

**Public Comments and Associated Responses
for the
The Harrisburg Authority
Act 537 Plan Update**

Questions Received at the March 26, 2009, Harrisburg City Council Public Works Committee

Question 1: “If a major spill of sewage occurred due to unforeseen circumstances, say a power failure at a pump station which caused a bypass, would the nutrients that spilled be counted by DEP with a resulting need to buy more credits?” (Question presented by William Cluck, Environmental Attorney)

Response: By Mr. Lee McDonnell, Program Manager, Pennsylvania Department of Environmental Protection, Southcentral Regional Office, Water Management Program – We would not be looking to account for your nutrient load during a pollution event, so you would not have to buy more nutrient credits as a result of a “spill”. Please keep in mind that a discharge of raw sewage for whatever reason is a violation of the NPDES Permit. In almost all cases where we have these events a penalty would be assessed to the permittee based on the severity of the pollution event. This is how we handle these types of pollution events now, and would not plan to change that in the future.

Questions Received at the May 13, 2009, Public Hearing Meeting

Question 1: “How much did the Authority pay for the original 537 plan, which it proposed the all build under the old formula?” (Question presented by William Cluck, Environmental Attorney)

Response: The cost of the Act 537 Planning effort, which included very extensive work on the Long Term Control Plan for combined sewers, was \$1,474,213.67 as documented in the grant reimbursement application approved in part by DEP.

Question 2: “How much was spent for, I believe it was Brinjac Engineering, and I would assume outside counsel? Are those dollars included in the project costs for which you are seeking funding and will they be a part of a rate-base increase at the end of the day?” ?” (Question presented by William Cluck, Environmental Attorney)

Response: Of the dollar amount cited in response to Question 1, the same grant application indicates that \$883,786.95 was paid to Brinjac, \$638,312.45 was paid to Malcolm-Pirnie, and \$2,114.27 was paid to the Patriot-News for public notices. Costs previously incurred on projects and studies are deemed “sunk” costs and are not included in determinations of present worth or present value.

Question 3: “Did they (DEP) reimburse both the original plan and this revised plan?” (Question presented by William Cluck, Environmental Attorney)

Response: The DEP reimbursed \$558,190.40 for the previous Act 537 in two payments made in 2006. It is anticipated that DEP will reimburse the current effort, assuming that a state budget is adopted which includes funding for the Act 537 program.

Question 4: “How much was spent on this revision? How much has been spent on HRG for all the wonderful work they have done, as well as outside counsel, and are those costs included in the project costs for which you are seeking funding and reimbursement?” (Question presented by William Cluck, Environmental Attorney)

Response: The HRG fee for the current Act 537 Plan Special Study is \$199,900. Costs of outside counsel are approximately \$17,000 through May 2009. Again, costs previously incurred are deemed “sunk” costs and are not included in the determination of present value or present worth.

Question 5: Are the items I’m questioning included in the 34.5 (project costs) or is that going to be separate?” (Question presented by William Cluck, Environmental Attorney)

Response: See the answer to No. 4 above.

Question 6: (With respect to the existing NPDES permit...) “My question is what was the strategy or purpose of filing the appeal, what was the goal that the Authority had in challenging the permit and how much has been spent on legal and possibly technical fees with respect to that, and again, are all of those wrapped up into the project costs for which the ratepayers will be asked to reimburse?” (Question presented by William Cluck, Environmental Attorney)

Response: The issues addressed in the appeal are not related to the current planning effort and would have been the subject of an appeal whether or not the current planning effort was underway. The issues addressed in the appeal are related to the number of credits that need to be purchased in water years 2011, 2012, and 2013; when trucked in wastes may be received at the treatment plant; and a new tighter ammonia limit. Engineering fees on the appeal are approximately \$52,000 through May 2009. Legal fees are approximately \$28,000 through May 2009. (The appeal has not yet been withdrawn.) The anticipated result of the appeal is a reduction in the number of credits that will need to be purchased in Water Years 2011, 2012, and 2013, saving the City about \$1,000,000 over that period of time. The other issues are difficult to monetize.

