

# BLUE PLAINS TECHNICAL COMMITTEE

## Meeting Summary (DRAFT)

December 13, 2005

### Meeting Attendees:

*BPTC: Dave Lake (Montgomery County); Shahram Mohsenin (Fairfax County), Roger Gans (DC-WASA Alternate); Craig Fricke (WSSC); Beverly Warfield (Prince George's County)*

*Others: Walt Bailey (DC-WASA); Roland Steiner (WSSC), Chris Peot (DC-WASA), David Bardin (DC-WASA Board liaison to BPRC)*

*COG staff: Tanya Spano, Christine Howard, Karl Berger*

### **I. Call to Order**

Chairman Lake - Called the meeting to order at 11:32 a.m. The meeting was held at DC-WASA. Noted that Mr. Bardin had been invited to attend the presentation on the BPSA flow projections in order to provide him with a better understanding of how those figures were developed.

### **II. Amendments to the Agenda (MM #1)**

No amendments were proposed for the agenda.

### **III. Previous Meeting Summaries (MM #2a & b)**

The October 11<sup>th</sup> and November 22<sup>nd</sup> meeting summaries were approved subject to a several minor edits. [10/11/05 – Verify ‘deaeration’] [11/22/05 – S. Mohsenin was absent; IV. 44%’ I/I; IV.A.1. modify/clarify text re: billing verification meters].

### **IV. BPSA & PI Flow Mgmt. Programs**

#### **A. BPSA & PI Flow Management Programs (MM #3a-d, & HO #4a-c)**

Ms. Spano – Provided a brief overview of the demographic data graphs (MM #3a); noted which demographic data was used in the Regional Wastewater Flow Forecast Model (RWFFM) to develop the flow projections; and noted a few adjustments noted at the last BPTC meeting. She also compared the preliminary Round 7.0 flow projection tables (MM #3b-d) with those from the Round 6.3 versions used in the 2003 BPSA Study (HO #4a-c), and answered the BPTC members’ questions.

#### **Overview - Demographic & Flow Projection Data**

- Reminder that the latest demographic data was derived from the COG Board approved Round 7.0 Cooperative Forecast (Oct. 12, 2005); and that the demographic data itself is developed and submitted by each of COG’s jurisdictions.
- These updated forecasts are then utilized in the region’s formal air quality and transportation planning and regulatory processes.
- Formal projections (i.e., Round 6.0, 7.0, etc.) are updated every 3-4 years based on the need to address any new ‘major’ planning assumptions and are region-wide. Interim updates (i.e., Round 6.2 vs. 6.3) address more limited updates and are often limited to incorporate changes for specific jurisdictions and their projects/programs.
- This cycle is not consistent with the BPSA Study’s proposed 5-year flow projection update schedule.
- Noted that the total population graph for Montgomery County had been corrected from the last draft (i.e., there wasn’t a significant change in the base year figures compared to the previous round).
- Reminder that although total population projections are provided for informational purposes, the RWFFM only uses the employment and household demographic data to project wastewater flows.

- Except for the change in demographic data from Round 6.3 to Round 7.0, no other changes in either 'base year 2000 flows' or wastewater flow factors were made. So any changes in flow projections are driven strictly by changes in demographic data.
- In a few cases demographic changes do occur in years 2000 and 2005. Those adjustments should be viewed as routine 'corrections' that occur during this forecasting process.
- For both the Round 7.0 and the previous Round 6.3 forecasts the BPSA Annual Average Flow Projections are presented as:
  - Table 7 – 'Unadjusted' Flows (i.e., based strictly on the demographic data)
  - Table 8 – 'Adjusted' Flows (i.e., adjusted by the assumptions outlined in Table 9)
  - Table 9 – Future Adjustments to the BPSA Flows (i.e., represents the difference between the Adjusted and Unadjusted flows - based on assumed flow management programs and projects)
- The RWFFM utilizes a GIS sub-sewershed layer that overlays the Transportation Analysis Zones (TAZ) GIS layer where the demographic data is originally parced out. Those sub-sewersheds (and the demographic data that is then associated with them) are grouped into larger sewersheds and routed according to the wastewater plant they serve. Hence the sewersheds in Fairfax County can be routed to the Blue Plains, Noman Cole, UOSA, and/or Broad Run plants as appropriate.
- Dulles Airport and the Other PI Users' flows are treated separately and are included in the District's flow projections (per IMA)
- Noted that during this round of projections, the region-wide estimates of increased employment moving into this area were huge. In fact, it the agreed upon set of planning assumptions were that changes would be made as necessary to housing and zoning conditions such that these expected increases in employment would result in increased density within the region itself (i.e., rather than assuming that the housing growth would occur in places like West Va., or Baltimore).
- In Fairfax County much of that growth appears to follow the proposed Metro extension to Dulles corridor.

