

**MINUTES  
CITY OF ORMOND BEACH CITY COMMISSION  
UTILITY MASTER PLAN UPDATE WORKSHOP**

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**March 3, 2015**

**5:30 p.m.**

**City Commission Conference Room**

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**I. Call to Order**

Mayor Ed Kelley called the meeting to order at 5:32 p.m.

Present were Mayor Ed Kelley, Commissioners James Stowers, Troy Kent, Rick Boehm and Bill Partington, City Manager Joyce Shanahan, Assistant City Manager and Public Works Director Ted MacLeod, City Attorney Randy Hayes, City Engineer John Noble, Utilities Manager Dave Ponitz, and Mr. Brad Blais, President of Quentin L. Hampton Associates.

**II. 2015 Utility Master Plan Update**

Introduction

Ms. Joyce Shanahan, City Manager, explained that the workshop would focus on the Utility Master Plan Update. She further explained that updating the master plan was a comprehensive process that the city underwent every five to ten years.

Mr. John Noble, City Engineer, explained that the Utility Master Plan was a planning document which looked ahead 20 years to forecast growth in the city and the impact that it would have on utility infrastructure. He noted that the report specifically looked at the city's well water supply and transmission system, water treatment and distribution system, wastewater treatment and collection system and water supply system. He stated that the final draft of the plan had been presented to the Public Works Advisory Board in February and that the board unanimously recommended that the City Commission adopt the report. He explained that any City Commission recommendations or comments following the workshop would be incorporated into the report and presented back to the City Commission at a regular City Commission meeting for formal adoption. He introduced Mr. Brad Blais, President of Quentin L. Hampton Associates, who prepared the report while working closely with him, Utilities Manager Dave Ponitz, and staff.

Water Supply

Mr. Brad Blais, President of Quentin L. Hampton Associates, stated that the last time the utility master plan was reviewed was in 2008. He displayed a map showing the city limits and utility service area. He displayed a graph showing population projection, which he explained were based on the Consumptive Use Permit (CUP). He stated that those projections were utilized to determine water demand increase projections.

Mr. Blais displayed a chart showing current well capacity and capacity requirements. He explained that there was a projected average daily flow per CUP, which constituted the permitted allocation that could be withdrawn from the ground to serve to customers. He noted that in 2015 that amount was 7.14 million gallons per day (mgd) and the projection for 2035 was up to 9.41 million gallons per day. He stated that the actual potable demand in the well water supply was approximately 6 million

gallons per day, which trailed behind the permitted demand. He noted that was a good thing. He explained that the reclaimed water extension to the west had helped to cause a dramatic 1 mgd drop.

Mr. Blais stated that having a reserve capacity allowed the life of the wellfields and equipment to be extended, as wells could be rested every other day. He stated that based on the city's allocation they would have permitted capacity to build three new wells as part of the CUP permit. He explained that the city did not need to look at additional raw water supply planning until sometime in the 2025 timeframe. He noted that the city was in good shape with their well water supply.

Mr. Blais identified the recommended water supply projects for the short-term, less than five years, as secondary raw water main reinforcement and variable frequency drive (VFD) retrofit for wells #39, #40 and #41. He identified the Hudson Wellfield expansion as a midterm project recommended for completion in the next five to ten years. He stated that presently there was a single water main from the Hudson Wellfield. He explained that if there was a break or any other major catastrophe affecting that water main, it would impact the city being able to meet their demand. He noted that a redundant water supply line would be a safety precaution.

Commissioner Kent stated that the city would not be able to meet their demand if something happened to that water main; whereby, Mr. Blais stated that the main would have to be repaired within less than a day and interconnects would have to be used.

Mayor Kelley explained that was why years ago some individuals, including him, wanted to locate a water plant in that area.

Mr. Blais stated that both the water and sewer plants were in pretty good shape. He stated that the capital needs there were fairly low compared to previous years.

Mayor Kelley stated that he saw that it was proposed in future years to spend significant amounts of money on the plant that was drawing brackish water; whereby, Mr. Blais noted that he had some numbers to provide when capital projects were discussed.

Mayor Kelley asked about the possibility of building a new plant; whereby, Mr. Blais stated that he would not recommend building a new plant as the cost would be extravagant. He explained that due to the existing infrastructure it would require a complete reconfiguration of the distribution network.

Mayor Kelley stated that he was thinking about the bridge. He explained that there would not be as large of a demand to pump across the river if it was being produced on the other side.

Mr. Blais stated that there were a number of issues including what to do with the brine disposal from the raw water.

Mayor Kelley stated that there was not as much out there as the brine was due to brackish water being drawn. He noted that he knew it would be cost prohibitive to undertake such a project. He explained that in hindsight the plant should have been located closer to the wellfields.

Mr. Blais agreed but noted that at this point the city was pretty committed to its current location. He explained that it would be extremely expensive to reconfigure the system in order to move it. He stated that he was recommending improvements at the current plant facility to maintain capacity and not to add additional capacity.

Mayor Kelley stated that the current usage was a far cry from the usage that had been predicted in 1994. He noted that they were told they would be at a higher capacity and need to use salt water.

