

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

Thursday  
June 6, 2013  
6:30 p.m.

Conference Room 1E-113  
Bellevue City Hall  
Bellevue, Washington

**COMMISSIONERS PRESENT:** Chair Helland, Vice Chair Swenson, Commissioners Cowan, Mach, Morin, and Wang

**COMMISSIONERS ABSENT:** Commissioner Weller

**OTHERS PRESENT:** Bob Mulvey, Councilmember John Stokes, Pam Maloney, Kit Paulsen, Doug Lane, Nicholas Matz, Bill Heubach

**MINUTES TAKER:** Laurie Hugdahl

**1. CALL TO ORDER:**

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

**2. ORAL COMMUNICATIONS - None**

**3. ELECT CHAIR AND VICE CHAIR**

**Motion made by Commissioner Swenson, seconded by Commissioner Wang, to nominate Brad Helland as Chair. Motion passed unanimously (6-0)**

**Motion made by Chair Helland, seconded by Commissioner Cowan, to nominate Keith Swenson as Vice Chair. Motion passed unanimously (6-0)**

**4. APPROVAL OF AGENDA**

The agenda was unanimously approved.

**5. APPROVAL OF MINUTES**

May 2, 2013 Regular Meeting Minutes

**Motion made by Commissioner Swenson, seconded by Commissioner Wang, to approve the minutes as presented. Motion passed unanimously (6-0).**

**6. REPORTS AND SUMMARIES**

**Information**

Deputy Director Mulvey pointed out that there was a lengthy report on Phantom Lake in the ESC packet along with a cover memo outlining the City's intent to

engage several of the residents around Phantom Lake over the next several weeks. Staff will be coming back in October to give the ESC a more thorough briefing on this. Councilmember Stokes added that he, Nav Ota, and Paul Bucich had a good meeting with some of the Phantom Lake representatives today. The struggle is to keep focused on the current situation and the future as opposed to past events. He commended Paul Bucich for his experience and the impact he had on the discussion. A big concern by all is making sure that all new development in the Eastgate area is mitigated. The next step will be to go out and talk to landowners who are affected by the drainage in the culvert to get their feedback. Councilmember Stokes stated that he is optimistic that things are underway and appear to be progressing well. Chair Helland requested that this topic be added to a future ESC agenda for discussion.

Councilmember Stokes then reminded the Commission that the Council decided not to go with the long-term Interlocal Agreement for waste disposal with the County. After 2028 Bellevue won't be operating under that contract, and it looks like the cities of Medina and Clyde Hill may be doing the same thing. One of the City's concerns was being locked into an old style disposal system of taking everything to the dump. The City is interested in looking at viable alternative technologies. At the King County Regional Policy Committee meeting last Thursday, there was reference to the fact that Bellevue hadn't signed on yet and indications that the group was looking at changes. The Sound Cities Association is now proposing changing the contract language to reflect that the County should specifically be looking at alternative technologies.

Deputy Director Mulvey noted that there is a flyer in the ESC packet regarding seeking residents for the new Light Rail Advisory Group. Council wanted to make sure that all commissions are aware of this effort. Additionally in the packet there is a letter from Ecology explaining their position regarding the Shoreline Master Plan. Staff will update the ESC more as that moves forward. Vice Chair Swenson asked what action Council has taken on the setback issue. Councilmember Stokes replied that the Council has not yet taken action, but it is on the schedule for analysis, and the Council is interested in comments from the ESC. Chair Helland recommended putting that on the agenda for the next meeting.

### **Conservation & Outreach Events & Volunteer Opportunity/Council Calendar**

Deputy Director Mulvey stated there is a community outreach event in the packet for information along with the Council Calendar.

### **ESC Calendar**

Deputy Director Mulvey noted that the CIP Tour will be occurring next month. Commissioner Wang suggested adding an additional meeting in September or October because of the large number of items on those agendas. Chair Helland suggested that the ESC might be able to do the CIP tour as well as a business meeting on the same night.

## **Presentations**

### **Wastewater System Plan – Findings and Recommendations**

Pam Maloney and Doug Lane with support from Bill Heubach

Ms. Maloney explained the importance of the Wastewater System Plan. The Plan affirms and documents system operational policies, operational practices, and system evaluation criteria such as flow per capita and population projections. It also recommends capital investments for a 20-year planning horizon. The Plan is required by state statute and includes all the information required to meet the statute. Ms. Maloney welcomed input and questions from the Commission which will be incorporated into a draft document slated to come back to the ESC in the fall. The draft document will also be made available to the public (concurrent with SEPA). It will be submitted for review by King County Utilities Technical Review Committee as well as given to neighboring jurisdictions for evaluation. Ultimately the Plan needs to be adopted not only by the Bellevue City Council, but also the King County Council. This is because King County is Bellevue's regional wastewater services provider and also because Bellevue's service area includes a little bit of unincorporated King County. Staff anticipates adoption of the Wastewater System Plan in 2014.

