11 12 million in debt, of which an astonishing \$50  
11: 40: 17 13 million is for financing fees.

11: 40: 23 14 The city now faces bankruptcy. The  
11: 40: 23 15 icing on the cake is that one of the Harrisburg  
11: 40: 27 16 Authority board members is publicly pleading  
11: 40: 30 17 ignorance in knowing what was going on. To my  
11: 40: 35 18 mind any public authority board member that  
11: 40: 38 19 screws up this badly with public dollars should  
11: 40: 42 20 go to jail for at least a year.

11: 40: 48 21 Major construction cost overruns  
11: 40: 51 22 are, unfortunately, not uncommon. In fact, as  
11: 40: 57 23 shown in the table to the right of Figure 8,  
11: 41: 02 24 Boston Big Dig was expected to cost \$2.8  
11: 41: 10 25 billion. By the time it was done, its cost was

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11: 41: 15 2 \$14.6 billion. The cost overrun was an  
11: 41: 21 3 astounding 460 percent. In that cost  
11: 41: 27 4 estimating combined with poor-some say almost  
11: 41: 34 5 criminal-construction management created its  
11: 41: 40 6 cost overrun.

11: 41: 42 7 The Denver airport over ran almost  
11: 41: 45 8 200 percent. Seattle's light rail system  
11: 41: 51 9 overran by over 50 percent. Indeed, it looks  
11: 41: 56 10 like a relative of the PAT North Shore tunnel.

11: 42: 03 11 DOD overruns like the Raptor are  
11: 42: 07 12 perhaps understandable, but things like roads,  
11: 42: 12 13 bridges, and airports are pretty well defined.  
11: 42: 16 14 They should be relatively easy to accurately  
11: 42: 19 15 cost estimate. After all, they are all above  
11: 42: 23 16 ground, unlike tunnels where you can't see the  
11: 42: 26 17 project work area.

11: 42: 31 18 Why do so many projects have  
11: 42: 33 19 significant cost overruns? The basic answer  
11: 42: 37 20 is, quote, "hubris," unquote. As one  
11: 42: 45 21 contractor put it, engineers' cost estimates  
11: 42: 49 22 are for projects built in heaven. Helping the  
11: 42: 53 23 effect of hubris along is Murphy's Law. We've  
11: 42: 57 24 all run into it.

11: 42: 58 25 It basically says, quote, "If

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11: 43: 00 2 anything can go wrong, it will," unquote. Both  
11: 43: 04 3 interfere with making good project cost  
11: 43: 07 4 estimates and with successful cost management  
11: 43: 11 5 to help control costs. Either is bad enough,  
11: 43: 14 6 but taken together, they yield catastrophic  
11: 43: 19 7 cost overruns like Boston's Big Dig.

11: 43: 23 8 Even normal projects experience  
11: 43: 24 9 major cost overruns. Bent Flyvberg, a  
11: 43: 39 10 well-published Danish expert, looked at 258  
11: 43: 43 11 large transportation projects. Their average  
11: 43: 47 12 size was \$350 million. Thus, each was large  
11: 43: 53 13 enough to have spent substantial amounts on  
11: 43: 55 14 getting good cost estimates.

11: 43: 58 15 They no doubt used quality  
11: 44: 00 16 estimating procedures and tools. Figure 9  
11: 44: 04 17 shows the results for the applicable 33 bridge  
11: 44: 07 18 and tunnel projects. The estimated cost at the  
11: 44: 12 19 time the project was approved for construction  
11: 44: 15 20 was compared with the project's actual cost at  
11: 44: 19 21 construction completion. The results are  
11: 44: 23 22 striking.

11: 44: 25 23 As shown on the green side, only 30  
11: 44: 29 24 percent of the projects had cost underruns. In  
11: 44: 35 25 contrast, 70 percent of the projects had

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11: 44: 38 2 overruns, with the average being a 55-percent  
11: 44: 43 3 cost increase over the initial construction  
11: 44: 47 4 estimate.

11: 44: 50 5 Thus, bridge and tunnel projects  
11: 44: 51 6 were consistently underestimated, even with the  
11: 44: 56 7 best of tools. Flyvberg cautions that decision  
11: 45: 04 8 makers and the public should take any estimate  
11: 45: 07 9 of construction costs with a grain of salt,  
11: 45: 10 10 especially for bridges and tunnels.