Mr. Blais noted that the city was at 6 mgd for well water withdraws, and it had not been there for a long time.

Mayor Kelley stated that the city was running 8 or 9 mgd at one point.

Mr. Dave Ponitz, Utilities Manager, stated that the city was approaching 7.2 mgd (in Year 2012 prior to completion of the Western Ormond Beach Reclaimed Water Transmission Project), with one million of that going to the subdivisions of Breakaway Trails and Hunter's Ridge.

Mr. Blais noted that they were recommending some small projects at the existing wells to improve their performance. He stated that in the five to ten year timeframe they recommended constructing three permitted wells.

#### Water Treatment Projects

Mr. Blais displayed an aerial photograph of the water plant. He stated that the city was in pretty good shape with the projects that had been undertaken recently at the water treatment plant. He noted that the city had plenty of capacity. He identified the short-term projects recommended to be done in the next five years as aerator replacement and clearwell rehabilitation, lime silo dust arrestor, LPRO transfer pump VFDs and solids handling facility upgrades. He explained that the existing aerators and clearwells were in pretty rough shape. He noted that those projects needed to be undertaken based on age as most of the facilities were ten to 20 years old. He further noted that the solids handling facility was closer to 20 years old and was in critical need of upgrading.

Mr. Blais identified the recommended mid-term projects, which could be completed in five to ten years time, as filter demolition and building a new storage building, replacing lime softening filters #5 and #6, and replacing the maintenance building. He noted that a filter that had been out of commission for about seven years was still sitting abandoned on the premises. He explained that real estate could be utilized for a new storage building and eventually the old filter would need to be removed. He noted that the lime softening filters he mentioned were about 35 years old and needed to be replaced with a new style of filter. He explained that in the long-term, over ten years out, it would be nice to have some additional storage capacity at the plant, which was being noted as a long-term project. He stated that all of the recommended projects for the short and mid-term were renewal and replacement projects.

#### Water Distribution Projects

Mr. Blais stated that for the past four years the city had made a serious commitment to replace undersized water mains. He noted that the replacement of two-inch water mains had improved water quality and fire protection. He stated that the next phase

was getting ready to begin on the beachside and on the mainland. He explained that in his opinion the city also had significant capital needs in other areas. He stated that he was not recommending stopping that program but was suggesting that over the next five years the city back off a little on that program and address some other needs that would require funding.

Mayor Kelley asked if they were able to determine any pipes that were damaged so badly that they were leaking during the water main replacements on the mainland.

Mr. Noble stated that a lot of the pipe being removed was completely corroded, pitted and in bad shape.

Mayor Kelley noted that they knew the pipes were in poor condition due to the water color and the solids going through. He explained that he was wondering about the water being lost; whereby, Mr. Blais stated that the city's unaccounted water had gone down.

Mayor Kelley noted that it had been a significant amount; whereby, Commissioner Kent stated that it had been one million gallons a day.

Mr. Blais explained that a lot of that was attributable to reclaimed water, which was being used in lieu of groundwater. He noted that the percentage unaccounted for had improved through a variety of ways. He explained that a better job was being done accounting for the water and that some of it was also attributable to the service connection. He noted that a lot of the pipe was abandoned in places and because of that it had not been inspected. He noted that it was more expensive to pull it out than leave it in.

Mayor Kelley stated that there was no solution at those connections to stop it.

Mr. Blais noted that typically the pipe was either replaced and new services were added, or if the pipe was in good shape a new service was put on it.

Mr. Ponitz stated that new services were put on all of the new pipes up to the meter.

Mr. Noble asked Commissioner Kent if he had seen an improvement in his water; whereby, Commissioner Kent replied that he had. He explained that his water used to look like chocolate milk and there had been a huge improvement in water quality and pressure at his home.

Mr. Ponitz stated that those were the characteristics they would expect to improve as a result of the project.

Mr. Blais stated that pump storage on the north peninsula was still recommended to be completed. He noted that some of the recommended projects would be performed by the developer; and therefore, not at a cost to the city. He explained that they were still being identified in the plan so that the city could refer to it with the developer. He noted the decisions regarding the cost sharing or specifics of those projects would be policy decisions. He stated that the two short-term developer projects listed were Ormond Crossings transmission mains and Ormond Crossings 1 mg storage tank and pump station.

Mr. Blais identified the mid-term recommended projects as the north peninsula water system improvements, Hunters Ridge and Breakaway Trails water system reinforcements, SR40 16" water main extension, additional 2 mg storage tank and piping at the water treatment plant and Airport Road water main extension, which were to be completed by the developer. He noted that minor improvements in the Hunters Ridge and Breakaway Trails communities could improve flow in that area.

Mr. Blais stated that the long-term projects for recommendation ten years or so out were optional and subject to special assessments. He explained that if there were gravity retrofits in some of those areas or if there was other work being done, conceptual designs and cost estimates had been prepared in case the city decided to service those areas. He identified those long-range projects as Tymber Creek Road water main extension from Southern Pines to Durrance Lane, Pine Tree Drive 12" water main extension, Tymber Creek Road water main extension from Durrance Lane to Ormond Crossings, Clyde Morris Boulevard 12" water main extension, The Falls Subdivision East connection, Hand Avenue West water main extension, Old Tomoka Road water main extension, Bear Creek Subdivision improvements and Hunter's Ridge/Breakaway Trails water system reinforcements.

