MINUTES OF THE PROCEEDINGS OF THE CITY COUNCIL

April 26, 2016

The minutes of the proceedings of a work session of the City Council of the City of Coos Bay, Coos County, Oregon, held at 3 p.m. in the Council Chambers at City Hall, 500 Central Avenue, Coos Bay, Oregon.

Those Attending

Those present were Mayor Crystal Shoji and Councilors Fred Brick, Mark Daily, Jennifer Groth, Stephanie Kramer, Thomas Leahy, and Mike Vaughan. City staff present were City Manager Rodger Craddock, City Attorney Nate McClintock, Finance Director Susanne Baker, Public Works Director Jim Hossley, and Police Chief Gary McCullough

Introductions

Those present included the aforementioned and Keith Andersen, John Gasik (phone), and Ranei Nomura, Oregon Department of Environmental Quality; Steve Major, Dyer Partnership; and Craig Massie, CH2MHill.

Councilor Brick entered at 3:02 p.m.; Councilors Thomas Leahy and Mike Vaughan entered at 3:05 p.m.; and Councilor Mark Daily entered at 3:07 p.m.

Structure of Meeting by City Manager Rodger Craddock

City Manager Rodger Craddock provided an outline of the agenda and the items to be presented.

Overview of Documents Related to Planning and Permitting Process by Public Works Director Jim Hossley

Public Works Director Jim Hossley introduced a multitude of wastewater exhibits of plans, studies, and capital improvement plan schedules which were displayed throughout the diocese, on easels, and on the wall dating back to 2003. Mr. Hossley stated wastewater treatment plants are typically rebuilt every 20 – 25 years due to permitting and/or the facilities end of life cycle. Wastewater Treatment Plant No. 2 (WWTP#2) was rebuilt in the 1970's and the 1990's; both construction periods utilized Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality (DEQ) funding resources.

During the time period of 2003 – 2007, the footprint of the existing WWTP#2 site was estimated to be sufficient for the new plant with a phased new construction; the cost was estimated to be approximately $11.5 million. In approximately 2007, with the first preliminary design underway after the facilities plan, the North Spit option was explored. Due to Oregon land use regulations and no interested partners, this option was ruled out. Moving the treatment processing of WWTP#2 to Wastewater Treatment Plant No. 1 (WWTP#1) was considered and ruled out as not cost effective. At this point, the analysis discovered the existing WWTP#2 footprint would not be sufficient and the City purchased the land across the street from the Fulton Street existing site as the new WWTP#2 site. In 2011, the sequencing batch reactor (SBR) technology was explored; DEQ had yet to review this treatment processing option and the new site location. A facilities plan amendment evaluated these options and a half-dozen other options. At completion, a value analysis was completed which included a third party engineer's review of the plans and

technology for efficiency. Currently, both WWTP's had secondary treatment processing before the effluent was discharged to the bay. Tertiary treatment was another step which produced high quality effluent and better quality than SBR effluent. The value analysis looked at approximately 20 different treatment processes using a decision tree, including economics, which lead to selecting the SBR option. The SBR technology could be upgraded to produce higher quality effluent to MBR tertiary treatment, in the future. After DEQ approved the facilities plan amendment, the predesign was commenced which included more details into the project and the SBR process. At that time, the City also applied for a DEQ state revolving fund (SRF) loan, which included a low interest rate of 1% when utilizing a sponsorship option to accept an additional $2.2 million loan to complete stormwater quality projects. During the time period the City applied for the loan, three years ago, the private funding market was not willing to loan significant amounts of money for more than 10 years because interest rates were not yet stable and banks did not want to tie up large amounts of money at a low interest rate. A 10 year rate at that time was in the range of 3 – 4%. The DEQ SRF loan had a lower interest rate and the term extended to the needed 20 years for repayment. Currently, there were some banks willing to loan up to 20 years with interest rates ranging from 3 – 4%, which would increase the cost of the project by an additional $6 – 9 million in interest payments.

The construction manager and general contractor (CMGC) process was chosen as the form of construction management over the traditional design/bid/build process which was a process wherein the engineers typically designed the plant with no input from the contractor. The CMGC process allowed for the engineer to partner with the contractor during the design process to achieve an economical total cost and to gain efficiency during construction. The CMGC and contractor process was commenced on a parallel course with the value engineering process. Additionally, on a parallel track, the Oregon International Port of Coos Bay (Port) evaluated construction of a wastewater treatment plant on their property on the North Spit and did not continue the process due to the complexity and the time required for other partners to commit to a regional process.