11: 45: 13 11 Indeed, there may be a bias toward  
11: 45: 16 12 underestimating construction costs, or perhaps  
11: 45: 19 13 Murphy's Law simply happens more often to  
11: 45: 22 14 bridges and tunnels.

11: 45: 25 15 The title of another instructive  
11: 45: 28 16 article worth reading is Victor Romero pretty  
11: 45: 35 17 much says it all. Cost estimating for  
11: 45: 38 18 underground transit is too dangerous to  
11: 45: 42 19 guesstimate.

11: 45: 43 20 Again, underground tunnels along the  
11: 45: 51 21 rivers represent a troubling \$850 million of  
11: 45: 55 22 ALCOSAN's projected construction costs.  
11: 46: 00 23 ALCOSAN's cost estimates were developed through  
11: 46: 03 24 a Philadelphia Water model, called ACT, as  
11: 46: 13 25 shown on the first bullet in Figure 10.

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11: 46: 21 2 Its description, which occupies four  
11: 46: 23 3 pages of the Plan, states it yields a Class 4  
11: 46: 28 4 estimate. This means the actual constructed  
11: 46: 31 5 cost should be in the range from 30 percent  
11: 46: 34 6 less to 50 percent more than the ALCOSAN  
11: 46: 38 7 estimate and Plan.

11: 46: 39 8 This is shown in bullet points and  
11: 46: 43 9 black text. Recommended ALCOSAN action items  
11: 46: 47 10 are shown in red along with an action red  
11: 46: 50 11 arrow.

11: 46: 52 12 The Plan itself provides no real  
11: 46: 54 13 validation or tables of ACT estimates versus  
11: 47: 01 14 actual construction costs. Thus ALCOSAN needs  
11: 47: 08 15 to provide assurance via a published report.

11: 47: 17 16 The second bullet deals with a key  
11: 47: 19 17 element called construction cost contingency.  
11: 47: 25 18 As highlighted in the figure, contingencies are  
11: 47: 32 19 added to Stage 4 estimates because experience  
11: 47: 33 20 shows that these added costs are likely and  
11: 47: 36 21 expected to be incurred, even though they  
11: 47: 40 22 cannot be explicitly defined at the time the  
11: 47: 45 23 estimate is prepared.

11: 47: 50 24 In other words, a contingency is not  
11: 47: 54 25 merely a nice to have comfort. For a good

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11: 47: 57 2 estimate it's absolutely necessary. For  
11: 48: 01 3 example, even a run-of-the-mill utility power  
11: 48: 04 4 plant will have a 30-percent contingency at  
11: 48: 08 5 this stage in the estimating process.

11: 48: 16 6 Such a contingency is not even  
11: 48: 18 7 mentioned anywhere in the Plan, let alone in  
11: 48: 20 8 the construction or capital cost sections of  
11: 48: 27 9 the Plan. Thus, it is not clear if any  
11: 48: 29 10 construction cost contingency has been added  
11: 48: 32 11 anywhere or any place to the plan's estimates.

11: 48: 36 12 Thus, as highlighted in red, ALCOSAN  
11: 48: 41 13 needs to promptly report and justify the size  
11: 48: 44 14 or nonuse of construction cost contingencies in  
11: 48: 51 15 the plan's capital estimates.

11: 48: 53 16 The next figure addresses some key  
11: 48: 55 17 capital cost management issues. This goes to  
11: 48: 59 18 the heart of the customer cost issue.

11: 49: 03 19 Figure 11 of the Plan refers to adaptive  
11: 49: 06 20 management as highlighted at the top of  
11: 49: 09 21 Figure 11.

11: 49: 11 22 However, this adaptive management  
11: 49: 14 23 refers to demographic financing and municipal  
11: 49: 20 24 flow changes. Conspicuously absent are  
11: 49: 25 25 adaptive plans for capital cost overruns,

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11: 49: 28 2 except a few sentences dealing with the cost  
11: 49: 30 3 impact as a percent of Median Household Income.