Mr. Blais noted one of the long-terms projects was Hunters Ridge/Breakaway Trails water system reinforcements. He explained that those areas had a "backward" water system with undersized water mains and oversized reclaimed mains. He further explained that all of the fire protection was on the reclaimed system. He noted that if the reclaimed system ever went down, explaining that it could, as it was not required to be kept up to pressure, a series of interconnects and other methods would have to be utilized to keep pressurization to the fire system. He stated that was not optimal and explained that ideally there would be six and eight inch water mains, as there was everywhere else in the city, which would have the water system being served by the fire protection system, which was always maintained at 20 pounds of pressure per square inch (psi) and then the reclaimed water system would be turned off during non-watering days and not need to meet the same specifications.

Mayor Kelley asked if there was anything in the plan about Daytona North or West.

Mr. Blais stated that service area, which they were calling the northwest service area, was being recommended for some general conceptual extension projects later in the plan. He noted that it was assumed that much of that work would be accomplished by developers, but they did not yet know what would happen in that region.

Mayor Kelley stated that he was wondering about that area's effect on the water demand.

Mr. Blais replied that it had been accounted for and that the major components in the distribution system were set up to serve that area. He noted that hydraulic modeling had been done accounting for the demand in that area.

Mayor Kelley noted that he could not find anything in the plan that he could identify to that area.

Mr. Blais stated that the Hand Avenue West water main extension identified in the long-term water distribution projects was one of the service lines to serve that area.

He noted that a lot of the projects had loops in other service mains that would serve that area.

Commissioner Kent referenced the almost \$8 million Hunter's Ridge/Breakaway Trails system project which Mr. Blais had referred to as "backward." He asked how that happened and who was responsible for it.

Mr. Noble stated that there had once been a treatment facility located out there. He explained that their treatment system was designed with a fire protection system. He further explained that over time the city eventually bought out the system and replaced the treatment package with a pump station to the city's treatment plant.

Commissioner Kent confirmed with Mr. Noble that the developer had built the original water system at that location.

Mr. Blais stated that he believed that purchasing that system had been part of the annexation agreement, but he was not certain.

Mayor Kelley stated that he believed that it had to do with the change in developers.

Ms. Shanahan stated that calls were frequently made to the city regarding Tanglewood and Tomoka View, or similar neighborhoods, where the county wanted the city to take over those water systems or sewer systems, but they did not meet city standards. She noted that those systems would have to be improved, but cost of improving their systems should be borne by those property owners. She noted that a special assessment would be needed.

Mr. Ponitz stated that the premise behind the system that was put in the referenced subdivisions of Hunter's Ridge/Breakaway Trails was to combine the pipes used for irrigation purposes and fire protection, and then use the smaller potable water pipes for the domestic demand by the homes because that demand would be less than the demand for irrigation and/or fire protection.

Mayor Kelley asked why the city would have to spend a significant amount of money to reverse that.

Mr. Ponitz explained that the recommendation was to complete the project way down the line; whereby, Mr. Blais noted that it was the last project on the list.

Mr. Blais explained that like the two-inch water mains that were replaced already on the beachside and mainland, the two-inch water mains located out west at those subdivisions would become inadequate.

Mayor Kelley asked why; whereby, Mr. Blais answered that they would become inadequate due to age and deterioration.

Mayor Kelley stated that those mains were not cast iron; whereby, Mr. Blais confirmed that they were mostly PVC (Polyvinyl chloride).

Mr. Blais explained that the project was included in the long-term list because it would keep coming up. He noted that he had designed a couple of different projects for interconnects and backups because when the water main got very high the

system had to be kept charged. He noted that there was no way to dial down the spigot as there were no demand controls on the irrigation system regarding how much could be used.

Mayor Kelley stated that was why the larger pipes were needed.

Mr. Blais stated that the problem was that the city was now serving that demand and if they could not get enough reclaimed water there then they would be serving it with potable water.

Mr. Ponitz stated that the reuse source water in the city's system was much more capable of keeping up with those demands and not depleting the supply.

Mayor Kelley asked if one or two million gallons per day was being dumped in the river.

Mr. Ted MacLeod, Assistant City Manager and Public Works Director, explained that the problem would come about when there was a drought.

Mayor Kelley asked if the suggestion was to reduce their larger pipes and increase the other ones.

Mr. MacLeod explained that presently if the city ran out of reuse water it would be a big deal, but it would not be a tragedy.

Mayor Kelley noted that it would be worse to run out of potable water.

Mr. MacLeod stated that if reuse was depleted there would not be fire protection, explaining that was the problem with that system. He noted that the same pipe providing irrigation in that location also served as their fire protection. He stated that if they ran out of reuse water, there would be no fire protection.

Ms. Shanahan noted that the existing lines did not have the capacity to meet the pressure.