Question 7: “In your alternative analysis, given the fluid goals of the Chesapeake Bay Commission, was any consideration given to actually building a brand new plant? I mean, I have absolutely no idea, are we talking 100 million dollars, 200 million dollars, something large enough to perhaps allow Camp Hill and Lemoyne to participate or to wrap in additional users?” (Question presented by William Cluck, Environmental Attorney)

Response: No consideration was given to a “brand new plant” or combining systems as described in the questions. It is noted that the Harrisburg treatment plant receives the wastewater from many outlying east shore municipalities.

Question 8: “What would be the useful life of a brand new plant as opposed to the useful life of these technical upgrades?” (Question presented by William Cluck, Environmental Attorney)

Response: The useful lives are the same for new construction.

Question 9: “What is the cost of compliance with the 2010 water year’s effluent limits and is that factored into the cost of the project?” (Question presented by William Cluck, Environmental Attorney)

Response: There is no cost of compliance for Water Year 2010.

Question 10: (With respect to purchasing credits...) “Are those credits from those providers actually in the bank at DEP, meaning accounted for, generated and approved by the state or is this something where they have made a promise that they’re going to get the credits and you’re hoping through your contract that that will occur?” (Question presented by William Cluck, Environmental Attorney)

Response: Credits are only good in the year they are produced, so none currently exist for Water Year 2011. Yes, any credits purchased by the City will need to be certified and approved by DEP. The methods that the identified credit generators use to generate credits have been approved by DEP.

Question 11: “Is there a risk of possible civil penalties by DEP for failure to meet the new effluent limits for Years 2011 and 2012 before this new system is up and running? What is the risk of lawsuits by private citizens or environmental groups, or even neighboring states?” (Apparently, the state of Maryland has been huffing and puffing about Pennsylvania’s inadequate efforts on the Chesapeake Bay.) “Again, have all of those costs been factored into the analysis of potential rate increases?” (Question presented by William Cluck, Environmental Attorney)

Response: The risk of civil penalties imposed by DEP will largely be managed with the purchase of credits. The date for implementation of the new ammonia limits is being negotiated with DEP. There is always a risk of lawsuits, but none are reasonably anticipated at this time. Maryland is not an intervener in the current NPDES appeal.

Question 12: “Do you have any indication that a TMDL for the Susquehanna River, for the Bay, could impact this project?” (Question presented by William Cluck, Environmental Attorney)

Response: We have been repeatedly told by DEP and EPA that the Chesapeake Bay Tributary Strategy related to Phase 1 and Phase 2 point source discharges from POTW’s will not be directly impacted by a TMDL. Indirect impacts, should they occur, are purely speculative at this time.

Question 13: “What’s the risk that in 120 days or 180 days which, under the Obama executive order, some new plan is supposed to happen that just changes everything?” (Question presented by William Cluck, Environmental Attorney)

Response: There is a very small risk that at some time in the future a technology standard will be developed by the committee formed under the executive order which will become a standard for all POTW’s. If this were to occur, it might require the construction of Stage 3 or a modified Stage 3. This current planning effort which recommends building only Stages 1 and 2, provides greater safety to the Authority by not committing to building Stage 3 which is the stage that could be impacted.

Question 14: "When will the residents see an increase in their utility bills? Will it be at the end of the project in 2013 or is there consideration to incremental increases beginning now?" (Question presented by William Cluck, Environmental Attorney)

Response: The timing of the steps that will be taken to adjust the sewer bills has not yet been developed.

Question 15: "My understanding is there is no extension on the permitted deadline of October 2010 to meet the Bay requirements. If there is some other extension of compliance, I would like an explanation of that." (Question presented by William Cluck, Environmental Attorney)

Response: THA's compliance schedule is dictated by the NPDES Permit. You may refer to the current NPDES permit which is included in the plan. The Authority has been guided in this planning effort by information provided by DEP and the question is best asked of DEP. The DEP website is an excellent source of information on the obligations faced by all point source and non-point source dischargers to the Bay.

Question 16: "Is there any possibility of federal stimulus money coming directly to the Authority or through the city, or is it only the PENNVEST that is pending? (Question presented by William Cluck, Environmental Attorney)

Response: Yes, PENNVEST administers some of the stimulus money and some may come to the Authority.

Question 17: (With respect to Russ McIntosh's comments on funds allocated to PENNVEST as the agency responsible and that we will look for any other subcategories of grants...) William Cluck asked, "That's the 20 million?"