11: 49: 36 4 As highlighted by the red action  
11: 49: 39 5 arrow and by the red text, any adaptive  
11: 49: 43 6 management plan should include construction  
11: 49: 45 7 cost as a distinct component, even if the EPA  
11: 49: 50 8 isn't particularly interested in it.

11: 49: 57 9 As keyed by the second red arrow,  
11: 50: 00 10 ALCOSAN also needs to clarify with the EPA what  
11: 50: 07 11 happens if, and more likely when, construction  
11: 50: 11 12 costs overrun. Is ALCOSAN supposed to keep  
11: 50: 19 13 blindly building to its consumers' billing  
11: 50: 28 14 detriment? Is there even a reset button? If  
11: 50: 31 15 so, at what point?

11: 50: 33 16 A second critical capital cost  
11: 50: 37 17 management issue is how ALCOSAN will perform,  
11: 50: 42 18 design, estimating, bidding, and construction  
11: 50: 46 19 management. These are vital components.

11: 50: 51 20 As you've seen in Figure 7,  
11: 50: 54 21 Figure 8, and Figure 9, a less than stellar  
11: 50: 57 22 performance can and will cost ALCOSAN customers  
11: 51: 05 23 hundreds of millions of dollars. This area's  
11: 51: 10 24 largely unaddressed in the Plan except for one  
11: 51: 14 25 page in Section 11.

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11: 51: 16 2 ALCOSAN indicates that for Woods Run  
11: 51: 19 3 it used internal design and construction  
11: 51: 21 4 supplemented by outside consultants. ALCOSAN  
11: 51: 25 5 then states it will do the same for the Wet  
11: 51: 29 6 Weather Plan, which I suspect is ten times  
11: 51: 31 7 larger.

11: 51: 32 8 Is this a good idea? Maybe. Or  
11: 51: 35 9 maybe not. As shown by the red action arrow,  
11: 51: 39 10 ALCOSAN needs to develop and publish a detailed  
11: 51: 43 11 construction Plan. It should look at design  
11: 51: 48 12 and estimating, bidding, and construction  
11: 51: 50 13 management from the viewpoint of resources,  
11: 51: 54 14 performance, costs, and risks. Then  
11: 51: 58 15 municipality engineers should review and  
11: 52: 05 16 comment.

11: 52: 08 17 As indicated, these are highly  
11: 52: 10 18 important and potentially quite expensive  
11: 52: 12 19 issues. Even an informed public is highly  
11: 52: 19 20 desirable. In blue at the bottom of Figure 11  
11: 52: 22 21 is some recommended reading. These are listed  
11: 52: 26 22 in the suggested order of reading.

11: 52: 31 23 Rather than give complicated links,  
11: 52: 39 24 simply type the name into Google, and you'll be  
11: 52: 42 25 taken to the article. All of the searches have

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11: 52: 46 2 been tested. Use PDF where shown to get the  
11: 52: 51 3 best link.

11: 53: 00 4 ALCOSAN is about to embark on a very  
11: 53: 02 5 serious cost endeavor, unlike anything they've  
11: 53: 07 6 ever undertaken in magnitude. Board of  
11: 53: 11 7 directors are supposed to be experienced ship  
11: 53: 14 8 captains that guide such things to untraumatic  
11: 53: 19 9 conclusion.

11: 53: 23 10 The top of Figure 12 highlights the  
11: 53: 25 11 present status. While not meaning to be  
11: 53: 29 12 disparaging, ALCOSAN's board is composed mostly  
11: 53: 36 13 of elected politicians and union organizers.  
11: 53: 39 14 None of them appears to have an engineering  
11: 53: 42 15 degree.

11: 53: 42 16 No objective person could reasonably  
11: 53: 45 17 conclude that such a composition is qualified  
11: 53: 47 18 to oversee capital construction undertakings  
11: 53: 50 19 costing hundreds of millions of dollars a year.

11: 53: 53 20 There are also some warning flags.  
11: 53: 59 21 ALCOSAN's O&M budget has been growing at four  
11: 54: 09 22 percent a year for a decade, and that  
11: 54: 09 23 four-percent annual cost increase is embedded  
11: 54: 09 24 in the Plan.

