CSO Long Term Control Plan Development
Citizen Advisory Committee Meeting 3
Monday, March 30, 2009
1:30pm

In Attendance: Leif Engstrom, CDRPC; Justin Schievelbein, City of Albany; John Kosa, City of Albany; Harry – City of Albany/Rensselaer?; Marybeth Pettit, City of Rensselaer; Linda VonDerHeide, Rensselaer County; Joe Cuniff, CANA; Mark Kestner, Town of Brunswick; Tom McGrath, City of Cohoes; Nick Ostapkovich, City of Watervliet; Neil Bonesteel, City of Troy; Sean Ward, Village of Green Island; Dan Durfee, CDM; Mike Miller, CHA; Ray Rudolph, CHA; Dan Loewenstein, MPI; Greg Daviero, MPI; Paul Wolfgang, Albany Aquaducks; Andrea Dzierwa, DEC Region 4; Derek Thorsland, DEC Region 4; Laura DeGaetano, Albany County; Nancy Heinzen, Stormwater Coalition of Albany County; Rich Lyons, ACSD; Tim Murphy, ACSD; Garry Nathan, City of Cohoes; Gerry Moscinski, RCSD; Chretien Voerg, Town of Colonie; Cheryle Webber, DEC; Rebecca Troutman, Riverkeeper; Julie Elson, New Scotland/Woodlawn; Donna Reinhardt, CDRPC.

1. Welcome and Introduction

Leif Engstrom welcomed everyone to the third Citizens' Advisory Committee Meeting. Everyone introduced themselves to the group.

A brief introduction was provided to the 6 communities in the project. CDRPC is the project manager for the Long Term Control Plan project that is required under the communities' SPDES permits. The APJVT consists of three engineering firms: Clough Harbour, Malcolm Pirnie, and Camp Dressler & McKee.

There are several components that are part of the scope of work for the Long Term Control Plan development:

- Public Participation Plan – which you should all have received;
- Receiving Water Conditions Assessment – which will be reviewed today;
- Combined Sewer System Mapping and Digitizing - which will bring together all of the paper maps and information into a usage single digital database;
- Combined Sewer System Flow Monitoring - what is going through the pipes, when and how much; Combined Sewer System modeling – creating a model to predict what will happen under different circumstances;
- Wastewater Treatment Plant Wet Weather Capacity Studies – to figure out how much combined sewage the Waste Water Treatment Plants can accept under different conditions
- Developing and evaluating the different CSO control alternatives
- Funding and financial impacts – including affordability evaluations
- Implementation Schedule
- Report Preparation

Mapping and Digitizing is complete. The CSS Flow Monitoring is complete, although the analysis and report has not yet been finished. 45 locations within the CSS were

monitored instead of the approved 25, for a better understanding of the CSS. The CSS modeling calibration is almost complete. WWTP wet weather capacity studies are almost 70% complete. We are just beginning to identify potential CSO controls ready for analysis. We have brought in some experts on Green Infrastructure to assist with identifying potential controls. We are in the early stages of data collection for funding and affordability analysis. The implementation schedule won't start until we begin settling on control technologies. The final report is currently due in September 2009.

2. Receiving Waters Conditions Assessment

Greg Daviero gave a PowerPoint presentation on the receiving waters assessment (posted on CDRPC's website). The sampling plan was recapped. The APJVT needed to know the background water quality and the impact of combined sewer overflows on the River before we can look at how to mitigate.

a) Hydrodynamics

The Hudson River flow is strongly regulated by the power authorities and flows show little correlation with rainfall. The Mohawk River flow shows more response to rainfall.

The Sacandaga Reservoir is affecting the Hudson River; the flow pulses and this pulse in the flow can be seen downstream. The Hudson River is also affected by tidal flows south of the federal dam. The graph showed little to no impact on flow from rain events; when there was an increase in flow during rain events it was due to changes in the Mohawk River flows.

b) Bacteria Data

NYS Standards for class A, B or C waters:

- Fecal Coliform geometric mean of 5 samples < 200 cfu/l00 ml
- EPA proposed standard E Coli: geometric mean of 5 < 126 cfu/100 ml
- Single E.Coli sample maximum < 235 cfu/l00 ml at a beach location.

Dry Weather Sampling Results

The bacteria levels showed a direct correlation between both Fecal Coliform and E.Coli. Moreover, the River showed little difference in bacteria concentrations between samples taken from both sides of the River. Samples also showed that the Rivers entering the area are generally in compliance with Fecal Coliform and that most transects meet the Fecal Coliform standards. There were significant bacteria counts, exceeding compliance standards at Patroon Creek, while the Wynantskill and Poestenkill generally exceeded the Fecal Coliform standards and the Normanskill and Mill Creek exceeded the Fecal Coliform standard during the last sample period.

Generally testing showed that by the time we test at the Dunn Memorial Bridge we are no longer in compliance. Bridge Street also has an issue; E.Coli is within the standard but the count is getting high on Fecal Coliform. The River shows high assimilative abilities

and at the beach sites we are in compliance with Fecal Coliform.

Testing showed an anomaly at one point on June 4.

Waste Water Treatment Plant Samples for bacteria showed Fecal Coliform concentrations that were very high (as expected). This shows that the River has high assimilative abilities regardless of the flow.