#### **Round 7.0 Flow Projections - Preliminary Findings**

- Based on the new demographic data, an additional 15.57 MGD is projected to be generated by Year 2030 (i.e., 'Unadjusted' flows) compared to the Round 6.3 forecast
- By assuming that Fairfax and LCSA would continue to divert all flows beyond their IMA allocations (i.e., the same logic used in the BPSA Study), another 8.55 MGD in diversions would be required for those two jurisdictions by Year 2030– beyond those originally identified in the BPSA Study.
- No changes were made to any of the other flow management assumptions (i.e., there was no rationale for changing any previous DC-WASA or WSSC assumptions).
- As a result, there would still be an additional 7.02 MGD projected by Year 2030 (i.e., 'Adjusted flows) compared to the Round 6.3 forecast
- The net impact on Blue Plains' flow projections - after accounting for all current flow management adjustments - would be that:
  - The plant's 370 MGD capacity would now be reached at approximately Year 2027 vs. 2030; and
  - At Year 2030 Blue Plains' would be over its 370 MGD capacity by 6.6 MGD.

- While these projections are based on the latest demographic data and best local planning assumptions, the Blue Plains Users will need to determine whether a net increase of 6 MGD to the BPSA as a whole, and a change of approximately 3 years to the 2030 timeline is of significance – or a reasonable variance given the known limits in accuracy of these broad planning level flow projections.
- Noted that although its flows are slated to be completely removed from the BPSA by December 2005, the Seneca WWTP is also projected to reach its current 20 MGD capacity by close to Year 2015; and its 26 MGD ‘planned’ capacity by Year 2030.

#### **Annual Flow Management Report**

- Data for the annual report is normally to be gathered in January and the report updated in February of each year.
- If there are any new and/or significant changes in flow management assumptions it is presumed that this information would also be incorporated into the 2005 annual report.
- Noted that so far there no additional flow management modeling scenarios have been identified for analysis.

#### **Discussion**

- Chairman Lake - We need to make some critical decisions about the proposed flows and the associated flow management adjustments as this important for the IMA discussions. Asked whether there are any other flow reductions that the region, WSSC or DC-WASA can reasonably expect to add to our current assumptions. If so, can we bring these numbers to the table for discussion?
- Mr. Benson – After a discussion, agreed with Chairman Lake that it was appropriate for the Blue Plains Users to adopt the latest flow projections (once the figures had been reviewed and vetted) in order to be using the most up-to-date figures for the IMA negotiations.
- Mr. Gans – Reported that DC-WASA’s consultants, Greeley and Hansen, are currently working on the Sewer System Assessment Report that is likely to identify additional flow management/reduction opportunities. The report that is due to DC-WASA staff this month, and will hopefully be completed by February 2006.
- Ms. Spano – If that report is ready for BPTC review in February that would still allow sufficient time to incorporate any new flow management assumptions, formally adopt the new flow projections, and still meet the stated commitment to share the update flow projection figures with the BPCAOs by March 2006. Noted that it would be critical for the Users to determine whether they can, at this time, agree to any other new/significant flow management assumptions that should be reflected in the ‘Adjusted’ flows (i.e., Table 8).
- Mr. Mohsenin – Noted that the proposed quantify of flows to be diverted from the PI begins to push their capacity to pump flows out of those basins.
- Mr. Fricke – Noted that historically the flow projections have overestimated flows (e.g., Blue Plains was originally expected to reach 370 MGD by year 2010, now we predict that will occur in Year 2030 – 20 years later).
- Ms. Warfield – Asked how to get additional information about the Prince George’s planning assumptions.
- **Ms. Spano – Agreed to have Mr. DesJardin of COG staff available at the next BPTC meeting in order to address more specific questions about the demographic data and planning assumptions.**

