

**CITY OF BELLEVUE  
ENVIRONMENTAL SERVICES COMMISSION  
MEETING MINUTES**

Thursday  
June 19, 2014  
6:30 p.m.

Conference Room 1E-112  
Bellevue City Hall  
Bellevue, Washington

**COMMISSIONERS PRESENT:** Vice Chair Swenson; Commissioners Mach, Pauley and Wang

**COMMISSIONERS ABSENT:** Chair Helland, Commissioner Howe & Morin

**OTHERS PRESENT:** Joe Harbour, Assistant Director, O&M; Bill Heubach, P.E. – Sr. Utilities Engineer; Tony Marcum, Operations Manager; Dave Dickson, Waste Water Superintendent, Doug Lane, Water & Sewer Systems Sr. Engineer; and Pam Maloney, Water Resources Planning Manager

**MINUTES TAKER:** Laurie Hugdahl

**1. CALL TO ORDER:**

The meeting was called to order by Vice Chair Swenson at 6:30 p.m.

**2. WELCOME NEW COMMISSIONER – Dr. Gilbert Pauley**

Dr. Pauley introduced himself and was welcomed by the Commission.

**3. ORAL COMMUNICATIONS**

None

**4. APPROVAL OF AGENDA**

Asst. Director Harbour commented that he would also be reviewing the *Don't Drip and Drive* outreach materials at the end of the meeting.

**Motion made by Commissioner Wang, seconded by Commissioner Mach, to approve the agenda as amended. Motion passed unanimously (4-0).**

**5. APPROVAL OF MINUTES**

May 15, 2015 Regular Meeting Minutes

**Motion made by Commissioner Wang, seconded by Commissioner Mach, to approve the minutes as amended. Motion passed unanimously (4-0).**

May 29, 2015 Special Meeting Minutes

**Motion made by Commissioner Wang, seconded by Commissioner Swenson, to approve the minutes as presented. Motion passed unanimously (4-0).**

**6. REPORTS AND SUMMARIES**

- Conservation & Outreach Events & Volunteer Opportunity

Mr. Harbour reviewed these items as contained in the Commission's packet.

- ESC Calendar/Council Calendar

Assistant Director Harbour reviewed the calendars. He pointed out that the next ESC meeting on July 17 will be a combined CIP tour and meeting.

**7. NEW BUSINESS**

- Asset Management Update

Bill Heubach, P.E. – Sr. Utilities Engineer – Utilities Engineering Division

Mr. Heubach gave the annual status update to the ESC focusing on pipelines, which make up over 90% of the City's Utility infrastructure value. He explained the goal of the asset management program is to manage the infrastructure assets while meeting service level goals at the least possible life cycle cost. The City follows the Environmental Protection Agency's 10-step Framework for Asset Management. The ten core steps are: develop asset inventory, assess condition, determine residual life, determine life cycle costs, set target level of service, determine business risk exposure, optimize operations and maintenance, optimize capital improvement program, determine funding strategy, and build the asset management program.

The City uses a Risk-Based Replacement Analysis for its Asset Management approach where **Risk = Probability of Failure x Consequence of Failure**. The Probability of Failure is determined by failure history and condition reports. The Consequence of Failure would be determined by looking at economic, environmental, and social costs. He reiterated that over 90% of Utilities' asset value consists of pipelines.

The Watermain Asset Management Approach:

The service level goal is based on the number of unplanned water service incidents per 1000 customer. The target is 3 incidents, but Bellevue has been well below that for several years. Mr. Heubach reviewed information about 2013 watermain breaks per 100 miles. For the City, the primary concern is failure of asbestos cement pipes.

Data regarding Water Utility failure and condition reports, the water pipe failure consequence, asbestos cement watermain risk, and the asbestos cement

watermain 5-year replacement plan was reviewed. The City replaced more AC pipe than planned through 2013 and will slightly decrease the planned replacement over the next few years as discussed earlier with the ESC, so the aggregate total length of pipe replaced meets the planned replacement length. The City is on target for reaching the proposed replacement levels of 5 miles per year by the year 2018.

The Wastewater pipeline service level goal is less than 28 overflows per year. As with Water, this is risk based. The number of overflows in Bellevue has been fairly steady over the years and below the target level. 2013 main overflows per 100 miles of sewer main in surrounding cities were reviewed. Bellevue has below the average number of overflows. Roots are a large source of the problems, especially in sewer stubs and mains. Structural problems account for a much smaller portion of failures. Wastewater overflows and work orders, wastewater pipe failure consequences, and wastewater pipe risk maps were reviewed.