Mr. MacLeod explained that the potable system would have to be switched and the reuse system would have to be charged to provide for fire protection.

Mayor Kelley asked if that was happening; whereby, Mr. MacLeod replied that it was not happening at this time.

Mayor Kelley asked why it would happen; whereby, Mr. Ponitz explained that it would be when the reuse area was expanded so far that the reuse demand exceeded the capability to keep those tanks filled and replenished. He noted that it would be some time before that would happen.

Mayor Kelley stated that there may need to be a way to limit reuse to consumers in that area or instruct them that they would need to compensate for it, as they would be the ones causing it, and the cost of it should not be supplemented by the remainder of the city.

Mr. Blais stated that the issue primarily related to peak factors. He stated that the city had an average day flow of 4 to 5 mgd and was treating about 5 to 6 mgd of sewage. He explained that when conditions were very dry, the sewer demand could go down to 4 to 5 mgd easily with a lot of infiltration, but the sewer flow could come in at 4 to 5 mgd with a reclaimed demand of 6 mgd. He noted that was not inconceivable. He noted that the system had just been connected as far as the Breakaway Trails area, and it had only been through one summer there. He noted that it had been a wet summer. He explained that a really hot, dry summer would use most of the reclaimed water.

Mayor Kelley noted that less potable water was being used. He explained that he was trying to put together all of the components as to why something had to be done. He noted that the city was not using anywhere near the maximum of their CUP and was not using their capacity to produce potable water. He explained that it would not hurt the city if for a short period of time 1 to 2 mgd was being put out; whereby, Mr. Blais explained that was why that project was the last on the list.

Mayor Kelley asked what year they were suggesting the project be undertaken; whereby, Ms. Shanahan replied in 2025 or later. Ms. Shanahan explained that the project could be removed from the list if that was the desire.

Mayor Kelley explained that he sometimes did not like the justification for a project. He noted that if he did not understand it or think that there was logical reasoning, which he did not think there was because he felt there were other alternatives, he would question it. He requested an asterisk or notation showing that the Commission would consider such a project many years out, only under select circumstances.

Mr. Blais stated that the projects were to be divided into categories such as short-term, mid-term and long-term, and that eventually some of the longer term ones would need to be completed, but it would be many years away.

Commissioner Boehm joked that in Mayor Kelley's 20<sup>th</sup> year as Mayor, he would have to deal with it.

Mr. Blais noted that it was an unusual and not optimal situation; whereby, Ms. Shanahan suggested footnoting that project.

#### Wastewater Treatment Plant

Mr. Blais stated that the mgd flow for the city was in good shape until 2030 or so. He displayed an aerial photograph of the wastewater treatment plant. He noted that expansion alternatives were evaluated. He explained that in the long-term when capacity had to be expanded they recommended expanding the existing wastewater treatment plant capacity, rather than constructing an additional western wastewater treatment plant or relocating the entire wastewater treatment plant.

Mr. Blais stated that the short-term recommended projects for the wastewater treatment plant were outfall pipe replacement, clarifier weir covers and master lift station (MLS) #1 comminutor, sludge digester improvements, sludge dewatering improvements and laboratory additions. He stated that the outfall pipe was in terrible condition, and there was no way to repair it as it had to be operational during repairs, noting that it would be essentially impossible to repair it while it was operating. He noted that some of the other mentioned projects dealt with handling solids within the

plant. He explained that the digesters were not touched in the last plant expansion projects and the laboratory also needed some work.

Mr. Blais identified the mid-term recommended projects for the wastewater treatment plan as proposed MLS #2, pretreatment structure and fermentation and pre-anoxic basin upgrades. He explained that presently all of the flow was handled by a single master lift station and that if anything was to happen to that station, or it needed to be temporarily taken out of service for maintenance, it would be essentially impossible to do so. He stated that as such they were recommending in the future constructing a backup primary lift station at the wastewater treatment plant. He stated that the pretreatment structure was moderately touched in the last expansion project. He noted that all of that equipment had been put into place in 1990. He stated that in the next five to ten years he was recommending reworking that as the technology was better and a lot could be done to improve the plant process.

Mr. Blais identified the long-term recommended projects for the wastewater treatment plant as chlorine contact and effluent pumping, carousel/oxidation ditch upgrades and re-aeration basin modifications, aqua diamond filter medications and 2.0 mgd Integrated Fixed-Film Activated Sludge (IFAS) process modification/expansion.

Mayor Kelley asked if there was appropriate land for the expansion at the current plant.

Mr. Blais explained that based upon their analysis the clarifiers were adequate and it would just be an extension of the existing biological process basins and reworking of the process utilizing a different technology to get the additional capacity out of essentially the same basins.

Mayor Kelley noted that years ago there was a problem regarding where to locate the extra storage tanks for the treated water. He asked if it would be in the same footprint of the plant; whereby, Mr. Ponitz explained that there would be a slight encroachment into the solid waste transfer station.

Mr. Blais explained that the roadway on the solid waste side would have to be reworked a little bit, but he noted that presently there was adequate reclaimed water storage and adequate space on the existing site.