Another component of wastewater treatment was the disposal of the residual biosolids. This required a biosolids facilities plan which was completed in 2014. During the processing of biosolids, solids were turned into sludge which was trucked from WWTP#2 to WWTP#1 and then piped under the bay in a pressure line to the sludge lagoon in Eastside for further biological treatment. Once the biological treatment was completed the sludge was trucked to farms east of town and land applied. The development of Class A biosolids was explored as an option for WWTP#2 by the Dyer Partnership. Due to the economics and unknown market for Class A biosolids, continuation in the production of Class B was recommend as the best option for the City. The new construction of WWTP#2 would include underground piping from WWTP#2 to WWTP#1 as an economical solution to trucking the sludge.

The final design for WWTP#2 utilized the SBR process and handling of biosolids included input from the operators, CMGC, various engineers, City Council, public input, and many outside third party government reviews. During the final design, on a parallel track, the geotechnical evaluations were completed for the underground piping from WWTP#2 to WWTP#1; environmental permitting; concurrence from the US Army Corps of Engineers; the environmental assessment was submitted to EPA; a review by National Marine Fisheries Service (NMFS); and a biological assessment were completed. All permitting, construction, and governmental approvals were completed in March of 2016. A hazardous materials survey for demolition of the

old WWTP#2 plant was also completed. The land use application and process was commenced when the new construction site was purchased. The Oregon Department of Energy Trust was also involved in the process and evaluated the plans and provided suggestions to save energy on the project site, if their suggestions were implemented on the blowers, diffusers, and buildings. Additionally, several iterations of the DB Western proposals to site a wastewater treatment plant on the North Spit were reviewed with the analysis estimating rate payers would expect a significant rate increase if the DB Western options were chosen. Mr. Hossley spoke to the length of the time that had passed since 2003 to complete the tasks and ready WWTP#2 for the construction.

Councilor Brick asked if the membrane bioreactors (MBR) could be added at a later date to the SBR process and referred to constituents concerned about the quality of effluent. Steve Major, Dyer Partnership, stated yes the MBR process could be added and Councilor Brick stated he liked the future addition of the MBR. Mr. Major presented a sample of a MBR and SBR filtration membrane and stated Dyer Partnership designed the Bandon Dunes wastewater treatment process which used the SBR process to draw the wastewater through the membrane using gravity to allow the solids to settle. Bandon Dunes had utilized this process for the past 12 years without replacing the membranes. Typically 10% of the membranes were replaced after 10 years, depending upon the use. The process did not produce a backwash flow, all flows stayed within the tank.

Councilor Vaughan asked if the membranes could be staked vertically wherein Mr. Major stated the Dyer Partnership also designed the wastewater treatment process for Spirit Mountain casino and because of their need for capacity, they converted from SBR to MBR and added four cassettes on each side and could place another cassette on top. Anything over two cassettes high was a maintenance issue. Building chambers would add to the cost, which would be possible, but with a SBR tank with 20' walls, it would make better sense to stack the cassettes. Compartments could be added but a wall between them would interfere with the treatment process. Craig Massie, CH2MHill engineer, stated the SBR and MBR process required air and the presence of microbial components for processing, which replaced the treatment at the secondary digester. Councilor Vaughan asked if the process could be constructed at the existing WWTP#2 site, a smaller footprint and limited scale with vertical stacking. Mr. Massie stated the option had been evaluated twice and in both cases was considered infeasible due to the cost and the membrane bioreactors requiring suitable and constant flow year round to operate correctly and efficiently. This type of flow did not typically occur in a municipality and would not remove the ammonia.

Councilor Vaughan referred to a business in Oregon, Talking Gardens, and the wastewater treatment process utilized. Mr. Massie stated he was very familiar with the process used at that location because he was the project manager for the project. The Talking Gardens utilized a temperature model for wastewater treatment, not a biological treatment, which was not the same nor suitable for a municipality. Councilor Vaughan stated he was not fully educated in the scientific processes; the wastewater upgrade process started before he was on Council, he had to specifically ask for the information attained during the last hour, and it was a lot of information to think about before the next Council meeting. As a Councilor he felt he should know why the Port's North Spit option did not work and had the notion that Civil West's plan was reviewed, dismissed and they were replaced with CH2MHill. Mr. Massie said that was not the case with Civil West; the facilities plan amendment was prepared by Civil West and CH2MHill concurred

with their results during the review process. Civil West's engineering was the right technology, process, and the basis for the pending construction. The MBR was ruled out because it would have added 25 – 30% more to the cost in 2012. Councilor Vaughan asked if technologies had changed since that time wherein Mr. Massie stated no. Mr. Massie stated there would be changes but the current suite of technologies was the best technology for quite some time and he projected that would continue well into the future.

