CHESAPEAKE BAY PROGRAM
WATER QUALITY GOAL IMPLEMENTATION TEAM
September 21st, 2009 Conference Call

SUMMARY OF DECISIONS, ACTIONS, AND ISSUES

Critical Period – Andrew Parker
ACTION: Andrew Parker will provide John Schneider with the flow represented by these percentages.

Review of Base Year and Update on 5.2 Scenarios – Gary Shenk, Jing Wu
FEEDBACK: The majority of the partner representatives prefer basing the TMDL on a base year of 2010 and using design flows for wastewater treatment plants.

Review of Options Analysis for Target Load Methodology – Gary Shenk, Rachel Streusand
DECISION: WQGIT approved considering only the 2 line approach to target load methodology for the September face-to-face meeting.
FEEDBACK: WQGIT members agreed to an emphasis towards using a target load methodology with a straight line or a z curve at the September face-to-face meeting.
ACTION: Lee Currey will work with Gary Shenk to consider the analysis of the risk factor and provide further quantification at the face-to-face meeting.

Review/Approval of Enhanced Program Implementation Level (EPIL) Scenario Definition – Jeff Sweeney
ACTION: Jeff Sweeney will update the information on percent implementation for each scenario.

Review/Approval of Air Allocation Plan – Lewis Linker
DECISION: WQGIT approval to continue on plan for air allocation.

MINUTES

Critical Period – Andrew Parker
Feedback Requested: Anything in presentation that would change majority trend towards 93-95 critical period?

- At face-to-face will present an analysis using each three year period 91-2000
- Same presentation as last call to provide background; additional analyses begin on slide 22.

Slide 23

- Not a significant change from Weibel method
- Higher resolution in terms of return period

Slide 24

- Didn't have time to do without using the drainage area ratio method

Slide 25

- R^2 based on correlation between flow and water quality
- Slight change, some higher return periods

Slide 26

ACTION: Andrew Parker will provide John Schneider with the flow represented by these percentages.

Slide 27

- LOESS de-trends over shorter periods, rather than the whole period
- Used more frequently by USGS
- Significantly different results for two methods

Slide 28

- 96-98 flow less extreme with linear de-trending

Slide 29

- 96-98
- Bob Koroncai explained that the policy question is what return frequency is acceptable or protective enough. We have so much data, but we are forced to make a decision. EPA does not have any guidance on this. We looked into what the states used, and there was a lot of range, but the states generally looked at the worst period in the calibration data, which is often only 2-3 years worth of data. Otherwise, if it's low-flow type TMDL, states will use a worst 7 day in a 10 year period (7Q10).

Review of Base Year and Update on 5.2 Scenarios – Gary Shenk, Jing Wu

Slide 8

- Looked at edge-of-stream compared to delivered loads. In places like PA and NY, there is a lower total delivered load in the design flow than in current flow. Reason for that is that we added a little bit more N, but 20-25% more P because the concentration of P in the No Action is so high. This additional leads to further chemical reactions, we lose N when we add so much P.

Slide 9

- Percentage change between No Action and E3 is much higher for P than N.

Slide 10

- This is up to 10% change in some states.
- Pat Buckley, PA DEP, inquired if this is beneficial for PA and Gary Shenk, EPA, explained that if PA wants the highest possible load then PA would prefer the 1985 load.

Slide 11
- Could also run one without the P ban, since that would change delivered load, but otherwise, this is not going to change.

Slide 12
- This came from state responses through the Reevaluation Technical Workgroup and work from Aileen Molloy from TetraTech.

Slide 14
- Fixed problem in last bullet.

Slide 15
- 1985-2002 developing more forest land.
- 2002 to 2008 developing more agriculture land.
- Part of this is from difference in the Agricultural census; we will do a change in 5.3 to better reflect this.

Slide 17
- Base year is important, not as important as design vs. current wastewater flow
- Discount 1985; look more at 2002, 2010, until we have the agricultural change in phase 5.3.

Discussion:
- Given that we are not seeing dramatic changes between base years, is there disagreement with moving forward with the 2010 base year? Design vs. current vs. 1985 flow for WWTPs?
- In 5.3 we will bring in agricultural census 2007 data and land use change, will extrapolate several years forward instead of going all the way back to 2002.
- Ron Entringer, NY DEC, stated that they are not ready to make this decision; this is not what they expected to see. For edge of stream loads ours are relatively flat and other states are going up quite a bit. For MD and VA, growth allowed in permits is larger than our total loads.
- Which options should presentations be developed on?

NY – 2002 base year, current flow
PA – as much as possible for all various design flow and years, can't make recommendation without Bob Yowell
WV – I don't understand why we should be looking in the past. We need to represent what's out there now. 2008 or 2010 design flow. Would recommend 2008 if 2008 has more comprehensive info about land use
VA – 2010 base year, design flow
MD – point sources design flow, 2010 base year, need to start with what is there now, TMDL completed in 2010
DC – design flow, 2010, but that doesn't mean you will use concentrations for 2010, No Action would be 1985
DE – 2010, design flow
CBC – 2010, design flows would be most precise outside of 2008
Region II – not sure, as many as possible

FEEDBACK: The majority of the partner representatives prefer basing the TMDL on a base year of 2010 and using design flows for wastewater treatment plants.

