

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

Thursday
June 18, 2015
6:30 p.m.

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

COMMISSIONERS PRESENT: Swenson, Pauley, Howe, Wang, Morin, Mach, Shin

COMMISSIONERS ABSENT: None

OTHERS PRESENT: Andrew Lee, Deputy Director; Kit Paulsen, Watershed Manager; Paul Bucich, Asst. Director Engineering; Pam Maloney, Water Resources Manager and Doug Lane, Senior Engineer

MINUTES TAKER: Laurie Hugdahl

1. CALL TO ORDER:

The meeting was called to order by Vice Chair Swenson at 6:36 p.m.

2. ORAL COMMUNICATIONS

None

3. ELECT CHAIR AND VICE CHAIR

Commissioner Mach nominated Keith Swenson. Commissioner Pauley nominated Calvin Wang.

Motion made by Commissioner Morin, seconded by Pauley to close the nominations for Chair. Motion passed unanimously (7-0).

The two nominees left the room and discussion followed.

Motion made by Commissioner Pauley, seconded by Commissioner Morin, to elect Keith Swenson as Chair and Calvin Wang as Vice Chair. Motion passed unanimously (7-0).

4. APPROVAL OF AGENDA

Motion made by Commissioner Morin, seconded by Commissioner Howe, to approve the agenda as presented. Motion passed unanimously (7-0).

5. WELCOME NEW COMMISSIONER

Deputy Director Lee introduced Lisa Shin as a new commissioner. Commissioner Shin introduced herself and reviewed her background. The Commission welcomed her. Deputy Director Lee announced that Diann Strom would be the other new commissioner and reviewed her background. She will be attending the next meeting.

6. APPROVAL OF MINUTES

April 16, 2015 Regular Meeting Minutes

Commissioner Wang referred to page 9 and noted *Commissioner* Robertson should be corrected to *Councilmember*. He also noted that the last four paragraphs on page 11 can be deleted because that section is repeated from the previous page.

Motion made by Commissioner Wang, seconded by Commissioner Howe, to approve the minutes corrected. Motion passed unanimously (7-0).

May 21, 2015 Regular Meeting Minutes

Commissioner Mach thought there was a discussion on an easement that was not recorded. Commissioner Morin noted there was a paragraph regarding easements at the bottom of page 15. Commissioner Mach indicated that was sufficient.

Motion made by Commissioner Morin, seconded by Commissioner Shin, to approve the minutes. Motion passed unanimously (7-0).

7. REPORTS AND SUMMARIES

- ESC Calendar/Council Calendar

Deputy Director Lee noted that the Utilities CIP tour would start at 5:30 July 16 and would cover three projects: Bellefield Pump Station Replacement, Yarrow Creek Tributary Culvert Removal, and Water Quality Improvements at the Parks Department's Complete the Circle Project. Commissioner Wang asked to visit Kelsey Creek prior to the culvert replacement. Deputy Director Lee indicated he would look into that.

Deputy Director Lee then proposed September 2 and 3 as possible dates for the retreat. September 3 appeared to be the preference. Commissioner Mach said he thought that the retreat was going to be just the Environmental Services Commission and not the Council Liaison in order to have an

opportunity for more open discussion. Commissioner Wang asked if there would be an agenda or just informal, open discussion. Deputy Director Lee explained the Council Liaison usually comes to the retreats for the other commissions. There is food and discussion about important upcoming issues for the year. There is usually an agenda, but there is also time for open discussion. Commissioner Wang said he had some items he would like to talk about at the retreat.

Commissioner Mach asked about having the retreat in December instead of September and keeping the August recess the same. Deputy Director Lee indicated that might be a possibility.

Deputy Director Lee reviewed items on the Council Calendar. Commissioner Morin asked if the Commission would be involved in the Solid Waste Transfer and Disposal Options discussion. Deputy Director Lee said there would be a presentation to the Council on four potential options, but he would check with Director Otal about ESC involvement.

8. NEW BUSINESS

- Storm System Plan
Presenters: Kit Paulsen, Watershed Manager and Paul Bucich

Engineering Manager Bucich reviewed the Strategic Initiatives:

1. Utility Department Property Management Plus
2. Primary Stormwater Infrastructure
3. Improving Water Quality
4. Open Streams Assessment
5. Watershed Planning

The first three were discussed at the last meeting; the last two are in the packet for Commission review. Asst. Director Bucich explained that staff would bring these back again in July to get feedback and answer any questions. There will be an open house in August, and the complete document will come back for approval in September.