Response: The future stimulus funds or state revolving funds may be available when needed.

Question 18: (With respect to Russ McIntosh's comments on the 20 million being a state program funded by the Commonwealth Financing Authority...) William Cluck asked, "Any idea when we're going to hear?"

Response: No.

Question 19: "... I think we're still intending to pass the debt service, if there is any, to the local share on to the outlying communities, as is done now, as opposed to asking for a capital contribution. Some of our clients, the way I read that, it says it will be rolled into the cost of treatment." (Question presented by Jeff Wendle, CET Engineering Services)

Response: Yes, that would be expected, consistent with existing agreements.

Question 20: "When did you anticipate -- so that the 2010 later year beginning would be the year you purchase the credits, so that would be -- I would anticipate that time frame would be the first year we would start to see an increase in costs to the users and out outliers, and then when the borrowing takes place, I guess it was part of Mr. Cluck's question, too, is it going to happen all at once or is it going to be stepped forward, I guess is what our questions

would be, so we can plan for the future when we start to see those rate increases implemented.” (Question presented by Jeff Wendle, CET Engineering Services)

Response: The timing of the steps that will be taken to adjust the sewer bills have not yet been developed, however, your speculation is reasonable that as costs increase so will the rates.

Written Comments received by the Harrisburg Authority

Correspondence from Jeffrey G. Wendle, P.E., BCEE on behalf of Lower Paxton Authority, dated June 1, 2009 and correspondence from Jeffrey G. Wendle, P.E., BCEE on behalf of Susquehanna Township Authority, also dated June 1, 2009.

Comment 1: We have reviewed the Act 537 Plan Update on behalf of Lower Paxton Township Authority one of the tributary municipalities. Our comments are presented below.

Response: No response required.

Comment 2: General: Assuming that the nutrient reductions projected from the recommended treatment processes can be achieved, the Plan appears to represent a sound approach and provides flexibility to meet future requirements. The concept of “buy some, trade some” is a particularly effective as the addition of State 2 represents the most cost-effective range for TN reduction and the flexibility to meet changing conditions as nutrient trading is still developing.

Response: No response required.

Comment 3: Pilot Testing: The plan text indicates that both the proposed sidestream treatment system and the MLE process are to be pilot tested prior to design. The implementation schedule on page 8 indicates pilot testing for only sidestream process. It is recommended that pilot testing be performed over a variety of flow conditions, including wet weather, to simulate the proposed HPOAS modifications and MLE process. While it is expected that the settling characteristics of the sludge with the stripping of CO₂ and the additional of the anoxic tank will improve compared with that experienced with prior attempts at nitrification, it is critical to determine the SVIs from the new process will be sufficiently low enough to allow adequate clarification. In addition, higher than typical dissolved oxygen levels from the primary clarifiers, especially during wet weather, should be considered in sizing the anoxic tank.

Response: The compliance schedule will be revised to reflect the wording in the text. The remaining comments are important to the pilot testing and will be addressed as the work moves forward.

Comment 4: Present Worth Analysis: When comparing the original Alternative #1 from the 2007 report with the alternatives developed in this 537 Update inclusion of Stage 1 is appropriate since Alternative #1 is a complete solution for meeting ammonia as well as total nitrogen limits. When comparing the three newly developed alternatives for meeting the total nitrogen (TN), however, Stage 1 should not be included since it is common to all masks the

substantial difference between the TN removal alternatives. Once the decision is made to build Stage 1 for ammonia removal, the real comparison is the various means to meet the TN cap load, "Trade All", Build Stage 2 and Trade Some" and "Build Stage 2 and 3 and Sell Some", Using the cost presented in Table 9 of page 39 and Table 10 on page 41 of Volume 1, a comparison of these alternatives is provided below in Table 1. As evident, the relative present worth values differ considerably than those indicated in the report. In fact, if credits can be sold, construction of State 3 immediately appears to be the least cost based on present worth.

This comment is not necessary meant to suggest immediate construction of State 3, It is meant, however, to demonstrate the value of construction of Phase 3 if the market for sale credits appears viable, Furthermore, if, as the Plan suggests, it is currently a buyers market for the purchase of the nutrient credits, the cost of credits may rise significantly over the planning period as costs rise and it becomes a sellers market. Because the debt service on capital remains constant, the investment of capital into Stage 3 may prove even more cost effective.