- **Chairman Lake – Asked that the BPTC members review the preliminary flow management assumptions noted in Table 9 (Round 7.0), and to be prepared to discuss and note any new assumptions that they feel should also be reflected in the flow projections - at the January 17<sup>th</sup> BPTC meeting.**
- **Ms. Spano – Agreed to speak to LCSA staff about the projected flows from Broad Run and to transmit the ‘preliminary’ flow information to the BPRC as a heads-up, noting that the BPTC will be reviewing the information at their January 17<sup>th</sup> meeting.**

**B. Anacostia Wastewater Pumping Station Hydraulic Study (HO #1)**

Mr. Fricke - Provided an update on the Anacostia Waste water Pumping station (WWPS) No. 2 Hydraulic Study:

- Anacostia WWPS has a safe pumping capacity of over 220 MGD, but its discharge is limited to 199 MGD under the IMA (i.e., 185 MGD WSSC and 14 mgd CD)
- As a result a number of overflows have occurred at the station over the past 10 years
- Remediation is required under the terms of WSSC’s pending SSO Consent Decree (signed Dec. 7<sup>th</sup>)
- The purpose of the study was to quantify the magnitude of the overflow events and to develop and evaluate alternative strategies to mitigate future overflows
- Some major overflow events occurred on:
  - January, 19, 1996 – estimated volume of 4.3 MG, peak 49.4, due to rain w/snowmelt
  - March 9, 1998, estimated volume of 1.4 MG, peak 23.7, due to heavy rain
  - September 16, 1999, estimated volume 2.0 MG, peak 31.6, due to Hurricane Floyd
  - February 22, 2003, estimated volume 5.3 MG, peak of 56.4, due to rain w/snowmelt
  - September 23, 2003, estimated volume 1.5 MG, peak of 25.1, due to Hurricane Isabel
  - July 4, 2004, estimated volume 1.4 MG, peak of 30.6, due to heavy rain
- Some alternatives considered to address the overflows:
  - No action
  - Increased pumping and participation in DC-WASA’s CSS LTCP
  - Off-line storage at the Anacostia WWTP site, a Hyattsville WWTP site, or a NE gravel trap site
  - In-line storage
- **The most feasible alternative is off line storage at the Anacostia WWTP site, with a volume of 6.7 MG and a peak flow rate of 56 MGD**
- Other aspects to consider include the optimization of the station performance
- In addition, the SSO Consent Decree requires SSES studies, condition assessments and/or trunk walks for the entire basin
- Next Steps: Further refinement of the proposed alternative, county coordination, community outreach, submittal of the plan to EPA/MDE and others, and inclusion in WSSC’s CIP
- **Agreed with Mr. Gans to coordinate the outreach activities with DC-WASA staff in the District boundary areas**

BPTC – Thanked Mr. Fricke for the presentation but did not indicate a need for any further updates.

**V. Virginia DCR Nutrient Management Regulations (HO #2a & b)**

Mr. Berger - Provided an update on the Virginia Department of Conservation and Recreation (DCR) Nutrient Management Regulations as described in the staff letter and attachments. (HO #2a).

- DCR has finalized changes to its Nutrient Management Training and Certification Regulations. The final regulations were published in the *Virginia Register* on December 12, 2005 and will take effect on January 11, 2006.
- The controls are greatest on ‘sensitive’ sites (which constitute approximately 70% of Blue Plains’ current land application sites). The key nutrient issue continues to be with phosphorus.