Watershed Manager Kit Paulsen discussed the problem with streams: urban impact, lack of information or strategy to meet the City's vision, and the fact that only 38% of the 80 miles of open streams is publicly owned. The City knows that the streams are degraded and there are limitations, but it is not really known what is needed. In order to do a good job of managing stormwater, it is important to address stream corridors. The City would like to determine the health of the stream system, ways the City can work to improve the areas that need the most help, and what methods are available to work with the private owners. Currently, streams range from severely impacted

from development to areas that are still pretty natural looking, but still have a lot of runoff and pollutants from the system. There is potential to improve the whole terrestrial system.

The initiative would provide options to develop a comprehensive plan and strategy to meet the city vision for streams. It would also establish a clear understanding of the city, department, and private owner roles. It would be done by collecting data about current conditions and stressors, identifying clear objectives and performance measures by basin, and developing options for system improvements for flow, water quality, and habitat.

Commissioner Wang asked about a definition for streams. Commissioner Pauley explained that this is getting into a legal area. Asst. Director Bucich noted that Bellevue already has a definition for streams. The real question is: *What is the potential for improving the aquatic systems and ecosystem?* Ms. Paulsen noted that the state has definitions for streams and legal ways of interpreting whether they are fish-bearing or non-fish-bearing. Staff recognizes that not all basins and streams are the same. One of the things staff wants to do is evaluate the basins and streams and determine goals for the different areas. Commissioner Wang suggested putting the definition of stream in writing somewhere and following that with clarifications. Asst. Director Bucich added that there are categorizations of streams that Fish and Wildlife has already established. Staff will be looking at the function and value of all the streams.

Commissioner Pauley referred to the five pictures of streams, discussed differences in them, and noted all of them are considered streams, but there are differences in potential. Asst. Director Bucich commented that collecting the data will help to prioritize the streams that need the most focus.

Watershed Management Plan assessment now is done parcel by parcel with a regulatory approach. Stormwater investments are based on redevelopment, not strategic methods. The City is trying to meet flow and water quality “forested” standards in developed lands even with increased population. What the City wants to do is look at the options that are out there and figure out how to consolidate the mitigation so it will do the most good, articulate the priorities for restoration, and see results in basins. The City wants to develop a strategic plan for restoration, support development and address multiple regulatory requirements. The problem is over 38% of the City was developed prior to stormwater controls. Also, with the scattered, parcel-by-parcel redevelopment regulatory approach, benefits in streams won’t be seen for many years. Watershed-based strategic stormwater investments are not supported by the regulatory approach.

Redmond is currently trying a watershed approach where development is assessed on a basin scale to see how it will impact the basin. Asst. Director Bucich explained it is exciting that it might be a possibility for Bellevue to be allowed to bank credit by Ecology. After 20 years of trying it the other way and not seeing improvements, it is finally looking like something will work.

Commissioner Morin expressed concern about the continued growth in Bellevue despite the impacts to the environment. Asst. Director Bucich explained that the Growth Management Act mandates a certain amount of growth in Bellevue, but it is up to the City Council to determine how this is done. Ms. Paulsen explained that this is exciting, but there are also some challenges associated with this. One of the questions is if the City needs to construct the project up front. If so, are the rules going to be consistent long enough that the City can get the money back out of it? Also, there is a question of how to manage it and do it efficiently. This will require investigating different options to determine the best way for Bellevue. Asst. Director Bucich pointed out that the Storm and Surface Water Strategic Initiatives are long-term goals and will take at least five years.

Commissioner Mach suggested a change in wording in order to not imply the City is doing a bad job. He noted that the current approach doesn't allow the City the opportunity to globally make an improvement in the watershed, but he doesn't think it will actually make things worse. Similarly with streams, there are areas that the City is doing a great job in terms of stream restoration projects. Asst. Director Bucich noted that the projects the City does are important, but those projects are very limited in nature in the context of the whole system because the City only owns 38% of the streams. Most of that is in areas that are wetlands which are undevelopable and have not been impacted. Commissioner Mach said he recognizes the need to look at things globally, but he wants to also recognize that the City is doing a pretty decent job with what is in place. Asst. Director Bucich commented on the current challenges of different priorities between different city departments such as Parks and Transportation. This project will help identify who is responsible for what and how it will occur.

Commissioner Shin asked how the City evaluates the effectiveness of the programs if it is not possible to take a global approach. Asst. Director Bucich replied that Kit Paulsen and the Stream Team volunteers do salmon spawning surveys and macroinvertebrate bug counts every year. This gives the City a gauge of the health of the system and shows that things are not getting better. When it comes to doing restoration work, projects get built and monitored for a period of time and then forgotten. Ms. Paulsen added that one of the reasons staff is bringing the initiative forward is because results are not being realized from project-specific activities since there are so many other influences affecting the projects outside of the City's control.

