

Summary Meeting Notes

Tryon Creek Wastewater Treatment Plant Facilities Plan CITIZENS ADVISORY COMMITTEE

September 13, 2012
4:00 – 6:00 p.m.
Portland Building

CAC MEETING NO. 5

CAC in attendance: Al Iverson, Harvey Lockett, Tom Badrick, Mary Beth Coffey, Rich Martin, Bruce Brown, Dan Vizzini

Staff in attendance: Jim Brown, Linda Macpherson, David Allred, Dave Green, Michelle Burkhart, Dan Garbely, Ben Schonberger, Tuong Nguyen, Scott Gibson, Steve Behrndt, Erica Rooney

Public attendance: Charles “Skip” Ormsby, Margaret Ormsby

1. Welcome and Overview of Meeting Objective

Linda began the meeting at 4:03 p.m. She explained that the purpose of the meeting was primarily to present information pertaining to the design criteria the CAC will use during the evaluation process. Linda noted that each of the presentations will conclude with information about how the specific issue relates to the evaluation criteria. This can now be expected at the end of each presentation.

Dave Green introduced the three presentations and described how they fit into the overall facilities planning process.

2. Condition Assessment Review

Scott Gibson, principal engineer at the City of Portland’s Bureau of Environmental Services (BES), described BES’s asset management program. BES began its asset management program in 2007/2008. The concept of asset management was a product of BES’s 2008 Strategic Plan. In essence, it is a means for BES to identify and prioritize projects by managing the risks of failure (i.e., to ensure service and safety to customers).

Scott described four categories of failure:

- Expecting a new level of service from an asset

- Economic failure (i.e., an asset costs more to repair than to replace)
- Capacity failure
- Mortality failure

Bruce Brown asked whether risk is related only to concerns of moving and processing waste. For example, can the process take into consideration the risk of a community not having enough water? Scott replied that the triple bottom line evaluation in a sustainability analysis is intended to get at these issues, and it does also include an evaluation of risk to the community. Steve Berndt noted the importance of defining the level of service to be provided. If there is a community need for water, without a level of service that defines the need for reuse water, BES cannot measure the risk of including it. But if a level of service is defined, then the risk can be evaluated. The issue must be in the BES mission. Dan Vizzini asked whether something like reuse could be considered because it involves an alternative to discharge. Steve replied that it could.

Scott Gibson noted that the focus is on funding projects that reduce risk. Once BES gets into capital planning and programming, the Capital Improvement Plan will have larger projects of more than \$250,000 and, separately, more routine repair, replacement, and maintenance projects (RRM).

Dan Garbely/CH2M HILL, who is leading the CH2M HILL task for condition assessment, introduced himself and described the condition assessment work, both process and results. Dan described how a condition assessment is done. He noted that it builds on the asset management work just described but also includes review of historical documents, an onsite investigation, and discussion with operations and maintenance staff. There is a physical assessment that covers structural, mechanical, architectural, electrical, and high-level instrumentation and control components, plus a desktop underground evaluation.

Mary Beth Coffey asked whether “fair” represents a quantifiable score. Dan Garbely responded that the profession does not have specific guidance on this point. Dave Green noted that BES is working to define a grade of 1 to 5. Failure is a difficult concept because the plant needs to meet its permit requirements every day. This means that it must perform, and there have been quite a number of upgrades to ensure that this happens. The point of a facilities planning condition assessment evaluation is to determine whether the plant components are likely to need investment within the 30-year planning horizon. Harvey Lockett pointed out that evaluation needs to emphasize that the plant must operate in perpetuity. Dave Green responded that part of the work is to identify components at the plant that are at the end of their useful life.

Dan Garbely described specific observations of some of the major unit processes.

Bruce asked whether cracking at the primary clarifiers was susceptible to failure during a seismic event. Michelle Burkhart explained that the assessment did not include a detailed seismic analysis; instead, it identified obvious areas of concern. Typically, water-bearing structures still meet even current seismic criteria as the water-bearing loads are governing.

Linda Macpherson asked whether primary effluent pump stations are typically located in buildings. Jim Brown responded that they can be. The plant includes a primary effluent station to lift flow from the primary process to the secondary process. The PE pump station was added in the expansion in 1976 when the secondary expansion was constructed (at a higher elevation).

Al Iverson asked about the condition of the anaerobic digesters. Dan and Jim responded that they are in pretty good shape. They are functioning well, and the mixing and heating system is working well. Tuong Ngyun noted that, compared to other plants, the facility is lightly used since only primary sludge is sent to the digesters at TCWTP.

Al also asked about plant capacity for solids processing. Jim replied that treatment is not an issue because the solids are taken to the Columbia Boulevard Wastewater Treatment Plant for processing and final treatment. Steve Behrnt clarified that this is not an issue so long as solids continue to be managed in the current fashion. Dave Green explained that the alternatives evaluation will likely consider a range of alternative solids processing options.

Rich Martin asked whether it is fair to say that the headworks and grit system are in a fair to poor condition and that the other areas are in better condition. Dan confirmed that that is a reasonable statement.

Rich also asked whether any thought has been given to incorporating grit into the new, enclosed headworks or to moving the headworks up in the hydraulic profile. Dan stated that both these possibilities have been considered, and that relocating the headworks would likely be part of the alternatives evaluation.

Bruce Brown asked whether BES is considering replacing pumps with more efficient units. Dan said that this is part of BES's asset management program, while Jim Brown noted that most of the pumps have been replaced with premium efficiency motors. The blowers represent a good example of replacement of investment in highly efficient systems.

Steve Behrnt commented that it is not a foregone conclusion that primary clarifier concrete will need to be replaced within the planning horizon.