11: 54: 09 25 In contrast, the income of ALCOSAN's

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11: 54: 12 2 customers has been growing at only two percent  
11: 54: 15 3 a year. Minutes of board meetings are not even  
11: 54: 19 4 available on ALCOSAN's website.

11: 54: 22 5 The first red action item and arrow  
11: 54: 26 6 simply shows some sunshine into the mix with  
11: 54: 30 7 easily available minutes. Actually, the  
11: 54: 33 8 videotaping is also critical. It gives you a  
11: 54: 36 9 good idea of what's actually going on in terms  
11: 54: 38 10 of interactions and experiences without having  
11: 54: 43 11 to trudge down to ALCOSAN's plant in the dark  
11: 54: 46 12 hoping to get a good seat at a board meeting.

11: 54: 49 13 The second action is crucial,  
11: 54: 52 14 considering where we're heading. ALCOSAN is  
11: 54: 56 15 entering a new \$3 billion construction future.  
11: 55: 00 16 The board and we need to think now about how we  
11: 55: 11 17 are going to get there.

11: 55: 20 18 It is very timely for the board to  
11: 55: 22 19 commission a public assessment. It would  
11: 55: 26 20 detail current practices and potential future  
11: 55: 30 21 savings and issues associated with fundamental  
11: 55: 34 22 construction options such as PLAs or non PLAs,  
11: 55: 49 23 union or nonunion construction, and any other  
11: 55: 53 24 such money saving or risk reduction options  
11: 55: 57 25 deemed even remotely possible.

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11: 56: 00 2 Potentially at stake are tens if not  
11: 56: 03 3 hundreds of millions of dollars of customer  
11: 56: 08 4 costs or savings. As far as future status, it  
11: 56: 13 5 is probably unlikely that the board will be  
11: 56: 30 6 reconstructed with one having more appropriate  
11: 56: 33 7 management and construction experience.

11: 56: 37 8 However, there, is an alternate  
11: 56: 45 9 option that appears reasonable, suitably  
11: 56: 50 10 productive, and nonconfrontational. This would  
11: 56: 55 11 be to form a Capital Project Supervisory  
11: 56: 57 12 Committee under the board.

11: 57: 05 13 This CPSC would have  
11: 57: 10 14 responsibilities for monitoring, reviewing,  
11: 57: 13 15 assessing, and recommending elements to and for  
11: 57: 17 16 the board relating to design, estimating,  
11: 57: 23 17 bidding, and project management of capital  
11: 57: 27 18 project constructions.

11: 57: 31 19 The CPSC would report to the board.  
11: 57: 35 20 The board would have to accept or reject any  
11: 57: 38 21 CPSC proposal within 30 days. Also,  
11: 57: 43 22 municipalities could request a meeting with the  
11: 57: 46 23 CPSC to broach an issue of concern.

11: 57: 51 24 The CPSC would have five members.  
11: 57: 55 25 One would be appointed by the board and one by

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11: 57: 57 2 the municipalities. The other three would be  
11: 58: 05 3 by a CPSC search whose results were approved by  
11: 58: 10 4 the board and the CPSC. Moreover, a CPSC  
11: 58: 16 5 member would have to have an engineering  
11: 58: 20 6 degree, substantial management experience with  
11: 58: 23 7 a hundred million dollars a year  
11: 58: 28 8 responsibility, must not be holding political  
11: 58: 30 9 office or affiliated with any key contractor,  
11: 58: 36 10 et cetera.

11: 58: 37 11 Additionally, a CPSC would have to  
11: 58: 41 12 select and participate in AACEI or other  
11: 58: 48 13 seminars. Board members and municipal  
11: 58: 53 14 engineers could also attend these.

11: 58: 57 15 In effect, establishing a CPSC would  
11: 59: 01 16 add a valuable additional resource to  
11: 59: 03 17 successful implementation of the Plan and  
11: 59: 07 18 potentially broaden municipal support.

11: 59: 12 19 Moreover, the CPSC has the potential to detect  
11: 59: 16 20 and solve a lot of problems while potentially  
11: 59: 19 21 mitigating, if not avoiding tens of millions of  
11: 59: 24 22 misspent customer dollars in cost overruns.

