A. ROLL CALL

B. REQUEST TO ADDRESS THE BOARD

C. APPROVAL OF MINUTES
   • Approval of Minutes from Special Called Meeting June 3, 2019
   • Approval of Minutes from June 17, 2019

D. MONTHLY REPORTS
   • Financial (Verbal Summary)
   • Plant Operations
   • Field Operations
   • Engineering
   • Human Resources & Safety
   • General Manager’s

E. BUSINESS
   • Action Report #2019-20 – North Water Treatment Plant – High Service Pump #3
   • Action Report #2019-21 – South WTP – Raw Water Pumps & Pipelines
   • Resolution #2019-22 – Recommending Changes to Chapter 23 of the City of Henderson Code of Ordinances
   • Resolution #2019-23 – Acceptance of Stormwater Management System Maintenance Agreement – 2429 U. S. Highway 60 East
   • Action Report #2019-24 – Cleaning, Painting & Upgrades to Fire Hydrants

F. EXECUTIVE SESSION – None Requested
REQUEST TO ADDRESS THE BOARD
ACTION MINUTES OF
SPECIAL CALLED MEETING
June 3, 2019
ACTION MINUTES
SPECIAL CALLED MEETING
JUNE 3, 2019
HENDERSON WATER & SEWER COMMISSION

A. ROLL CALL

Present at the meeting was Commissioner Paul Bird, Chairman, who presided over the meeting, along with Commissioners George Jones (by conference phone), John Henderson, Gary Jennings, and Julie Wischer. General Manager, Tom Williams and Eric Shappell, Attorney were also present. Other staff members present were Kevin Roberts, Todd Bowley, Bart Boles, Tim Fischbeck, Kathy Ambrose, and Patty Brown. Others in attendance were City Manager, William “Buzzy” Newman; City Commissioner, Brad Staton; HR Director, Connie Galloway; and Public Information Officer, Donna Stinnett. There were no members of the media present.

B. BUSINESS

• Adoption of 2019-2020 Budget

Chairman, Paul Bird explained to the Board that when the HWU budget went to City Hall for their approval there was some concern over lack of specification regarding merit increases for contractual employees. It was requested that additional review be given this matter.

Tom Williams advised that for the last several years when management positions are filled the decision was made to make those positions contractual since upper level management positions might need to be compensated differently than civil service employees. In addition to the General Manager, the other positions involved are Director of Operations, Chief Financial Officer, and Project Engineer. Commissioner, Gary Jennings added that hiring and retaining good, qualified people in these positions is important. Commissioner, Paul Bird noted that contractual negotiations occur during the hiring process and sometimes certain benchmarks are discussed to obtain additional increases. The board agreed that it is vital that good people are retained.

City Commissioner, Brad Staton reported that when HWU’s budget was received for the City’s review the question was raised concerning merit increases. He discovered that HWU’s budget included an increase of up to 1% merit and 1% COLA for civil service employees and up to 5% merit for contractual employees. He indicated that every City employee including contractual employees will be receiving an up to 1% merit and 1% COLA for the new budget year. Therefore, approval of HWU’s budget with a different type of increase for their contractual employees was concerning. The City is heading into an extraordinary year unlike other years. Pension obligations are increasing rapidly, and money is tight. Uniformity between the City and HWU for the upcoming budget year is desired.

Commissioner, Gary Jennings stated that complacency and decrease in initiative and ambition is a concern. The civil service employees have some protection, but contractual employees can be let go at any time. Commissioner, Julie Wischer added that those giving extra output should be encouraged and pay increases are one of the best forms of encouragement.
City Commissioner, Brad Staton noted that this is not a permanent thing, the request is being made for the 2019-2020 budget year. This does not affect raises given for obtaining certifications or when an employee assumes other job duties. He added that he has a very high opinion of the job that the HWU upper management is doing and this is not a reflection on anyone’s skills just the need to be consistent with the City’s merit and cola.

Commissioner, John Henderson stated that his concern is that someone is hired with indications that there could be an up to 5% pay increase and then the rules are changed in the middle of the process. This is not a good position to be in. Commissioner, George Jones expressed his displeasure in losing control of the ability to reward good workers but noted his understanding of the City’s current situation.

Commissioner, Paul Bird mentioned to City Manager, Buzzy Newman, that if there is any discussion concerning how employee pay increases are arrived at in the future that he would like to participate. Mr. Newman indicated that obtaining a consultant for this purpose might be a possibility.

City Manager, Buzzy Newman advised that the City Commission normally sets the merit and COLA increases, which are typically followed for everyone at the City and it has been that way for several years. Commissioner, Julie Wischer stated that the City through the Memorandum of Understanding has developed the merit and cola increases for HWU civil service employees, but up to now, the HWU Board has always handled the contractual employees merit increases.