City Manager Rodger Craddock asked if CH2MHill knew what they now know, would that have changed the value engineering wherein Mr. Major stated when evaluating which process to engineer, the DEQ requirements of the effluent was the starting point and then processes were developed to meet the NPDES requirements. The SBR in Coquille and Siletz met the permits and what was attractive was the simple process, ease for maintenance for the operators, and the cost to maintain the equipment. Of the processes, considering the economics and ease of operations the SBR was the most logical choice. The MBR process included pumps, valves, etc. and was replaced every 12 years. The maintenance and operation costs for MBR were significantly higher. Councilor Vaughan asked if the City could implement this technology for a better effluent. Mr. Massie stated the cleanliness of the water could be modelled and anticipated for both processes. In terms of biological chemical demand, with wastewater coming into the plant at 250 mg per liter, the effluent exited at 4 mg per liter using a SBR. The result using a MBR was an effluent of 2-3 mg per liter. Councilor Vaughan asked if that was drinkable and Mr. Major and Mr. Massie stated no.

Councilor Vaughan asked about virus removal wherein Mr. Massie stated viruses passed through both membranes. Councilor Brick asked if the SBR was minutely not as good as the MBR, what else was getting through in a SBR that the MBR would stop. Mr. Massie stated neither would stop viruses, reduce ammonia, soluble metals, or total suspended solids as much. The SBR removed more zinc, likely because of a binding to the solids. Councilor Brick asked about the winter time increased flows wherein Mr. Massie stated the plant was sized for the hydraulic capacity and ammonia removal. Mr. Major stated the hydraulic capacity square footage was required and during the summer time, the MBR equipment would be idle and it needed moisture and to be in operation, cleaning. This process would leave the equipment idle 85% of the time which would be costly and prohibitive. There were plants that had both processes which were essentially two separate treatment plants, which was cost prohibitive. Councilor Brick asked if down the road a MBR could be added to comply and if it would work with footprint of WWTP#2 as designed wherein Mr. Major and Mr. Massie stated yes it could be converted. Mr. Major stated this was what was done at Spirit Mountain.

Councilor Brick asked if DEQ concurred with the statements made during the meeting so far and Keith Andersen stated yes. Mr. Andersen stated the process had been evaluated thoroughly for years and the City was at a "sweet spot for economics and efficiency, a good place to be". Though things would change in the future, the engineered system seemed to be a good place to land and the City had the ability to get it done today as DEQ had provided an economic solution.

Councilor Kramer stated she had been apprised of the wastewater pending construction since her election in 2006 and believed she was educated on the matter. Councilor Kramer suggested contacting staff if a Councilor had any questions. Councilor Kramer thanked everyone for their time.

Councilor Brick stated he did not want to make a wrong decision and acknowledged the impact the decision would have in the future.

Mayor Shoji suggested wastewater was always a long term project and inherently caused dissention and asked DEQ if this was typical. Mr. Andersen stated, yes, the decision to address wastewater in many communities was in many cases, the most expensive project a Council would undertake. Because of the amount of money, the long term commitment, it generated dissention. Mr. Andersen stated Coos Bay was not alone in having differences of opinion in how to move forward and DEQ had a responsibility to make sure communities moved forward to address wastewater systems to improve the quality of water discharged. DEQ ensured communities stayed with the agreements set forth in the mutual agreements and order (MAO). Coos Bay was on the clock, two months from the last Council meeting to move forward with the loan agreement and construction to comply with the MAO and subsequent steps. City Attorney McClintock asked what would happen if the Council did not move forward wherein Mr. Andersen stated the stipulated penalties written into the MAO would be invoked. Though he could not forecast what else would occur, the penalties were a tool for the EPA to ensure communities take their commitment seriously. They would start with stipulated penalties and next step could include third party involvement as well. Councilor Vaughan asked why it had taken 13 years to get to this point wherein Mr. Andersen stated DEQ had taken in good faith that the actions exhibited by the City, the City was moving forward. Mr. Andersen cited the footprint change and external delays outside of the City's control as to the reason it had taken 13 years. DEQ was famous for giving leniency which was discouraged by EPA and had told DEQ to no longer be lenient. Mr. Andersen stated the City had a good plan and finances; there was no reason for any further delay. If there was something with an exact time frame and 800% better, maybe, but there was nothing on the horizon at this time. Mr. Andersen stated DEQ had told the City to move forward.