11: 59: 30 23 I very much appreciate your and the  
11: 59: 47 24 audience's patience and attention. I hope  
11: 59: 49 25 these constructive comments will prove useful

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11: 59: 52 2 and helpful. The Wet Weather Plan is an  
11: 59: 56 3 awesome responsibility and cost. It will be  
11: 59: 58 4 the equivalent of building Hoover Dam paid for  
12: 00: 04 5 by only 300,000 families. The end success will  
12: 00: 10 6 depend not on hope but rather on good people,  
12: 00: 13 7 good plans, and on good contractors, and still  
12: 00: 16 8 even then on a fair amount of luck. As PAT  
12: 00: 19 9 found out with the North Shore Connector,  
12: 00: 21 10 Murphy is very much alive and well.

12: 00: 27 11 Again, you can download a virus-safe  
12: 00: 39 12 PDF of this presentation at [alcosancost](#) for  
12: 00: 39 13 viewing and printing. At the top of its main  
12: 00: 41 14 page is a red arrow with yellow letters to view  
12: 00: 44 15 and print these comments and graphic material.  
12: 00: 47 16 Thank you very much for your time.

12: 00: 55 17 MR. BORNEMAN: Thank you.

18 (Mr. McClelland's comments  
19 were concluded at 12:00 p.m.)

20 (Whereupon, the above-entitled  
21 portion of the public comments taken by this  
22 Court Reporter was concluded at 1:00 p.m., this  
23 date.)

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C E R T I F I C A T E

I hereby certify that the  
proceedings and evidence are contained  
fully and accurately, to the best of my  
ability, in the stenographic notes  
taken by me on the hearing of the  
within cause and that this is a correct  
transcript of the same.