Chair Helland asked why the unincorporated King County areas have not been annexed by Bellevue. Nicholas Matz explained that annexation is an action initiated by property owners, not the City. At this point the Council has not directed staff to pursue this area for annexation.

To analyze the system, staff reviewed and updated the computer hydraulic model to reflect King County's and local flow monitoring, and to include the Bellevue-assumed portions of the Coal Creek Utility District. Staff operational experience, and the 2012 Wastewater Asset Management Program review results were considered. The model was updated to reflect revised population and employment growth forecasts from the Planning and Community Development Department. An interesting fact is that Bellevue's daytime population is now estimated at 206,000 people including students and visitors in addition to employees and residents. The forecasts are particularly important downtown and in the Bel-Red corridor where most redevelopment will occur. Recommendations from the Plan fall into three investment categories: existing system capacity; system capacity to meet planned growth; and infrastructure renewal and replacement.

#### *Existing System Capacity*

Bellevue's wastewater system is aging. A natural consequence as the pipes gets older is that increased stormwater and groundwater inflow and infiltration (I&I) get into pipes. This is creating capacity concerns in some areas. This is creating capacity concerns are not related to population growth and are not unique to Bellevue. Bellevue's Wastewater System Plan policy is to reduce or eliminate I&I where it is a cost effective means of resolving a capacity problem.

System modeling and overflow experience points to several areas of concern. One of these areas is the Points communities (Yarrow Point, Cozy Cove, Evergreen East Pump Stations and the associated lakelines). I&I is likely a major contributor based on the rapid flow response to storms. Another area of concern is the pipes downstream of the Newport Lift Station. I&I is a likely contributor to overflows into Cascade Key in 2006, 2007 and 2010. Unauthorized connections of basement sumps are suspected in that area. Another area of concern includes three sewer basins (39, 40, and 41) where overflows into the basements of two residences occurred during the 2007 and 2010 storms. King County's flow monitoring program identified very high I&I in these basins. Bellevue subsequently investigated and identified specific sources of I&I and required their elimination. The City also installed an interim solution of a high-flow bypass at one location to divert some flows from basins 39 and 41. Four other areas of potential surcharging are predicted by model results although overflows have not actually been observed. Those areas are downtown, near Kelsey Creek Park in the Glendale Golf Course, Valley Creek Basin, and near Vasa Park.

The Plan will contain several recommendations to address these capacity issues as follows:

- Establish a sewer flow monitoring program for areas of concern
- Perform targeted I&I investigation, including smoke and dye testing
- Require elimination of unauthorized or inadvertent connections of sump pumps or roof drains
- Incorporate findings into the plan for renewal or replacement of assets
- Where necessary, evaluate alternatives to divert or bypass flows, or increase pipe or pump station capacity

### *Capacity for Growth*

Ms. Maloney reviewed several projects which have been identified for increased capacity to meet anticipated growth. These include the Midlakes Pump Station, the East CBD Trunkline, the Bellefield Pump Station and Force Main, and the Wilburton Sewer. Most of the growth projects were identified in the last Wastewater System Plan update, and all of them are budgeted in the current CIP. The cost of projects to meet growth is recovered from benefited properties as they redevelop and connect to the system. Capacity improvements that are needed to meet local development activities are outside the scope of this plan. These are usually the responsibility of the developer, but occasionally the City needs to facilitate that sort of improvement.

Councilmember Stokes noted that it looks like there will be some substantial new development in the downtown area in the near term. Ms. Maloney replied that downtown system capacity will improve when the East CBD Trunkline and the Bellefield pump station are completed. However, the West CBD Trunkline was completed last year so the western half of the CBD is in good shape, to accommodate the growth.

Another growth need could be for sewer extension projects throughout Bellevue to sewer septic areas or undeveloped pockets of land. For these infill areas it is common for the City to facilitate such an improvement. In this case the City might construct a sewer extension and recover the cost through connection charges. There was discussion about the large number of septic sites still in Bellevue, mostly up in Bridle Trails where there is a policy to try to limit the extension of sewers. Bellevue's wastewater policy on septic systems is to let them remain in service provided there are no health or environmental impacts.