Councilor Vaughan asked if the City could address the MBR. Mr. Massie stated the plant was designed for 20 years for the flows and loads and was expandable on the footprint to approximately 50%. Councilor Daily asked if that was calculated with inflow from rainwater being fixed wherein Mr. Massie stated it was included, though not designed by CH2MHill.

Councilor Daily asked Mr. Andersen when the Council decided to move forward with the process the total cost was $40 million (plants, I/I, pump stations) about eight years ago. Next the wastewater rates would need to be increased every year for 20 years at 6.5%. Some years later we were told the cost would be $80 million, then $120 million and that just covered the basics. Councilor Daily stated the rates for $40 million seemed to work for the $120 million project; someone seemed to know or didn't know it didn't apply to $40 million at the time and he questioned who led the Council down this path of $120 million and asked whose head should roll. Mr. Andersen stated, no one's head should roll, the City had a plan in place to meet the effluent, a 20-year life cycle span, and a favorable financing package. Councilor Daily stated DEQ was part of the process all along and should have stepped in to say the project could not be done for $40 million. Mr. Craddock stated the first schedule of $40 million did not include construction of the pump stations, siting the treatment plant at a different location, and demolishing the old treatment plant. Not everything was added in from the beginning. Mr. Hossley stated a rate study was completed every three to five years, did not look at the whole 20 years, and typically projected rates for up to five years using the take down list. Of the additional cost estimate from $40 million to $80 million, half was collection system improvements. Now that the total cost and terms were

known, the rate consultant would update the data and provide updated projections for five years out.

Councilor Kramer stated she thought the rates were going to be able to go down wherein Mr. Hossley stated Council had raised the rates to catch up from past Council's not implementing rate increases. The Council had done the right thing and the City was in a good position financially because of the current Council's actions.

Councilor Vaughan asked how the Coquille plant compared to the proposed WWTP#2. Mr. Major stated in his experience once a plant was bid and built, those costs would never be seen again for another plant. The Gold Beach wastewater treatment plant was the same plant as Coquille's though with a lesser population, was more expensive.

Mayor Shoji asked if Charleston Sanitary District's (CSD) contribution to WWTP#2 could be explained. Mr. Major stated his firm was the engineer for CSD and their flows and loads had consistently been approximately 25% of WWTP#2. Mayor Shoji asked if CSD was participating financially wherein Mr. Major stated Rural Development has agreed to fund their portion of the project with stipulations. Rural Development required an intergovernmental agreement with the City of Coos Bay and their financing was contingent only if CSD stayed with Coos Bay as their wastewater treatment processor. Mr. Major stated CSD would raise their rates again another 3 – 5%.

Councilor Groth exited at 4:31 p.m.

Councilor Vaughan asked why the City switched from Civil West to CH2MHill wherein Mr. Craddock stated because state law required the City to utilize a qualifications based process and SHN and CH2MHill were more qualified due to their vast experience.

Councilor Brick asked how long before WWTP#1 would need to be upgraded or reconstructed. Mr. Hossley stated the City was starting the facilities plan process. A facilities plan was completed about the same time as WWTP#2 and it was unknown if a new plan would be required or if DEQ would allow an amendment. The pending project looked to be a refurbishment at approximately the same cost as WWTP#2. Reni Nomura, DEQ, stated a facilities plan was required if financing was utilized by governmental agencies which used state or federal funds for the project.

Councilor Vaughan asked about the condition and replacement of the outfalls at both wastewater treatment plants and about sending the effluent to the North Spit or a regional plant. Mr. Hossley stated neither DEQ nor EPA had concerns with the outfalls and the plants met water quality standards. Councilor Vaughan asked if there were minimum standards wherein Mr. Hossley stated the plants would exceed minimum standards. Mr. Massie stated the effluent quality exceeded the current permit requirements five-fold.

Adjourn

There being no further business to come before the Council, Mayor Shoji adjourned the meeting. The next regular Council meeting was scheduled for May 3, 2016 in the Council Chambers at City Hall.

Crystal Shoji, Mayor

Attest: _____
Susanne Baker, City Recorder