S/RONDA J. WEINELL

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<p style="text-align: center;"><b>\$</b></p> <p><b>\$1,340</b> [7] - 5:15, 5:20, 10:12, 14:9, 23:5, 27:7, 28:24</p> <p><b>\$1,600</b> [1] - 28:24</p> <p><b>\$1,850</b> [1] - 10:25</p> <p><b>\$1,930</b> [1] - 27:8</p> <p><b>\$1,981</b> [1] - 28:9</p> <p><b>\$104</b> [1] - 30:7</p> <p><b>\$14,000</b> [1] - 27:24</p> <p><b>\$180</b> [1] - 5:2</p> <p><b>\$2,772</b> [1] - 28:10</p> <p><b>\$210</b> [1] - 15:9</p> <p><b>\$240</b> [1] - 28:22</p> <p><b>\$250</b> [1] - 12:6</p> <p><b>\$260</b> [2] - 5:6, 14:14</p> <p><b>\$295</b> [3] - 4:23, 5:11, 5:16</p> <p><b>\$30,000</b> [1] - 21:6</p> <p><b>\$300</b> [1] - 5:5</p> <p><b>\$320</b> [1] - 30:11</p> <p><b>\$350</b> [2] - 29:20, 32:12</p> <p><b>\$402</b> [1] - 23:9</p> <p><b>\$410</b> [1] - 14:15</p> <p><b>\$440</b> [2] - 5:2, 5:11</p> <p><b>\$5,000</b> [1] - 20:21</p> <p><b>\$50</b> [1] - 30:12</p> <p><b>\$530</b> [1] - 15:5</p> <p><b>\$550</b> [1] - 29:20</p> <p><b>\$590</b> [2] - 27:12, 27:14</p> <p><b>\$600</b> [3] - 5:19, 12:15, 28:21</p> <p><b>\$65,000</b> [1] - 21:25</p> <p><b>\$700</b> [1] - 30:5</p> <p><b>\$80</b> [1] - 30:10</p> <p><b>\$842</b> [1] - 10:25</p> <p><b>\$850</b> [1] - 33:21</p>	<p>27:2</p> <p><b>15219</b> [1] - 1:10</p> <p><b>15237</b> [1] - 2:10</p> <p><b>155,000</b> [1] - 7:16</p> <p><b>16.6</b> [1] - 18:10</p> <p><b>17</b> [1] - 1:10</p> <p><b>1700</b> [1] - 4:8</p> <p><b>175</b> [1] - 29:9</p> <p><b>18</b> [1] - 11:13</p> <p><b>19,000</b> [1] - 5:24</p> <p><b>1900s</b> [1] - 7:17</p> <p><b>1930s</b> [1] - 14:2</p> <p><b>1940s</b> [1] - 7:4</p> <p><b>1950s</b> [1] - 7:19</p> <p><b>1999</b> [1] - 17:10</p> <p><b>1:00</b> [1] - 42:22</p>	<p><b>330,000</b> [1] - 14:7</p> <p><b>390,000</b> [1] - 20:8</p> <p style="text-align: center;"><b>4</b></p> <p><b>4</b> [3] - 18:8, 34:3, 34:19</p> <p><b>4.1</b> [1] - 24:3</p> <p><b>4.7</b> [1] - 14:20</p> <p><b>40</b> [3] - 5:25, 12:7, 28:21</p> <p><b>44</b> [1] - 27:5</p> <p><b>460</b> [1] - 31:3</p>	<p style="text-align: center;"><b>A</b></p> <p><b>a.m</b> [3] - 1:11, 2:4, 2:6</p> <p><b>AACEI</b> [1] - 41:12</p> <p><b>abandoned</b> [1] - 29:15</p> <p><b>ability</b> [1] - 43:8</p> <p><b>above-entitled</b> [1] - 42:20</p> <p><b>absent</b> [1] - 35:24</p> <p><b>absolutely</b> [1] - 35:2</p> <p><b>absorb</b> [1] - 26:15</p> <p><b>accept</b> [1] - 40:20</p> <p><b>accuracy</b> [1] - 23:20</p> <p><b>accurate</b> [1] - 21:10</p> <p><b>accurately</b> [2] - 31:14, 43:7</p> <p><b>ACT</b> [2] - 33:24, 34:13</p> <p><b>action</b> [8] - 14:23, 15:24, 34:9, 34:10, 36:4, 37:9, 39:5, 39:13</p> <p><b>actual</b> [4] - 22:11, 32:20, 34:4, 34:14</p> <p><b>adaptive</b> [4] - 35:19, 35:22, 35:25, 36:5</p> <p><b>add</b> [2] - 27:12, 41:16</p> <p><b>added</b> [3] - 34:19, 34:20, 35:10</p> <p><b>adder</b> [1] - 27:15</p> <p><b>addition</b> [1] - 27:14</p> <p><b>additional</b> [1] - 41:16</p> <p><b>additionally</b> [1] - 41:11</p> <p><b>address</b> [2] - 2:9, 12:10</p> <p><b>addressed</b> [1] - 11:19</p> <p><b>addresses</b> [1] - 35:16</p> <p><b>adjustment</b> [1] - 24:11</p> <p><b>administration</b> [1] - 2:13</p> <p><b>affiliated</b> [1] - 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ALLEGHENY COUNTY SANITARY AUTHORITY (ALCOSAN)

PUBLIC MEETING

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IN RE:

ALCOSAN DRAFT WET  
WEATHER PLAN  
PUBLIC COMMENTS

- - - - -

Sheraton Hotel  
Station Square  
300 W. Station Square Drive  
Pittsburgh, PA 15219  
Wednesday, October 17, 2012  
1:00 p.m.

- - - - -

BEFORE: Nancy Barylak, ALCOSAN  
Mary Kay Meanor, ALCOSAN  
Joseph Day, ALCOSAN

- - - - -

TRANSCRIPT OF PROCEEDINGS

- - - - -

Reported by:

Candace Gabeletto,  
Registered Professional  
Reporter

- - - - -

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P R O C E E D I N G S

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(A meeting was held for public comment on Wednesday, October 17, 2012, at Sheraton Hotel, Station Square, 300 West Station Square Drive, Pittsburgh, Pennsylvania 15219. The hall was open and available for testimony from 1:00 p.m. to 5:00 p.m. No individuals appeared during the allotted time to give testimony.)

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C E R T I F I C A T E

I hereby certify that the  
proceedings and evidence are contained  
fully and accurately in the  
stenographic notes taken by me of the  
proceedings of the within cause and  
that this is a correct transcript of  
the same.

S/Candace Gabeletto, RPR, FPR

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