Dan Vizzini requested a color-coded map of the site by condition that would provide a good summary of the presentation.

3. Presentation: Peak Flows

Michelle Burkhart explained that peak flows are a big issue because of inflow and infiltration (I&I) versus the treatment cost curve and showed how there is an optimal amount of investment in each. She explained that the basis of flow projections is the BES System Plan, BES Flow Memo, and Lake Oswego Water Collection System. Very sophisticated computer models have been prepared to model these current and future flows.

In response to a request from Bruce Brown, Michelle defined total flow as base flow (i.e., sewage) plus Inflow (i.e., flow from downspouts) and Infiltration (i.e., flow from leaky pipes and groundwater). During a typical spring rainy day in the Pacific Northwest, it is not uncommon to see peak flows that are 6-10 times dry weather flows. Tryon Creek typically has a 7x peaking factor. Only 10-15 percent of the flow is actually wastewater during these peak flow events.

Bruce asked about the ratio between inflow and infiltration and commented that it seems like inflow would be easier to control. Jim Brown stated that the ratio depends greatly on the individual system. Scott Gibson explained that sometimes it is easier to repair pipes than to disconnect downspouts on hills, etc.

Michelle described the I&I plans in the BES system and showed the range of peak flows for 0 to 25 percent I&I reduction.

Dan Vizinni commented that the range was only 4 million gallons per day (mgd), and it may not pencil out to invest in the collection system.

Bruce asked whether it makes more sense to reduce the base flow through water conservation techniques. Linda Macpherson asked whether reducing the base flow might cause more odor in the collection system. Michelle Burkhart responded that it might.

Michelle described the Lake Oswego approach, in which I&I reductions are used to manage the capacity of the collection system without increasing treatment costs at the plant.

Dan V. asked whether this approach could reduce Lake Oswego's contribution to capital improvements. Jim Brown said that the current Intergovernmental agreement (IGA) stipulates that capital costs be shared based on Intergovernmental Agreement. Scott Gibson mentioned that the approach might change the contribution of the operating costs.

Lake Oswego's I&I approach really is focused on reducing sewer system overflows (SSOs) above the Lake Oswego Interceptor System (LOIS).

Michelle noted that both cities have decided to convey a 25-year storm to the plant, even though an overflow from a 25-year storm is allowable in the collection system. Jim Brown clarified that although that is true for the collection system, once the flow reaches the plant no overflows are allowed. Michelle stressed that since the plants are prohibited from overflowing, how to manage peak flows through the treatment plants is a significant issue.

4. Presentation: Land Use Permit Process

Ben Schonberger of Winterbrook Consulting introduced himself and provided a general overview of the land use process. He noted that most criteria are general and provide a lot of discretion to the reviewing bodies. Dan V asked whether an appeal of the design review commission (DRC) could be made to the Land Use Board of Appeals (LUBA). Ben explained that the appeal goes to the Lake Oswego City Council and that the Council decision could then be appealed to LUBA.

Dan V asked whether areas of the plant are currently within sensitive land areas. Jim Brown responded that, yes, the Tryon Creek pump station, blower building, primary effluent pump station, and parts of the primary clarifiers and aeration basins are already within sensitive land areas.

Bruce Brown asked whether it will be difficult to determine the impact of Foothills Design and Construction standards until those standards are finalized. Ben explained that that is not necessarily the case because the standards don't really apply specifically to the treatment plant property. However, there is a lot of room for interpretation of words such as "complements" and "suitable."

Dan V commented that the CAC's major work is to help both jurisdictions craft a solution that is permissible. Ben stated that, because it is a conditional use, it would be very difficult for a design review commission to deny the use. However, they could condition it so heavily that it would prohibit some modifications at the plant. Dave Green pointed out that the CAC can play a very valuable role in supporting the land use process associated with plant applications. Linda commented that it would be tremendous if the CAC could be a voice to the DRC and oversight committee in support of the project and potential solutions.

Dan V stated that if the plant's footprint has to increase, which pushes the limits of condition at the plant, then anti-growth elements in the Lake Oswego community could use the application to further their agenda. Dave Green said that it is important to understand that increases to the plant are a function of increased levels of service (i.e., treatment), rather than accommodating growth.

5. Alternatives Evaluation Criteria

Linda Macpherson distributed the alternatives evaluation criteria and described how staff had translated the guiding principles into evaluation criteria.

Linda asked the CAC to look closely at these criteria and determine whether the CAC needs any additional information to help inform its decision making and apply the evaluation criteria. If so, CAC members should provide any requests for information to David Allred.

Rich Martin said he thought visits to other treatment plants that have integrated headworks and grit removal would be helpful and mentioned Oak Lodge and Marine Park. There was some discussion about a virtual tour through a presentation, but it was determined that a field trip would be preferred. Jim Brown said that this option could be explored. The tour would be arranged outside the CAC meeting times, and those who attend could report back to the group. BES staff will report back to the CAC on the possibility of a tour.

Linda asked the CAC to consider further whether weighting the five major criteria was warranted. Previously, group members had indicated that they wanted to weight the criteria equally. The CAC members concluded that they were comfortable with the idea of weighting the criteria but wanted to ensure that the process is not so heavy handed that the work fails to look at holistic solutions. They made this decision acknowledging that they could fall back to the current approach where the criteria are not weighted independently, but, rather all criteria have the same weight. Linda will bring a structured approach to the October 11 meeting.

6. Opportunity for Public Comment

Linda noted that Skip Ormsby had to leave early but conveyed the strong sentiment that he still believes he should be at the table as a member of the CAC.

7. Next Meeting

The next meeting will be October 11, scheduled tentatively for the Lake Oswego Pointe Condominiums. Mary Beth Coffey will verify that the community room is available at that time.