Response: Stage 1 is common to all the alternatives considered because it is the first stage in a three stage alternatives analysis. The purpose of the analysis presented in the study is to determine how much should be constructed. Should only Stage 1 be constructed? Should Stages 1 and 2 be constructed? Should all three stages be constructed? To assume that Stage 1, plus one or both of the subsequent stages would be constructed, is incorrect.

Further, the comment that Stage 3 should be considered is valid only if the trading program matures in such a way that there is a demand for credits. Since the Authority actually bid for the purchase of credits, it is known that credits can be purchased and at what cost. Unfortunately, there is no significant current demand to purchase, other than that of Harrisburg, so the analysis provided by Mr. Wendle is not currently valid; however, the analysis may be valid at some time in the future, as he suggests, "if the credits can be sold." While this current study does include the analysis of present worth costs with and without the sale of credits with the construction of Stage 3, it is unlikely that credits will be sold until buyers of credits emerge. In the absence of being able to sell credits, the immediate construction of Stage 3 increases the TPW in Mr. Wendle's analysis by approximately \$16,000,000 or approximately 67 percent. Further, the number of credits needed to be purchased as set forth in the study reflects a guarantee of performance (+99 percent) at an AAF of 25 MGD. The concept of building only Stages 1 and 2 allow for proving how well they perform. The current 66% confidence level of performance for Stages 1 and 2 would allow that no credits be purchased, thus raising the question of why build Stage 3 until we know how well Stages 1 and 2 perform. The largest question is the impact of "seeding" the forward flow with the WAS from the side stream treatment.

Comment 5: *Financial Plan/Rate Increases: The timing and the amount of the rate increase(s) from the City of Harrisburg to the tributary municipalities to meet the costs of the CBTS compliance will depend upon the amount of grant that is obtained (if any) an the actual financing terms, as well as when purchase of nutrient credits is required. According to the implementation schedule presented on page 8 of Volume 1, construction is to begin in August 2011 and to be completed by May of 2013. The permit present in Table 7 indicates that nutrient cap load goes into effect June 1, 2012. The purchase of nutrient credits,*

therefore, will be required for TN reductions to meet the cap load between June 1, 2012 and September 20, 2013. Even prior to trading and construction, however, considerable costs will be incurred for pilot testing and design in 2009.

Since the tributary municipalities need to make plans for rate adjustments to meet their respective shares of the costs, the plan should present a projected financing schedule indicating the timing of projected amounts of rate increase to all tributary municipalities to take into account the following:

- *Additional funds necessary for pilot studies and design costs*
- *Funds needed for nutrient trading prior to completion of construction and timing of payments*
- *Funds needed for Nutrient trading in subsequent years and timing of payments*
- *Timing of borrowing and initiation of the debt service schedule*

In addition, the estimated rate increase present in the plan presumes that a grant of \$20,000,000 will be realized. There is no contingency plan present, however, in case the grant is not available. Would it be possibly advantageous, for example, to delay construction of Phase 2 and trade while continuing to search for financing assistance?

Response: The number of credits that will need to be purchased by the City beginning in water year 2011 is a matter of appeal of the current NPDES permit. The comment raised by Mr. Wendle regarding the implementation of rate increases goes to implementation of the adopted plan, not to its selection, and therefore would not normally be included in an Act 537 Plan. The amount of grant to be received is a reasonable estimate, but not assured. If a larger grant is received, and if the performance of Stages 1 and 2 is better than predicted in the plan, the rate increases will be less. As he says, if no grant is received, the increases will be greater.

The problem faced by all seeking to adopt an Act 537 Plan is illustrated in this comment.

Comment 6: Plan Implementation Schedule vs. Permit Compliance: The Plan's implementation schedule proposed compliance with the NH3-N effluent limit in June 2013. The permit conditions appear to require compliance with ammonia reductions and the TN cap load starting in June 1012. While the Plan indicates that Harrisburg is negotiating with DEP to amend the permit to coincide with the proposed implementations schedule, is DEP approval of such an amendment reasonably assure? If not, what are the contingency plans?