Implications of dry weather results on the LTCP
The River is well mixed and as such a 1 dimensional model for Fecal Coliform loading can be used. We can use the model to assess WWTP disinfection and the effects of the elimination of the Patroon Creek, Wynantskill and Poestenkill bacteria. We learned that WWTP disinfection and eliminating the tributary bacteria loadings would probably go a long way to reducing Fecal Coliform in the river.

During dry weather, the beaches are in compliance with Fecal Coliform. The APJVT was surprised that the bacteria counts were so low.

Wet weather Sampling Results
Results show that .25 inches of rain is more than enough to trigger a CSO.

In wet weather the numbers were not as good and we do have water quality violations, but even during wet weather the beaches are in compliance with the geometric mean test. The larger the storms, the higher the Fecal Coliform levels – as expected.

Bridge Street and from Dunn Memorial Bridge onwards, have problems with bacteria loads, but this decays pretty quickly, so that we are in compliance by the time the water reaches the beach sites; if we use the geometric mean test. E. Coli showed a single sample exceeded the maximum. Cohoes pumps were down 7/13-7/15/08 -which is where we see a spike in bacteria at Bridge Street.

The tributaries are close to the bacteria limits in dry weather and exceed the standards during wet weather.

c) Field Measured Parameters: Temperature, Conductivity, DO and pH
Temperature, conductivity and pH are all within typical riverine and tributary ranges. The Hudson River showed unseasonably low DO in the spring, but no apparent DO demand throughout the sampling area. We think that the amount of water released upstream by the Sacandaga Reservoir affects DO.

Conductivity -dissolved solids -tests showed something in the Mohawk River as it enters the testing area. However, conductivity is within half of the limit by the time it mixes with the Hudson River and so there is no issue.

In wet weather events, DO is around 9mg/l, with 5mg/l the State standard. During wet weather the DO significantly increased. During wet weather the tributaries had several

samples below the minimum for a single sample -all tributaries seem to have one low DO sample at some point in time.

CSOs were sampled for Fecal Coliform, E-Coli, TSS, BOD, Ammonia Nitrogen, TKN, and Phosphorus. The data was collected so that we know what kind of loads are being released from the collection system and what kind of impact they may have on the 1D model. The results were generally consistent and typical for CSOs but the concentrations diminish with flow due to the larger influence of stormwater.

Implications of dry weather results on the LTCP

The results are somewhat similar to what we found with the dry weather sampling. The River is well mixed and a 1 dimensional model can be used for Fecal Coliform loading. Despite significant dry and wet weather loading, the areas where bacteria standards are exceeded are spatially small around the south side of Albany. The beaches are in compliance with the geometric mean but there were some single samples that were high. We think that significant water quality benefits can be obtained by dry weather improvements.

3. CSS Modeling Update

The calibration of these models depended on the collection of precipitation and flow data. Additional flow meters were added to increase data. Data was delivered in beginning of November 2008 and we are still analyzing and using this data for calibration. Simulations are being performed.

4. Future Activities

1 dimensional bacteria model is under development.
CSS modeling calibration meeting will occur probably in May 2009.
Public Participation is on-going.

5. Questions

Q: Plan targeted .25 to .75 rainfall, yet in a chart there was a 1.13 event. Did you actually sample at every rain event or where there some 2 or 3 inch events that you didn't sample and why would you not sample them?
A: At outset of plan didn't know how much precipitation would create a CSO. Turned out that at .25 were able to lower it as small amounts caused a CSO. We also had a problem due to need for 72 hours of dry weather before a rain event – we didn't have enough dry time for some events. Didn't know how much rain we'd get, just when it rained and met dry time requirements we sampled. Prefer to get range of events. Did not initiate sampling until we saw overflows and what we saw at one was generally consistent throughout the system.

Q: On a sampling chart from Big C the samples didn't look to be consistently spaced – does this mean that overflows stopped and started again?
A: Sometimes overflows did stop and start.

Q: What causes low DO?

A: First spring value – what was coming into the area was low too. We are still trying to understand the DO. But those 5 values seem to be correlated to the flows coming in. But a comprehensive study hasn't been done.

Q: Will all sampling data be available online?
A: Not yet, but it will be eventually.

Q: You said dry weather improvements would be helpful to wet weather events, Dry Weather Overflows are illegal and it's a big concern - but does the data really point to that – will the public be able to look at the data and see that dry weather improvements will significantly abate the wet weather issue?
A: There were no Dry Weather Overflows; there were only Wet Weather Overflows. The Sewer Systems never overflowed during dry weather at the CSO points to our knowledge. The one discharge was a pumping bypass, which was reported to DEC. We are creating a tool that will help us assess that hypothesis and whatever recommendations come out of the plan.

Q: Is the GPS satellite images that was shown at the last meeting available yet and will this allow us to see what is causing the Patroon Creek bacteria?
A: No, it is in interactive tool for engineering. Any determinations would be user driven. The specific locations that were sampled are public documents that are part of the sampling plan.

Q: Vloman Kill – is that where one of the CSOs is? It stinks.
A: That is Town of Bethlehem. They don't have CSO points and so they are not part of this study.

Q: Where was the Patroon Creek sampled?
A: It is in the Plan. Off of Tivoli Street.

Q: Can the flow monitoring locations be provided?
A: Flow monitoring locations are on the Plan.

6. Public Participation Update

Next CAC meeting will be in advance of the 2nd public meeting, which will review all the tools being developed for Control Alternative Analysis.

Next CAC will review CSS modeling.

3rd Public Meeting will start to discuss control alternatives.
4th public meeting will be a presentation and discussion of the LTCP.

Meeting adjourned.