Commissioner Wang noted that there were no lakelines shown on these maps. Mr. Heubach explained that the lakelines have their own asset class and program.

Stormwater pipeline structural failures are below Bellevue's target of 5 failures per year. There is a concern though because Bellevue has 60-70 miles of corrugated metal stormwater pipelines which can have a life as short as 25-30 years, and a lot of the lines are already older than that. Utilities is currently developing its stormwater pipeline program. Over the past year, Utilities has been enhancing its asset inventory by reviewing as-builts on an individual basis. Staff has proposed enhancing the Stormwater pipeline CCTV inspection in the upcoming budget. Starting in 2015, staff wants to ramp up to 25 miles per year. This will help to fill in the blanks about what is known about the condition of different pipelines.

- Wastewater Claims  
Tony Marcum, Operations Manager – O&M Utilities

Mr. Marcum reviewed Wastewater claims. The goal is to have clear, defensible criteria to evaluate responsibility related to Wastewater claims. Staff will be asking for the ESC's concurrence with the current approach or feedback on a recommended approach. Challenges associated with Wastewater claims include issues surrounding system ownership (Wastewater v. Water – no clear line); Wastewater is an "open" system (as opposed to Water which is a "closed" system); roots present many challenges; and there are multiple approaches (various jurisdictions in Washington State approach ownership and claims strategy differently). He reviewed examples of how some other cities deal with responsibility issues.

Blockages are mainly caused by roots, but also can be caused by structural failure, foreign objects (wipes, hair, paper towels, etc.), and FOG (fats, oils,

and grease). Most back-ups do not result in damage or claims. Paid Wastewater Utility claims vary from year to year. The aggregate number of paid Wastewater Utility claims is both small and extremely variable; however some claims can be quite expensive. On average the City pays approximately 8 claims per year.

Sometimes responsibility for claims is very straightforward. For example, if there is a known defect and a work order has been already been issued, the City will pay for those. If there is a side sewer blockage with a defect located on private property, it will be denied. He reviewed examples of side sewer and mainline failures to illustrate the City's approach to determining responsibility for failures and associated claims.

Commissioner Wang asked for information about how staff determines right-of-way. Mr. Harbour explained that the maps in GIS have right-of-way lines that are pretty accurate. Staff also looks at the width of the right-of-way in any given location and uses survey monuments when available. Occasionally, there are cases where the City needs survey verification for a certain level of accuracy.

Vice Chair Swenson asked if there are situations where there is shared responsibility. Mr. Harbour replied that it is generally one or the other. Commissioner Wang suggested there might be a need to change the development requirement to require installation of a cleanout. Mr. Harbour noted it has been discussed, but since the City is pretty much built out it would mainly impact redevelopment. Commissioner Wang thought this would help to clarify the responsibilities and make maintenance easier. Vice Chair Swenson concurred. Pros and cons to doing this were discussed.

There was consensus among the Commission to concur with Utilities' current approach.

- Water System Plan Update

Doug Lane, Water & Sewer Systems Sr. Engineer – Utilities Engineering Division

Mr. Lane explained that staff has completed some of the analysis for the update, including population and demand projections, but hasn't started looking at what needs to be done to accommodate the future growth. He stated he would be soliciting the Commission's feedback on that as well. The purpose of the plan is to address operational policies of the water system, discuss how the City manages its water system, does business, identify needs for a 20-year planning approach, and discuss the basis and plans for water system capital improvement. The Plan is required by Washington Administrative Code, King County Code, and Bellevue City Code. It also demonstrates conformance with the Growth Management Act (GMA) for water system planning.

Utilities Water policy categories were presented. These are contained in the 2006 Water Plan available on the City's website at the following link: [http://www.bellevuewa.gov/pdf/Utilities/Water\\_Comprehensive\\_Plan\\_2006.pdf](http://www.bellevuewa.gov/pdf/Utilities/Water_Comprehensive_Plan_2006.pdf).

Vice Chair Swenson asked if the City is on time or behind schedule with the current Plan. Mr. Lane replied that the City is right on schedule. He explained a lot of the analysis for the current plan was done in 2006, but the Plan was actually adopted by Council in 2008, and the Department of Health approved it in 2009. The six year frequency starts from that point. The Department of Health doesn't enforce the 6-year requirement. In fact, DOH is in the process of transitioning to a 10-year requirement. Mr. Lane then reviewed some background data on the service area.