Chair Swenson asked staff to repeat the information about the number of salmon in Kelsey Creek versus Coal Creek. Ms. Paulsen stated that 640 Coho adults were released into Kelsey Creek with zero reds. 1100 Coho were released into Coal Creek, and there were fish for 3½ months and about 300 reds. This was a significant difference since there were only fish, alive or dead, in Kelsey Creek for four days. This represents 100% pre-spawn mortality in Kelsey Creek. Ms. Paulsen explained that the City has put in a lot of habitat and done a lot of work on Kelsey Creek, but the situation is not improving.

Commissioner Pauley asked if there is an idea why this is happening, noting that ten years ago he used to see huge numbers of Coho adults coming up the stream, but he hasn't seen one for years. Ms. Paulsen acknowledged that it has been grim. Staff started seeing about 30-40% pre-spawn mortality in 2000. After setting up water quality tests in Longfellow Creek with multiple agencies, staff believes it is related to road runoff. The Regional NPDES Permit monitoring group is helping to fund studies to find out exactly what the harmful chemical constituent is. The good news is that the LID infiltration treatments are resulting in 100% survival of the Coho. This is very hopeful. Asst. Director Bucich noted that staff has some ideas for things that might be successful on Kelsey Creek, but it's important to have more data to make those recommendations on.

Commissioner Morin asked if the plan is intended to address just the 38% of the creeks that the City has access to or the private areas as well. Asst. Director Bucich said it will identify the best places to do restoration, if necessary, in the total area. If it is on private land, the City will determine the alternatives and actions for getting the work done.

Commissioner Mach asked staff to put together the cost impacts for the different projects. Asst. Director Bucich said it was impossible at this stage to quantify any costs until the assessments are done.

Commissioner Wang asked if the culvert improvement at Coal Creek could improve the salmon mortality rate in Coal Creek. Ms. Paulsen said the Stream Team has had to extend their spawner surveys by over a mile because of the open culvert since the fish are moving upstream a mile further than they used to. This is a sign of success. Asst. Director Bucich added that at Coal Creek there is a whole park upstream that is protecting a lot of the headwaters combined with very low development and low traffic. There is some pre-spawn mortality there, but it is at very low levels. It doesn't have the same kinds of impacts as Kelsey Creek does. The City is also seeing improvements in the natural returns to Coal Creek. Coho are being added to jumpstart that

process with the Muckleshoot Indian Tribe. She believes there is hope for Coal Creek now that a lot of the areas are stabilized.

Asst. Director Bucich summarized the schedule from this point noting the goal is to take this to the City Council this fall for approval.

- Water System Plan

Presenters: Pam Maloney, Water Resources Manager and Doug Lane, Senior Engineer

Sr. Engineer Doug Lane gave an overview of the purpose of the Plan which covers operational policies and system evaluation, identifies needs for a 20-year planning horizon, and forms the basis for water system capital improvement proposals. It is required by state, county, and city codes. It also demonstrates compliance with the Growth management Act.

System Analysis:

Service Area: The service area and asset inventory will update the service area including rehabilitated or decommissioned facilities.

Water demand trends:

Mr. Lane reviewed the historical trends. The average billed volume per single-family unit is declining each year. A typical household uses approximately 25% less than it did in the 80's. The overall effect is that the previous planning consumptions were too conservative. Moving forward the assumptions have been moved downward.

Commissioner Morin asked what might happen if for some reason the demand gets very high or if it continues to get down to a point where costs get very high because of infrastructure costs. Mr. Lane stated there is a policy that guides water conservation efforts, but it doesn't have numerical goals. Asst. Director Bucich added that this is a big area of discussion with Cascade Water Alliance. CWA is acknowledging that the population is growing, and water use is going down, but the costs of maintenance are going up.

Deputy Director Lee commented that overall eastside water demand levels have remained level as opposed to increasing as projected. As a result, the plans to develop Lake Tapps as a water source have been pushed out from 2012 to 2040 or beyond. This will be extremely expensive so there is a huge economic incentive to keep water demand levels down. Asst. Director Bucich commented that it is theorized that the drop in conservation isn't because of a change in people's behaviors as much as a change in the appliances being used such as toilets and dishwashers.

Population forecasts show a steady growth projected in Bellevue's service area from 140,000 people to 180,000 people by 2040. Nearly all of that is in multi-family growth, but the forecasts show a drop in single-family population due primarily to the assumption of the South Cove area by the City of Issaquah. Mr. Lane reviewed projected average day demand which increases gradually until 2040. Mr. Lane noted that this is a conservative projection because staff is not assuming that demand will decrease. Chair Swenson commented that it seems at odds with information the ESC has received in the past which showed decreased water usage even with increased population. Asst. Director Bucich commented it is the best projection staff can do with the information available at this point. He commented that it is a moving target. The City has to be careful to not over-predict and overbuild infrastructure. Commissioner Mach thought that this might be an appropriate forecast since there will probably be a leveling out of consumption.