#### *Infrastructure Renewal: Pipes*

Continued investment in infrastructure renewal is also recommended. Bellevue's system has 525 miles of gravity mains, 130 miles of sewer stubs, and 5.8 miles of force mains. Program S-24 for pipeline rehabilitation is budgeted at about \$1.2 million annually right now for making repairs where defects are found. Also, this year a new program for pipeline replacement began. It is budgeted at \$1 million annually. This will buy less than a mile of new sewer pipe. This rate of replacement is working now because the system is not too old, but the City will need to ramp up as time goes on. Ms. Maloney then discussed the 6 miles of pressurized pipe known as force mains. In particular, asbestos cement forced mains are susceptible to hydrogen sulfide damage. Two locations downstream from Lake Hills Pump Stations #6 and #12 would have very high consequence of failure due to the volumes which they convey and the geography at those locations. A rough estimate to replace the 800 feet of force main at Pump Station 6 is about \$300,000. Pump Station 12 has 3,000 feet of force main and the replacement cost would be approximately \$1.2 million. The Plan is recommending development of a comprehensive replacement strategy for force mains, considering them separately from gravity mains and giving consideration to the consequence and probability of failure. Initially, the approach should be for a strategic program to assess the condition.

#### *Infrastructure Renewal: Lakelines*

The lakelines are a very special and expensive asset class. S-58 Sewer Lakeline Replacement Program has \$2.2 million budgeted for the first 1300 foot project in Meydenbauer Bay. Beyond that, only condition assessment of the lakelines is funded in the CIP. However, the cost of lakeline replacement is reflected in the city's R&R estimates.

Chair Helland referred to Bellevue's inspection program and asked if all the identified higher-risk lakelines have been covered. Mr. Heubach responded that samples have been taken where there have been opportunities. Three AC samples and five cast iron samples have been taken and are currently being evaluated. Design engineers will speak to the ESC about the results of that once the samples have been studied.

Lake Washington has 14.6 miles of lakelines, and Lake Sammamish has 4.1 miles. Lakeline replacement will be a highly visible project which will be environmentally difficult and sensitive. No single solution will work in all

locations. It will also be very expensive. Staff is looking at the Wastewater System Plan as an opportunity to start to tell the story of the in-lake sewer pipes by telling when, how, and why they were built, who they serve directly and who they serve indirectly, how they keep Lake Washington and Lake Sammamish clean and are an integral part of Bellevue's wastewater system, and how Bellevue is not alone in dealing with the problem. Staff will also explain what is known about them now, what is being investigated, and when they are expected to need replacement. The Plan will provide the City a roadmap for proceeding with the investigation, for stakeholder involvement, and analysis of the alternatives at each location. Some of the alternatives for the lakelines replacement include:

- Rehabilitation
- In-kind replacement in lake
- In-kind replacement on land
- Low pressure grinder pumps
- Vacuum pump systems

The Plan will not recommend preferred solutions at specific locations.

*Infrastructure Renewal: Pump and Flush Stations* – The asset management program anticipates that each station will require rehabilitation every 25 years. Pumping capacity upgrades would need to be considered along with retrofit if infiltration can't be eliminated or is expected to increase over time. The City has about \$500,000 budgeted annually for pump station improvements. That amount is likely understated, even in the short term. Recent pump station rehabilitation costs have ranged from \$300,000 to over \$1 million.

Ms. Maloney summarized that the recommended investments for the Wastewater System Plan include:

1. Evaluation and resolution of potential capacity problems in the existing system
2. Add capacity to meet planned population and employment growth
3. Continue to renew and replace wastewater system assets responsibly to cost-effectively maintain service levels and manage risk.

Commissioner Mach asked if the I&I is mainly a result of broken pipes. Mr. Lane replied that it can occur through leaky joints and other age-related breakdown. Infiltration occurs through leaks in the pipes; inflow is a result of sump pumps, roof drain, parking lot drain, or improper connections. Vice Chair Swenson asked if staff finds that the illicit connections are concentrated in certain developments. Ms. Maloney replied that I&I can be from particular development areas or from a certain period of time. She referred to the three basins that have very high I&I. Staff plans to strategically look at the neighborhoods in that region. Mr. Lane further discussed the City's intent to investigate the I&I issue.

Councilmember Stokes left the meeting at 7:34 p.m. Before he left he requested input from the ESC about the Comprehensive Plan and the recommendations for the Phantom Lake issue. He expressed appreciation for the work the ESC did on the Phantom Lake matter.