Response: Current negotiations with DEP lend reasonable expectation for the delay of reduced ammonia limits in 2013 and a reduced number of credits to trade beginning in water year 2011. If the appeal cannot be settled, it will continue in front of the Environmental Hearing Board.

Comment 7: Cost of Nutrient Credits: On page 6 of the Plan it is recommended that nitrogen credits purchased from a mix of suppliers rather than the lower bidder. While it is recognized the purchasing from a variety of sources improves the likelihood that adequate credits will be available should there be a default by one of the suppliers, purchase of all 250,000 lbs per year of nitrogen credits from the low bidder for 250,000 lbs. per year would result in a

savings of \$125,000 per year if all 250,000 lbs are purchase and \$62,500 if only half are purchased. In addition, TP credits if all 8,000 lbs are used. Should there be additional evaluation of the reliability of the bidder to assess the true risk of default versus the cost savings?

Response: Planning to buy all credits from a single supplier is viewed as a larger risk than from a series of suppliers. The plan does not say that only the listed suppliers would supply credits. The exact number of credits will vary, new suppliers will come to the market and some will leave. Further fine tuning of the plan to buy credits beginning 26 months from now is inappropriate.

Correspondence from Daniel R. Tunnell, Chairman of the Dauphin County Planning Commission, dated June 1, 2009 (see attached.)

Comment 1: The DEP Act 537 Plan Content and Environmental Assessment Checklist notes that maps from the County Comprehensive Plan should be included, along with the municipality maps. The county has the following maps which would be applicable to the plan:

- a. Dauphin County Comprehensive Plan: Future Land Use Map*
- b. Tri- County Regional Growth Management Plan: Development Patterns in Prime Agriculture Areas, Vacant Buildable Parcel Study, Sewer Service Area, Remaining Sewer Service, Community Water Supply, Recreational Areas, Community Service Areas, Planned Growth Areas.*

Response: Maps listed above have been included in the Plan.

Comment 2: The checklist also requests that sections of the County Comprehensive Plan relating to development, use, and protection of land and water resources should be referenced. The following sections of the current comprehensive plan would apply:

- a. Chapter 3: Natural Resources*
- b. Chapter 6: Industrial Land Use*
- c. Chapter 9: Community Facilities, services & Utilities Goals and Objectives*
- d. Chapter 9: Sewerage Services, Public Water Supply Services, Stormwater Management and Solid Waste Management*

Response: Portions of the Dauphin County Comprehensive Plan listed above have been referenced in the Plan.

Correspondence from James M. Armbruster, Borough Manager of the Borough of Penbrook, dated May 18, 2009 (see attached.)

Comment 1: In response to the letter we received from your engineers, the Borough of Penbrook would like an estimate of the costs of the proposed changes to the AWTF to residents in the Borough. The documentation provided does not appear to include any information on projected costs for municipalities other than the City of Harrisburg.

Response: The project will impact both capital cost and annual operation and maintenance costs. The capital costs will be represented by an increase in the debt service while the purchase of nutrient credits, chemicals and other similar costs will be reflected as increased operation and maintenance expenses. Costs will be distributed among all municipalities served by the system in accordance with inter-municipal agreements. Since this is only a portion of costs incurred by residents in the outlying municipalities, it is not possible for the Authority to determine total costs per user on an individual basis.

Comment 2: Additionally, we would appreciate knowing how the recent take over of the Chesapeake Bay Tributary Strategy by the federal government will impact the changes you propose to the sanitary system.

Response: Please refer to William Cluck's questions, numbered 12 and 13, and the Authority's associated responses listed on page 3 (above.)

Comment 3: Finally, as I explained to you in our recent phone call, the Borough of Penbrook objects to receiving notice of public hearing with less than 48 hour notice. The letter from your engineers announcing the public hearing on May 13, 2009 is dated May 8, 2009 but was hand delivered to the Borough offices on the afternoon of Monday May 11, 2009. This appears to be an unseemly attempt to prevent anyone who may object to the proposals from knowing of the public hearings.

Response: Notice of the public hearing was advertised in the Patriot-News on May 1, 2009. The Authority apologizes for not delivering the follow-up notice to the Borough in a timelier manner.