<u>Review of Options Analysis for Target Load Methodology</u> – Gary Shenk, Rachel Streusand
- Number of lines: 2 lines most agreeable, negative for 4 line response
- Shape of line: strongest preference is for straight. One could not live with a straight line. Most negative feedback was for hockey stick

- Max of wastewater: no real consensus. Some preference for 93%
- Slope of line: highest should be 20% more than lowest. Negative feedback for 5% to 0% slope
- Overall: 2 straight lines, wastewater not over 90 of e3, slope should be so that highest is 20% more than lowest
- At least one jurisdiction that could not live with all choices for each question.

Q1-Q4 Discussion:

- Russ Perkinson, VA, expressed that he don't see much use for keeping options that are very far apart on the table. He supports keeping 2 and 3 on the table, but even with that there is a big difference in response.
- Gary Shenk, EPA explained that cutting analysis down to two line option would leave time for other analyses.

DECISION: WQGIT approved considering only the 2 line approach to target load methodology for the September face-to-face meeting.

Q5-Q7 Discussion:

- All options can be done on the fly
- Ron Entringer, NY DEC, preferred the Z curve, but could live with straight line.

FEEDBACK: WQGIT members agreed to an emphasis towards using a target load methodology with a straight line or a z curve at the September face-to-face meeting.

Understanding the Decisions in the Bay Allocation Process – Lee Currey, MDE

- Trying to understand the implication of each decision in options analysis
- This is set up to look at each basin jurisdiction independently

Slide 7

- 100% likely to meet 2010 goals because we already have
- 100% failing if allocation set at 100% of E3
- 25% is arbitrary. Curves fit on three points, 100% achievable, 100% failure, assuming 25% likelihood of failure for MEF or other definition; have to look at it on a relative risk of failure
- This tool is more helpful with Q3, the number of lines. It automatically assigns levels to different source sectors. We are not proposing any new methods, just trying to make the decisions on the table easier.
- Bob Koroncai stated that with the graphical approach that would relate allocation to the basin to the relative impact from that basin, it would seem that the basin with a higher impact that they naturally are going to have a higher risk of failure and vice versa and your methodology could quantify that. So maybe we want to choose a point source line that has a 90% chance of success and another sector that would have a 90% change of success and this would come up with the delta.

ACTION: Lee Currey will work with Gary Shenk to consider the analysis of the risk factor and provide further quantification at the face-to-face meeting.

Review/Approval of Enhanced Program Implementation Level (EPIL) Scenario Definition – Jeff Sweeney

- Point sources average 4mg/l in existing Tributary Strategies (TS)
- Not going to give weight to Full Voluntary Program Implementation scenario from 2003 allocation
- EO general on NPS, 180 day report will have more detail
- Going to be a bit on the aggressive side, don't know where it falls in spectrum of existing scenarios

- This is subjective and we could define another version that would not even get us to TS
- We are hoping to get this finished and have loads at the face-to-face
- CAFOs likely to be medium and large
- State specificity is in what practices have been submitted. Implementation level will not vary between states.

ACTION: Jeff Sweeney will update the information on percent implementation for each scenario.

Review/Approval of Air Allocation Plan – Lewis Linker

- 2020 Max feasible scenario as an example: doing what we've seen in atmospheric deposition
- Run with 12k nested grid
- 2020 Max feas is lowest load, 2030 increase due to population growth
- 85 to 2002 reduction is due to atmospheric reduction rules
- CAIR is beyond what was proposed in air reduction in 2003 allocation, genesis of 8million lb reduction in 2003 assessment
- Based on WQGIT discussion, EO reports, etc. there is a consensus within Chesapeake Bay Program that an atmospheric deposition allocation should be attributed to EPA
- Draft EO report says that EPA could/would establish air reduction
- Direct deposition: complete mass balance of the Bay is appropriate. Would include in 1985 scenario: 26 million lbs TN contributed directly to the Bay; could be direct allocation to EPA
- Indirect loads to watershed

CORRECTION: Indirect Atmospheric Deposition Loads are an "Assumed Load Allocation" to EPA. We should consider in an assumed load allocation that the EPA would establish an assumed allocation which would involved reductions in atmospheric nitrogen deposition, and the allocations to states would assume the reductions that EPA would be responsible for meeting would be achieved,. This would be also reflected in the 2 year milestones.

- Ocean boundary reduction: revisit when we get some results
- Looking at an LOT CMAQ run, reductions in NOx and ammonia, setting up meeting with air colleagues, model will be available in spring

Discussion:

- We will have further discussion at a later date with more info available. Are people comfortable with EPA assuming direct and indirect load, any "beyond CAA reductions" by a state would go to state, and to credit load reductions to coastal ocean and see what that means for load to the Bay?
- Lewis Linker explained that a direct allocation is a lb/mass allocation as any of the other partners would have. An assumed allocation is the loads from different land uses are a part of the state allocation, but it is predicated on the idea that EPA will reduce atmospheric deposition by a certain amount by a certain date and the reduction will allow the state to achieve its load.
- The state making the "beyond CAA" reduction would be credited, not the receiving state. However, it would likely be a small credit as only 50% of what goes up comes down in the watershed.

DECISION: WQGIT approval to continue on plan for air allocation.

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