- The regulations will have a definite impact on land application in Virginia as conducted by Blue Plains' contractors. However, the economic impact of the changes has been minimized by DCR's response to the comments from the BPRC, the Virginia Association of Municipal Wastewater Agencies (VAMWA) and other parties.
- The question facing generators and potentially other parties is whether to challenge DCR's final regulations either through the General Assembly or the state court system. In either case, an appeal would have to be submitted within the next month.
- Two new contracts will be bid in the spring of 2006 and potential cost impacts will likely be noted in the pricing.
- Noted that COG and DC-WASA biosolids program staff recommend that the Blue Plains Users continue to track these efforts but not propose to overturn these regulations - because although DCR did not accept every comment made by VAMWA or the BPRC, it did modify its regulations in a way that should minimize the financial burden of compliance - and these regulations are likely the best compromise possible.

**BPTC - Agreed with staff's recommendation that the BPRC should be informed of the status of these regulations and that the BPTC does not recommend that any further formal action be taken regarding these regulations.**

Mr. Berger – Briefly reviewed the FY 2007 BPRC research priorities (HO #2b) and noted that as usual, all current and proposed projects reflect and support current DC-WASA biosolids program priorities and projected cost estimates.

Mr. Peot - Briefed the BPTC on the 2005 outstanding biosolids management award that was presented to Blue Plains by EPA at the annual Water Environment Federations' conference held here in Washington this November. This award noted DC-WASA's ongoing quarterly assessments, inspections, the formal EMS program, and especially the BPRC-supported biosolids research program. He also thanked Mr. Berger specifically for all his hard work over the past year and noted his significant contributions continue to help support the program and these efforts.

BPTC – Congratulated DC-WASA staff and recognized Mr. Peot in particular for his hard work in achieving this accomplishment. Also thanked Mr. Berger for his contributions to this effort.

## **VI. Standard IMA Updates**

### **Note: 'Actual Flow'**

Each jurisdiction included their current 'IMA Actual Flow' figure as of the end of November (when available) in their jurisdictional reports.

#### **A. DC-WASA – Walt Bailey**

##### **Overall Process/Operations**

- Blue Plains treated an average flow of 299 MGD for November. The annual (12 month rolling) average for November was 328 MGD.
- Plant operations are operating normally and in compliance with all permit conditions.

##### **BNR Operations**

- November TN concentration was 5.6 mg/L with a rolling annual average of 5.2 mg/L.

##### **Biosolids Management & Land Application Programs**

- November production was 1,423 wtpd; with a rolling 12-month average 1,252 wtpd.

**CSO LTCP Implementation**

- The consultants (CDM) are working and are getting up to speed on the process.

**NPDES Permit Appeal Process**

- Mr. Dave Evans, who is assisting DC-WASA counsel with this appeal, has been meeting with EPA. There is significant interest to resolve this case in order to re-open the permit. They are still in the appeal process with a new deadline of January 26, 2006. Discussions are still underway.

**B. WSSC – Craig Fricke**

User	Month	Monthly average flow	Rolling 12-month average flow	IMA Actual Flow (month)
WSSC to BPSA	November	126 MGD	130 MGD	136 MGD (December 2004)
Seneca pump-over	November	0.4 MGD	1.7 MGD	4.8 MGD (December 2004)

- The Rock Creek storage facility was not used during the month of November
- Highest peak flow to Blue Plains from the Rock Creek trunk sewers was 43.8 MGD (versus the IMA limit of 66 MGD) which occurred on Nov. 24<sup>th</sup>
- Highest peak flow to Blue Plains from the Anacostia pumping station was 129.0 MGD (versus the IMA limit of 199 MGD) which occurred on November 3<sup>rd</sup>
- Any remaining, minor, Seneca flows to the BPSA are projected to be completed ended by the spring of 2006

**C. Fairfax County – Shahram Mohsenin**

*Note: November flow data was not available at the meeting and was subsequently submitted.*

*October flow data reflects data submitted after the October summary was prepared.*

User	Month	Monthly average flow	Rolling 12-month average flow	IMA Actual Flow (month)
Fairfax to BPSA	October	28.802 MGD	27.191 MGD	27.191 MGD (October 2005)
Fairfax to BPSA	November	27.626 MGD	27.384 MGD	27.38 MGD (November 2005)

- Rolling annual average rainfall as of the end of October was 46.67 inches.
- Rolling annual average rainfall as of the end of November was 44.09 inches.