Mr. Lane then reviewed maximum day demand. This is important because it is what is used to evaluate the supply and coordinate with Cascade Water Alliance and Seattle. Commissioner Howe asked the reason for the spike in 2009. Mr. Lane explained it was due to a week of temperatures over 100 degrees. Commissioner Howe asked what the City is predicting for this year. Mr. Lane explained that water levels are already trending above average.

Mr. Lane then discussed the hydraulic model update and analysis. He explained the old hydraulic model was not regularly updated so there was a loss of confidence in the results and some results did not match the field. Additionally, the older software had limitations that made it very labor intensive. To address this, the City has rebuilt its hydraulic model with more advanced software. It is built from GIS data, is field-calibrated, and has increased efficiency and capabilities.

Commissioner Wang referred to the issue with water from the east side of Bellevue needing to be conveyed to the downtown area and asked if the new model would make that outdated. Asst. Director Bucich stated that evaluation was done by the consultants using a version of this newer model. Commissioner Wang then asked about the plans for trying to convey the water from the east half of the City to the west half. Mr. Lane explained staff would be discussing that later.

Commissioner Mach asked if there will be a challenge with keeping the information up to date with the new model. Mr. Lane replied staff is developing a standard operating procedure for how the data is updated. Ms. Maloney explained that the new model will be much more automatic than the old model. Keeping it current will be possible with the new model because of all the new software and GIS. Staff is very cognizant of wanting to keep it up

to date. Mr. Lane added that with the old model there had been a breakdown of internal communication which has been resolved.

Commissioner Howe asked if staff will be responsible for maintaining the model. Mr. Lane replied that the intention was to do it with staff resources. He added that it was great to get this model updated because now Operations and Engineering are working together to keep it up to date.

The System-Wide Model Analysis allows staff to map an analysis of pressure or fire flows to diagnose problem areas quickly. It has been valuable in pointing out new issues. It also allows staff to do reverse quality control on mapping data and can be used to evaluate “what if” scenarios for potential CIP projects. There have been multiple unanticipated benefits in addition to system analysis.

In addition to the model analysis, staff applied the future projected flows to storage evaluation. The first thing done was to revisit the criteria for how much storage is used. This was compared with other utilities and industry standards. Next, a zone-by-zone assessment was done to evaluate interconnectivity and apply new criteria to assess needs.

Commissioner Howe pointed out that there is no storage near Factoria and Newport Hills. Mr. Lane explained that the reservoir locations are slightly misleading because of the elevation requirements of the reservoirs. Asst. Director Bucich noted there is interconnectivity between the zones, but it is not reflected here. There is a long-term goal to increase the ability to move water across all the zones.

Commissioner Wang asked about the status of the reservoir issue which had been discussed earlier. Asst. Director Bucich explained staff had been waiting for the results of this analysis, but it would be included in the recommendation at the next meeting.

Another large initiative staff has taken is to evaluate emergency wells. Bellevue has legacy groundwater rights from Water District No. 68 and Water District No. 97. Bellevue stopped using these in the 1970's. The past system plans didn't mention the wells because they hadn't been used for a few decades, but it is important to map and inventory them for future purposes. A hydrology consultant was utilized to identify three potential alternatives: drive up emergency fill stations only; connect to system only in emergency; and fully on-line (regular supply). Staff evaluated the feasibility of existing well sites and researched surface water rights that the City holds from an old water treatment plant. Additional analysis conducted with the plan included regulatory and water quality assessment; asset management program review; and operations evaluation.

Commissioner Mach asked for copies of the maps in the presentation. Mr. Lane replied he could provide PDFs of those.

Ms. Maloney stated that staff recommendations would be coming at the next meeting.

10. COMMISSION REPORT

11. DIRECTOR'S OFFICE REPORT

Deputy Director Lee had the following items:

- Thanks to Gil Pauley for his service.
- Regarding AMI, an RFP was issued on June 4. Hopefully proposals will come in July, and a consultant will be hired in September. A mid-year budget adjustment will not be necessary.
- Water usage is up 14% higher than 2014 for the month of May. June is trending toward one of the highest water use months. Bellevue is still not being asked to conserve.

Commissioner Howe asked about the letters to the editor which criticized the City for encouraging people to use water. Deputy Director Lee gave some background on this matter. Staff's primary message was that there was not a need to curtail, but regular conservation measures should continue.

Unfortunately this was not captured by the reporter, but the City did contact the newspaper about the way it was handled. The City will be following up with bill inserts. Commissioner Howe noted she was at a conference in California. From Anaheim to the northern California border, every major transportation message board informed people of the state of emergency regarding the drought and encouraged them to conserve water. She noted that it is a very serious issue.

12. CONTINUED ORAL COMMUNICATIONS

None

11. ADJOURNMENT

The meeting was adjourned at 9:05 p.m.