Mr. Lane explained that staff looks at recent water consumption patterns in order to establish criteria for future projections. Criteria is developed and combined with population projections to forecast future water demand. He then reviewed population and employment projections he received from the Planning Department a few months ago. Single-family population is projected to be stable in general, but is expected to drop in our service area due to Issaquah's presumed assumption of the South Cove service area (which is mostly single-family). Meanwhile, multifamily population is expected to increase significantly in future years.

The City is rebuilding its hydraulic model, which is used to analyze pressure throughout the system and look at fire flow. The GIS database is very useful for developing the hydraulic model. Mr. Lane showed and discussed a video demonstrating how staff does field hydraulic model calibration. 70 hydrant tests have been completed, and the model is now being adjusted to field conditions.

Vice Chair Swenson commented that he has seen articles in the paper recently about reservoirs in Seattle that need to be made more seismically safe. He asked if this is an issue that Bellevue also faces. Mr. Lane thought the City was pretty far along in an ongoing seismic evaluation program. Pam Maloney, Water Resources Planning Manager, concurred. She explained that for many years one of the ongoing programs in the Capital Investment Program (CIP) has been structural retrofit of drinking water reservoirs to make sure they can withstand seismic events. Most of the high priority reservoirs have been upgraded. She doesn't think Bellevue has any reservoirs designed the way the ones in Seattle are, but the City will continue to look at this issue.

#### Emergency Well Evaluation:

Mr. Lane explained that the City has legacy groundwater rights in the Crossroads area. The Utility has registered those wells with the Department of Health (DOH) as emergency supplies, but the wells are essentially dormant. There are additional groundwater rights from the old Water District 68 near Clyde Hill. Mr. Lane explained that there are also Cascade agreements and operational considerations which are being reviewed. Staff is looking at feasible alternatives and considering potential new policies for future use of the wells.

#### Asset Management:

The City's asset management program is being continually updated and modified. In the Water System Plan, staff will summarize asset management strategies and demonstrate to the DOH that we have a responsible program and that we're making our best use of ratepayer funds in managing this through Renewal and Replacement (R&R) strategies.

#### Operations & Maintenance:

The Plan will discuss the City's practices in general terms, demonstrate conformance with industry standards and DOH regulations, and where appropriate, identify potential improvements.

One of the big implications of the Plan is that many of the CIP recommendations stem from the analysis that is presented. In the fall there will be discussions about policy recommendations, results of the system analysis, and overall findings and recommendations to be considered by the ESC. The goal is to have the Draft Plan ready for review and comment by the Commission by the end of the year.

Commissioner Wang asked if the City is utilizing a consultant for the system analysis. Mr. Lane responded that Carollo Engineers is being used as a consultant and will be assisting with the model rebuild and the model calibration. Carollo Engineers will also be assisting with the storage evaluation, storage analysis, and the well analysis. They have a hydro-geologist sub-consultant (Robinson-Noble) which will be used. The City has a license for the software being used for performing the system analysis but the consultant is also familiar with it.

Mr. Lane summarized that once Commission, SEPA, and public comments are reviewed and incorporated in 2015, staff will take the Plan to the Bellevue City Council for approval. Once it is approved, it will then go to King County Council and the Washington Department of Health.

- *Don't Drip and Drive Campaign Update*

Mr. Harbour distributed kits to the Commission related to the *Don't Drip and Drive* campaign on behalf of Laurie Devereaux, Stream Team Outreach Coordinator. The kits are intended to get people out to check their cars for leaks and will be given out at public events this summer as part of the Watershed Outreach Campaign. Additionally, nine auto shops in Bellevue will be offering free checks as well as 10% off leak repairs up to \$50. There is also an orange survey card included in the kit for feedback. If people return the survey they will get a coupon for a free car wash.

## **8. COMMISSIONS REPORT**

Commissioner Wang brought up the issue of automating the meter reading system. He thinks this is very important and timely. Since it is a multi-year expense, the City should start budgeting for this as soon as possible. He asked

about adding it as a CIP item. An automated meter reading system would provide a faster reading with much less maintenance. He said he talked with Director Ota who encouraged him to bring it up with the Commission. Ms. Maloney agreed that the ESC should have a discussion about the benefits and the costs of automating the meter reading system. Staff will put the topic on as a discussion item on a future agenda.

**9. DIRECTOR'S OFFICE REPORT**

None

**10. CONTINUED ORAL COMMUNICATIONS**

None

**11. ADJOURNMENT**

The meeting was adjourned at 8:48 p.m.