Mr. Blais noted that another issue was biosolids. He explained that Shelley's Environmental currently provided all of the biosolids handling needs for the city. He noted that they were not always reliable and not always available to take the sludge. He explained that everyday sludge was produced no matter what. He explained that rules in place presently severely limited what could be done with the sludge. He stated that there were really only two commercial contractors that dealt with sludge removal, BCR, who was trying to get into the business in this area, and Shelley's Environmental. He explained that various options were explored and their recommendation was for the city to investigate a contract with BCR to see if a better contract could be negotiated than the one the city presently held with Shelley's Environmental. He noted that it might require a moderate expense that could be financed. He stated that the City of Port Orange was currently in the middle of negotiating with BCR and that the City of Deland and Volusia County were also

speaking with them. He noted that a lot of people were currently speaking about residuals and biosolids.

Mayor Kelley stated that the state may decide that the sludge could not be disposed of 15 to 20 years from then.

Mr. Blais noted that it was an issue, but they were not recommending that the city construct their own improvements on site to handle the sludge. He explained that some of these companies may need to do some capital investment on site as part of the contract.

Mayor Kelley explained that it would become more expensive to dispose of it because of regulations at the state level; whereby, Mr. Blais replied that it was about \$38 a ton presently to dispose of it. He noted that everyone was predicting it would go up to \$60.

#### Sewer Projects

Mr. Blais stated that a lot of the city's system was constructed out of clay pipes, which were in many cases over 30 or 40 years old. He noted that the joints were in poor condition, and there were cracks from roots and soil shifting. He stated that about 25% of the total flow entering the wastewater plant could be attributed to infiltration and inflow, which he noted was significant. He explained that all of the infrastructure throughout the city was below the groundwater table and was constantly submerged. He noted that the shallowest area was four feet and the deepest was 12 to 16 feet. He explained that any cracks or leaks would have infiltration and inflow from heavy rain due to service connections, leaky manholes and other things. He explained that the number would never become less and would only become more as the sewer lines continued to deteriorate over time. He explained that the only way to evaluate what they had was to use robotic television cameras which went through the sewers and televised it. He noted that all of the data would be in digital form.

Mayor Kelley stated that there were companies that performed such a service.

Mr. Blais explained that those companies went through every run of sewer and evaluated leakage, condition and crack size in order to grade it so that the city could use the results to prioritize what areas they wanted to work on. He explained robotic equipment could then be reinserted in the sewers and apply fiberglass sleeves hardened with resin. He noted that the problem was that work cost about \$35 to \$40 a foot. He noted that it would cost about \$750,000 to do the entire city. He explained that they recommended setting aside \$250,000 a year and dividing the city into three study areas in order to evaluate one area per year.

Mayor Kelley asked if Mr. Blais had said that all of the city's sewer lines were clay pipes.

Mr. Blais stated that not all of them were clay, but a lot of the older ones were.

Mr. Ponitz stated that it was proposed that all of the segments of the city with clay pipes be reviewed. He noted that most of the newer pipes were PVC.

Mr. Blais explained that most of the areas that the city knew were newer and had PVC they would not recommend reviewing. He noted that there existed a mapping categorization of all the clay pipes.

Mayor Kelley noted that most of those would all be on the mainland; whereby, Mr. Ponitz replied that there was quite a bit of beachside that also had clay pipes.

Mr. Blais reiterated the recommendation to commit about \$250,000 to review the sewer piping and program in capital funds for the future to perform the repairs.

Mayor Kelley asked what was keeping the sewage from going out if the clay pipes were allowing rainwater to come in; whereby, Mr. Blais replied that pressure was.

Mr. Ponitz explained that hydrostatic pressure of the groundwater was much greater as the gravity sewer was never under pressure. He explained that the only way the sewage would leak out was if the crack was at the bottom of the pipe and it leaked out by gravity.

Mayor Kelley asked if any of the cracks were at the bottom of the pipes; whereby, Mr. Ponitz replied that even if they were the groundwater outside of the pipe was at a higher elevation.

Mayor Kelley stated that it was not under water; whereby, Mr. Blais replied that virtually all of the city's system was submerged.

Mayor Kelley stated that the groundwater table was ten feet.

Mr. Ponitz noted that there were a lot of sections that were shallower than ten feet. He stated that dewatering began at five and six feet in a lot of places in order to repair pipes.

Mayor Kelley asked if the city was about ten feet above sea level; whereby, Mr. Blais replied that the groundwater table was about three to five feet below grade.

Mayor Kelley noted that the dewatering process had to be used to take the water out, but he asked if that was usually at eight to ten feet deep; whereby, Mr. Ponitz noted that there were a lot of places that were shallower than that.

Mayor Kelley stated that it would be based upon the relevant sea level; whereby, Mr. Ponitz stated that the freshwater sat on top of the level of the sea level.

Mr. Noble stated that there had been extensive dewatering on the peninsula during the two-inch watermain replacement project. He noted that it had been performed at three to five feet. He stated that groundwater was constantly being hit.

Mayor Kelley stated that most of that was probably at an elevation of 12 to 14 feet above sea level. He noted that Tomoka Oaks was 26 to 28 feet above sea level. He stated that John Anderson Drive was probably 10 to 12 feet above.