## **City Comprehensive Plan Update**

Pam Maloney and Nicholas Matz

Ms. Maloney explained that the Comprehensive Plan is the City's umbrella policy document. It details the community's vision for Bellevue's future and establishes the policies that guide the City's actions, decisions, and capital investments. It plans for people, for places to live and recreate, for jobs and a strong local economy, for schools and colleges, and for a healthy environment. The Comprehensive Plan was last updated in 2004. This update is intended to reflect the dynamic changes and the trends that have affected and will affect this community into the future. This Plan update is also required for continued compliance with the Growth Management Act (GMA). Ms. Maloney then reviewed where Bellevue is in the Comprehensive Plan Update process. The intent is that a draft document will be completed by the middle of 2014 and that Council would adopt it by the end of 2014. There are three elements of the Plan that most directly affect Utilities Department's operations and for which staff is requesting ESC input. These are the Utilities, Capital Facilities, and Environmental Elements.

*Utilities Element:* Much of the content of the Utilities Element is prescribed by the GMA. The Utilities Element addresses both city-managed utilities and non-city-managed utilities such as communication, power, and gas. The intent is that utility planning would accommodate the land use, zoning, and anticipated population. The GMA encourages joint use of transportation and utility corridors, minimizing conflicts with critical areas, and consistency with our adjacent jurisdictions. Additionally, staff invites commissioner input to identify policy gaps such as an emphasis on low impact development, support for planned asset replacement consistent with best practices for managing assets, improved explanation of the nexus between the Comprehensive Plans and the system plan (Water, Wastewater, and Storm and Surface Water), and support for emerging technologies. Beyond identifying policy gaps, staff requests that the ESC help identify any inconsistent or obsolete policies.

*Capital Facilities Element:* Similar to the Utilities Element, GMA prescribes what needs to be included. This element deals with many City business lines, including Utilities. Multiple boards and commissions will be reviewing this element. Staff will be looking for compliance with GMA and asking for ESC assistance in looking for policy gaps. Staff feels there could be a clearer nexus with the Utilities Capital Investment Plan (CIP) and that compliance with NPDES-related stormwater requirements needs to be reviewed. The ESC can help identify any inconsistent or obsolete policies with this Element as well.

*Environmental Element:* This element is less prescriptive than the first two since the content is not as mandated by the GMA. It has broad policies that impact and overlap many of the Comprehensive Plan Elements such as Land Use, Capital Facilities, Transportation & Mobility, Utilities, and Economic Development. Staff are looking for policy gaps and things that are inconsistent or obsolete. Some possible areas of policy gaps include climate change, preservation and

enhancement of the natural environment and incorporating the policies that are contained in the city's Environmental Stewardship Initiative.

*Next Steps:* Ms. Maloney requested that the ESC members become more familiar with the three elements and identify current or future issues that are not well addressed and policies that are obsolete or inconsistent. Staff intends to come back in the fall to take their input, and to summarize proposed changes based on staff and public input. Joint meetings might be scheduled where there is overlap between various commissions. The Planning Commission will ultimately recommend the updated Comprehensive Plan policies to the City Council for approval.

Mr. Matz explained that staff will be going back to Council next Monday to finish the second half of the briefing to them regarding everything from project principles to the continuing public engagement plan. Ms. Maloney distributed a memo outlining upcoming Comprehensive Plan Update issues workshops. She said staff was hoping that one or more commissioners could attend each issues workshop. Mr. Matz further explained the process of outreach to boards and commissions. Ms. Maloney requested that commissioners advise Katie LaFree if they intend to attend any of the meetings.

Vice Chair Swenson asked if there is still a possibility that the Environmental Element might be removed as an element of the Comprehensive Plan and moved to an overarching goal of the Plan. Mr. Matz stated that at this point the Environmental Element will likely continue as a separate Element of the City's Plan. He discussed an assumption of the GMA is that all elements are equal so he doubted that any element would be elevated above another. Ms. Maloney agreed to provide Commissioners with a link to the outcomes from various outreach forums.

## **7. NEW BUSINESS**

Chair Helland requested that the ESC consider meeting on a different day because the first Thursday is currently a difficult day for him to meet. There appeared to be consensus to consider looking at meeting on another Thursday of the month.

Commissioner Wang asked about items from the last meeting that were supposed to come back to the ESC for discussion such as:

- The Wastewater capacity presentation packet from the Council meeting: Deputy Director Mulvey stated that the Wastewater capacity charge briefing just went to Council last week. He stated that he will get that information for the ESC.
- Water Storage Tank Sites: Commissioner Wang said he wanted to know what the other six sites were that were not selected from the original ten sites in the previous analysis. Mr. Mulvey stated that he could provide an electronic copy of the 2010 report.

## **8. DIRECTOR'S OFFICE REPORT - None**

**9. CONTINUED ORAL COMMUNICATIONS - None**

**10. ADJOURNMENT**

The meeting was adjourned at 8:10 p.m.