**VII. Old Business**

**A. DC-WASA Projects – R. Gans**

**1. Billing Verification Meters**

The project is going forward with a few billing meters and plans to share additional details as they become available.

**2. DC-WASA Emergency Operations Plan**

Preliminary scenarios are being reviewed internally. It may be another two months before a draft plan is ready to be shared with the BPTC.

**3. Governance Study**

There are no updates to report at this time.

**4. Blue Plains Facility Study**

*To be filled in by Tanya – based on my notes.*



**B. Blue Plains Nutrient Report (draft) – T. Spano**

Ms. Spano – Briefly reviewed a preliminary draft copy of the Blue Plains Nutrient Reduction Analysis Report. Asked the members to provide feedback on this preliminary version for the January 17<sup>th</sup> BPTC meeting. The document includes some of the additional analysis and alternative load contribution graphs that the BPTC previously requested. It still needs some background capital cost information and some text regarding loading assessments, but is ready for initial comments and suggestions.

**C. IMA Renegotiation Process: Update – T. Spano**

Reported that all members of the negotiation team have now been identified, and the first IMA Renegotiation session will take place at COG on January 31, 2006 from 10:30 a.m. – 1:30 p.m. (Rooms 4&5). There are no proposed distinctions to be made between the team members for each jurisdiction/agency; rather it is the issues and decisions that may be either technical and/or policy in nature.

**Valuations Study**

**VIII. New Business**

**1. BPRC's Annual Input on DC-WASA's FY06/FY07 Budgets – T. Spano**

Mr. Lake suggested that all members contact Michelle Coen (spelling) to obtain a copy of the FY06/07 Budget. This was discussed at a previous meeting held at DC-WASA; all members are aware of the proposal. Mr. Lake supported the notion of sending out an email from the BPTC supporting the proposed budget.

**2. Next BPTC Meeting**

The next BPTC meeting is scheduled for **January 17<sup>th</sup> (12:00 p.m. – 2:00 p.m.)** – at COG. Potential BPTC agenda items may include:

• **BPSA & PI Flow Mgmt. Programs:**

- BPSA & PI Flow Management Program - Continue discussion on potential PI modeling scenarios
- Annual (2005) Flow Management Report – Continue to identify any additional information needs and agree on a focus and schedule for preparing the report.
- Blue Plains Evaluation Study

• **DC-WASA Emergency Operations Plan** – deferring until February 2006

• **Blue Plains Nutrient Report (HO #3)** – Review and agree on any edits/additions to draft report

• **Updates** (as reqd.): WAD Residuals Study, DC-WASA Governance Study, Blue Plains Facility Study, DC-WASA's Billing Verification Meters Project, etc.

**3. Upcoming BPC Meetings:**

The BPRC's November 29<sup>th</sup> meeting is being rescheduled to January 24, 2006.

**IX. Adjourn**

The meeting adjourned at 1:30 pm.

**MEETING MATERIALS**

1. BPTC Meeting Agenda – December 13, 2005
2. BPTC Draft Meeting Summaries:
  - a. October 11, 2005
  - b. November 22, 2005
3. BPSA Updated Flow Projections Package (*handed out during the meeting*)
  - a. Graphs of Round 7.0 demographic data per jurisdiction
  - b. "Unadjusted" BPSA Flow Projections

- c. “Adjusted” BPSA Flow Projections (*based on flow management assumptions as of 12/8/05*)
- d. Email from T. Spano – December 12, 2005 – Summary Points of Flow Projections Package

**HANDOUTS (HO)**

1. “Anacostia Wastewater Pumping Station Hydraulic Study” (*WSSC presentation*)
2. Blue Plains Biosolids Management Program:
  - a. Update on Virginia DCR nutrient management regulations and impact on Blue Plains’ biosolids land application program (*staff memo*)
  - b. FY 2007 BPRC Research Priority Recommendations (*Power Point slides*)
3. “Blue Plains Nutrient Report” (Draft)
4. Table 7-9 - BPSA Flow Projections