Mr. Ponitz stated that he would say John Anderson Drive was about six or seven feet above.

Mayor Kelley suggested that the water there could be two feet. He noted that going along Ridgewood Avenue it would be higher.

Commissioner Kent noted that he had had an issue with his well for irrigation. He stated that he thought his well might have been going dry a few years back so he opened it up and tested it with a washer and a piece of string. He explained that there was plenty of water seven feet down on top of the hill. He explained that it made him realize that there was a lot of water right under them. He noted that the iron had been clogging up his well point.

Mayor Kelley stated that something had to be done about the clay sewer pipes.

Mr. Blais stated that the idea was to evaluate and repair, noting that it would be a long-term process similar to the two-inch water main replacement program. He stated that funds would have to be dedicated towards analyzing and repairing gravity sewers.

Mayor Kelley asked Ms. Shanahan where she would find the money for the project; whereby, Ms. Shanahan stated that staff would work on finding it.

Mr. Ponitz explained that by decreasing the amount of water to treat it provided more life to the current capacity of the treatment facility.

Mayor Kelley noted that at some time they may not be able to have the reuse they currently did and would have to drink it. He stated that it was close to drinkable now; whereby, Mr. Ponitz stated that it was highly disinfected.

Ms. Shanahan noted that the list of sewer retrofit projects prepared would certainly be alarming to the Commission as the total cost for those projects was \$24 million.

Mr. Blais explained that they reviewed the enclaves and the un-served areas surrounding the city. He explained that those included 85 homes in the Twin Rivers residential community, 198 homes in the Tomoka View and Tanglewood Forest residential communities, 61 homes in the Broadwater residential community, 506 homes in the Heritage Forest, Tomoka Park, Hidden Hills, Tidewater and Knollwood Estates residential communities, 413 homes in the Tomoka Estates residential community, 233 homes in the Village of Pine Run residential community, 24 homes in the Bonita Avenue residential community, 40 homes in the Magnolia Drive and Oak Drive residential communities and 10 homes in the Mirror Lake Drive residential community.

Ms. Shanahan noted that many of those neighborhoods had approached the city numerous times in the last several years.

Mr. Blais explained that for the areas without sewer conceptual designs, layouts and cost estimates for adding sewer were performed. He stated that if those areas ever came in for special assessment requests or the like the city would have the design information to provide the Home Owners' Association (HOA) or whoever came in.

Ms. Shanahan noted that the information could also be utilized when applying for federal grants such as was done with Arroyo Parkway years prior.

Mr. Blais stated that they also looked at retrofitting the north peninsula. He explained that the retrofit would include the north peninsula force main on A1A from Ocean Grove to Pelican Dunes, 702 homes from Plaza Drive to Longwood Drive, 554 homes from Hibiscus Drive to Seaside Drive, 798 homes from River Shore Drive to Rivocean Drive, 396 homes from Sandra Drive to St. John's Place, 45 homes from Starlight Drive to Ocean Breeze Drive, 524 homes from Buckingham Drive to San Jose Circle, 295 homes from Anchor Court to Pierside Drive, 330 homes from Ocean Grove Drive to Via Madrid, 165 homes from Capistrano Drive to Ocean-Aire Terrace and 85 homes from Dolphin Avenue to Tarpon Avenue. He explained that would be another huge undertaking with ten different pump stations and an estimate of \$48 million, including contingencies, engineering and soft costs.

Mayor Kelley joked that this was why Ms. Shanahan was discouraging him from annexing Ormond-by-the-Sea.

Ms. Shanahan stated that this was what it would cost to retrofit Ormond-by-the-Sea. She noted that they would never produce enough tax dollars to compensate for it.

Mr. Blais noted that it was a large figure but the question of the cost often came up.

Commissioner Kent noted that the 702 homes from Plaza Drive to Longwood Drive were estimated to cost \$5.2 million to retrofit, but he noted that the 61 homes in the Broadwater residential community was estimated to cost \$1.5 million.

Ms. Shanahan stated that she had asked about that. She explained that it depended on the proximity of the sewer and a variety of other factors.

Mr. Blais explained that they you looked at the projects identified in the master plan whereby the capital cost and the number of homes served was identified. He noted that they also identified the cost per home and that each project was different. He stated that the range was about \$10,000 to \$17,000 per home, with the average assessment being about \$12,000 per home to retrofit. He noted that it varied based on how many pump stations it cost to serve a certain number of houses and how far apart the houses were.

Commissioner Boehm noted that the state had been discussing Amendment One and asked whether there had been any discussion whatsoever about using those funds for this purpose.

Mayor Kelley explained that it was desired to receive such funds and that Florida Senator David Simmons wanted to use funds for this purpose.

Commissioner Kent noted that when they met with Senator Simmons he spoke about how this was his priority.

Mayor Kelley explained that the state was now trying to send the majority of the funding to South Florida for the Everglades. He noted that the Roundtable of Volusia County Elected Officials would recommend that they seek funding for those areas with septic tanks close to bodies of water.

Commissioner Kent noted that Commissioner Partington spent a lot of time in Tallahassee. He asked if he heard anything about this while he was there.

Commissioner Partington replied that he did not; whereby, Mayor Kelley noted that Senator Simmons was not getting any traction.

Commissioner Partington explained that it was difficult because of where they were located and that there were population centers much more represented which made it hard to get anything done.

Commissioner Kent lamented the situation. He noted that Senator Simmons had sounded very optimistic.

#### Wastewater Projects

Mr. Blais identified the short-term projects for wastewater as life station replacements, group 1 gravity sewer rehabilitation projects and a US1 force main from Airport Road to Ormond Crossings, which was to be completed by the developer. He stated that there were aging lift stations that needed replacement. He noted that the group 1 gravity sewer project was one with the cameras investigating sewer pipes. He noted that \$750,000 of the \$3,750,000 was for the evaluation and the rest was to begin the repair process.

Mr. Blais identified the mid-term project for wastewater to be sewage lift station upgrades and repairs. He stated that the long-term projects would be the southwest service area Old Tomoka Road/Booth Road, Halifax River force main crossing, southwest service area force main and lift station, and Hunter's Ridge to Pathways, which would be completed by the developer.

#### Reuse Projects

Mr. Blais stated that the city had done a lot to bring reclaimed water forward including storage and pumping improvements. He stated that the current reuse flow was about 3.0 mgd, which accounted for 66% of total flow. He noted that had actually risen a bit.

Mr. Blais identified the short-term projects for reuse as south peninsula RWM retrofits in two phases, Breakaway Trails reclaimed water storage tank and pump station, reclaimed water service to Deer Creek and Saddler's Run, and reclaimed water service to River Bend Golf Course. He noted that the south peninsula extension would involve taking the dry mains that went in with the last project and connecting them to provide service to those areas. He stated that there was currently a submitted grant application to the St. John's River Water Management District (SJRWMD). He noted that the city was not selected the last time for that grant funding because of some timing reasons, but he felt strongly that they would likely be selected for this year's funding.

Commissioner Kent asked about the amount of the grant funding; whereby, Mr. Blais replied that it would be 33% to 40%.

Mr. Noble explained that the city applied for a SJRWMD cost share agreement and also sent it to Mr. Doug Bell who was putting it in the water projects for legislative funding. He noted that the project would then have funding split three ways.

Commissioner Kent noted that the area being discussed was his neighborhood and he had one of those dry lines mentioned. He asked what the realistic timeframe was for connection.

Mr. Noble stated that Commissioner Kent's line would be connected during the recently awarded project, but he noted that there were other lines that would not be connected at this time because funding was not available.

Commissioner Kent asked when those would get on; whereby, Mr. Noble replied that the current project was starting that week and he thought it would be about four to five months.

Mr. Blais stated that the project was very cost effective as the dry lines were in place to be hooked up. He noted that it would be nice to receive funding. He stated that he believed the project was impact fee eligible, as well.

Mr. Blais noted that the pump station at Breakaway Trails and the steel holding tanks were in very poor condition. He stated that they recommended rehabilitating that as it represented a lot of demand. He noted that Deer Creek and Saddler's Run could be served with a couple short sticks of pipe, as well as River Bend Golf Course. He identified the mid-term projects for reuse as Airport Road reclaimed water main phase II and Ormond Crossings reuse transmission main, which would be completed by the developer. He explained that when the reclaimed water main was put in at Airport Road a ten-inch force main was repurposed and had been patched and repaired. He further explained that while it had worked it was undersized and needed to be replaced. He noted that the long-term projects were phases III and IV of that project.

#### Process Instrumentation and Controls

Mr. Blais explained that a sub-consultant had been enlisted to evaluate the city's process instrumentation and controls (PICS). He noted that they were an independent contractor and had nothing to do with the city's system. He explained that radio telemetry controlled all of the lift stations, wells and wastewater plant. He further explained that all of it was controlled by fiber optics and a combination of components that monitored that process. He stated that everything had been constructed over many years by many different contractors, resulting in a lot of non-standardized hardware and software platforms. He noted that various hardware and software programs did not work well together and that some of those components were over 15 years old.

Mayor Kelley asked if it could create false alarms; whereby, Mr. Blais replied that it could do a lot of things. He noted that this vendor was still working but had provided a draft of their plan regarding what changes should be made. He explained that staff was currently evaluating the report and the recommended options and would meet with the vendor for them to develop costs based upon the selected alternatives. He stated that in his opinion it would cost about \$500,000 to get it right.

Mayor Kelley asked if it all needed to be fiber optic or if it could be wireless; whereby, Mr. Blais explained that pretty much everything distributed outside of a plant site was radio, wireless or some other mechanism. He noted that inside the plant perimeter fiber optic was the way to go.

Mayor Kelley stated that the city had adopted a policy to put fiber in place anywhere that needed to be opened for any type of work. He noted that it might not necessarily go to the areas where the lift stations were located.

Ms. Shanahan stated that she believed there was some located there; whereby, Mr. Ned Huhta, Information Technology Director, confirmed that there were some. He noted that the radio system was pretty antiquated by current standards.

Mr. Blais stated that the technology had advanced and had become more affordable. He explained that the city had not undertaken a wholesale comprehensive look at all of the different systems before and were trying to create something where everything was consistent. He noted that there would be an addendum to the report to include this final recommendation when it was completed.

Commissioner Partington asked when that would be; whereby, Mr. Blais replied that it would be in the next couple of months.

Mr. Ponitz explained that the systems needed to be standardized and both plants needed to use the same platforms.

Mr. Noble stated that fiber optic interconnects between all of the facilities made this the more lucrative option.

Commissioner Partington stated that the fix would be important as or more important than the rest of the projects. He asked if the recommendations for this would come back to the Commission when the rest of the report did for approval.

Mr. Blais stated that they were close to finishing and could certainly do that. He noted that it would be finalized within a month or so.

Mr. Ponitz noted that an estimated cost would be provided then, as well.

Ms. Shanahan stated that the report would not be back to the Commission until that piece was completed.

Mayor Kelley stated that he believed there had been call outs on false alarms.

Mr. Ponitz replied that there had been various problems. He explained that the lift stations had one system and Microsoft did not support many of the server platforms that their current systems were on so it was not wise to stay on them.

#### Summary of Projected Costs

Mr. Blais summarized the project costs as follows: short-term projects to be completed within five years - \$25,491,600, mid-term projects to be completed in five to ten years - \$20,988,768, and long-term projects to be completed over ten years from now - \$22,195,204. He noted that grants and impact fees were available for funding. He stated that the city was currently funding a little less than \$3 million a year and would need to fund about \$5 million capital per year for the short-term projects. He explained that he had spent the past six months with staff and a lot of the projects had been pushed back or moved. He noted that the projects identified as short-term projects were important.

Mayor Kelley stated that it might be helpful to itemize and micro-examine the short-term projects.

Ms. Shanahan stated that the new numbers would be plugged into the Capital Improvement Program (CIP) and listed in more detail. She explained that they would detail the project cost and where those funds were coming from.

Mayor Kelley noted that it was shocking to see the bottom line numbers.

Ms. Shanahan stated that the numbers were shocking when taken all at once. She noted that the city had spent \$40 million on major improvements at two plants in the last ten years. She explained that water rates were raised incrementally just about every other year. She stated that everything would be taken into consideration and staff would work with the finance department. She noted that the city had been very successful in getting State Revolving Fund (SRF) low interest loans and grant funding.

Mayor Kelley stated that Ormond Beach had become a model to other cities as far as conservation pricing and their reduced mgd. He noted that a lot of that was attributable to conservation prices.

Commissioner Kent stated that he kept thinking about the sewer camera and the \$750,000 price for that phase. He asked how much the camera would cost if the city were to purchase it themselves and suggested that it could be leased out to other communities.

Mr. Blais noted that it was hard to staff it. He explained that the vendor would come in with ten cameras and a crew of three or four trucks and send the cameras in all directions. He stated that they were high-speed cameras and would lace together a composite so that those reviewing the film could look at any angle they wanted.

Commissioner Kent noted that he did not know what it entailed.

Mr. Blais explained that the vendors in that business were large companies who had spent millions of dollars on their technique and equipment. He noted that you could bid the companies against each other and bids would dictate the actual cost.

Commissioner Kent noted that it was a lot of money to find out where your problems were.

Mr. Ponitz stated that the stormwater crew had a camera. He noted that those crews had various responsibilities and various expertises and also had limited expertise in other areas. He explained that this method could be done a little at a time, but they proposed getting the experts in to do it quicker and to get a prioritized report of where they should go. He stated that the needed work would then be bid out.

Commissioner Kent noted that Mr. Ponitz said quick and he asked how long it would take them if they started that day to finish the first phase; whereby, Mr. Blais stated that it would probably be a couple months in the field.

Commissioner Kent replied that was not quick to him.

Mr. Blais explained that once that data was compiled it would take another two to three months to analyze it. He stated that the vendor had staff that would sit behind monitors and review the footage.

Commissioner Kent noted that because he did not see it he probably did not realize the number of pipes underground and the miles of them.

Ms. Shanahan noted that some cities did perform the videotaping themselves. She explained that the problem was that the footage then sat on a shelf because they never had the manpower to go back and analyze it. She stated that the real key was that all of the data would be taken and synthesized so that there was a priority list. She explained that she had worked for communities where there were miles of videotape that had never been looked at. She stated that collecting the data was easier than reviewing it.

Mr. Blais stated that if 90% of the pipe was in good shape and there was only one bad crack, then the pipe could be short-sleeve repaired. He explained that the report product generated regarding the repair needs could also be utilized to pursue funding opportunities.

#### Conclusion

Ms. Shanahan stated that when the final instrumentation piece was completed then staff would bring it back to the Commission with the entire plan report. She noted that in the past they had used this document as a reference for CIP projects in the next ten years.

Mr. Noble stated that just about every project identified in the last master plan was completed.

### **III. Adjournment**

The meeting was adjourned at 6:45 p.m.

Transcribed by: Colby Cilento