Motion was made by Commissioner, John Henderson that the HWU Board approve the 2019-2020 HWU Operating and Capital Budget as submitted with the stipulation that merit increases for the four contractual, non-civil service employees be capped at no more than 1% merit raise for the 2019-2020 fiscal year. Commissioner, Gary Jennings seconded the motion. After discussion, all Commissioners voted Aye, with no opposition. Motion passed.

C. ADJOURN

Motion was made by Commissioner, Julie Wischer and seconded by Commissioner, Gary Jennings to adjourn. All Commissioners voted Aye, no opposition. Motion passed.
ACTION MINUTES  
JUNE 17, 2019  
HENDERSON WATER & SEWER COMMISSION

A. ROLL CALL

Present at the meeting was Commissioner Paul Bird, Chairman, who presided over the meeting, along with Commissioners George Jones, John Henderson, Gary Jennings (arrived late), and Julie Wischer. General Manager Tom Williams and Eric Shappell, Attorney were also present. Other staff members present were Kevin Roberts, Todd Bowley, Bart Boles, Tim Fischbeck, Kathy Ambrose, and Deniese Jones. Others in attendance were Mayor Steve Austin; City Manager, William “Buzzy” Newman; Public Information Officer, Donna Stinnett; and Scott Abner, Kim Swift, Leslie Garvin, and Kenneth Lin with International Paper. There were no members of the media present.

B. REQUEST TO ADDRESS THE BOARD

“International Paper – Impact on Community”

Representatives from International Paper including Scott Abner, Production Manager; Kim Swift, Mill Controller; Leslie Garvin, Energy Buyer; and Kenneth Lin, Government Relations Manager appeared before the Board to make introductions and encourage additional communication between IP and HWU. Mr. Abner explained IP’s involvement in the community. He stated they employ approximately 100 people at the Mill and try to use local vendors, contractors, food services, etc. in their operation. A high priority is placed on being a good community partner and supporting the surrounding area where IP employees work and live. They not only donate funds, but also donate time to numerous school sports teams and non profit organizations.

Their desire is for assistance from HWU in recognizing potential opportunities to limit or reduce effluent costs for their organization since they operate in such a competitive internal and external environment. A 3% yearly cost reduction in spending is part of their task. There are 17 other Mills in the company competing for future capital investment and future expansion opportunities. They requested that routine meetings be set up between HWU and IP going forward to allow a better insight for cost expectations for 2020 and beyond. Being able to forecast better what expenses are going to be and including that in the budget process would be extremely helpful even though it is understood that the two entities do not have the same fiscal year endings. They also requested any information that might help them do something different in their process to lower their costs in other ways.

Kenneth Lin advised that IP has 6 facilities and 640 employees statewide. Kentucky is a very important state for IP and that partnership is valued along with the City of Henderson. Another plant similar to the Henderson plant is located in Maysville. There is hope for future capital investments and being able to better forecast effluent costs will be beneficial.

The Board expressed how much they appreciated IP’s presence in the Community and the jobs they have provided along with being a great customer. The HWU staff will willingly to work with IP staff in anyway that will be helpful in their budgeting process. Tom Williams said there has been a good ongoing relationship with MacMillan Bloedel and Weyerhaeuser in the past and
now International Paper. The way the contract is set up everything is reconciled at the end of the year and the rates are adjusted so that either side doesn’t owe a lot of money at the end of the period. The Board also requested notification for any changes in usage that IP becomes aware of in the future. Kim Swift noted that they are currently in their 2020 budget season so any information that can be shared pertaining to what costs will look like going into next year is needed. She also invited everyone to take a tour of the Mill sometime and several expressed interest in doing so. The Board thanked the IP group for their presentation and welcomed them back anytime. Tom Williams was designated as the contact person for HWU for future meetings.

C. RECOGNITION FOR 20 YEARS OF SERVICE

- Kathy Ambrose – Purchasing Manager

Kathy Ambrose was recognized for 20 years of service with HWU and presented with a certificate and hoodie. The Board acknowledged their appreciation of the work she has done for HWU in different positions throughout the years.

D. APPROVAL OF MINUTES

- Approval of Minutes from May 20, 2019

After discussion, motion was made by Commissioner, Julie Wischer and seconded by Commissioner, Gary Jennings to approve the minutes as submitted. All Commissioners voted Aye, no opposition. Motion passed.

E. MONTHLY REPORTS

- Financial – Discussed and approved as submitted.

Todd Bowley reviewed the Financials with the Board. Revenues were at $1.8 million for the month compared to a budget of $1.6 million. Water Sales were a little under budget due to some contractual adjustments. Wastewater Sales were over budget due to consumption and contractual adjustments. Everything else revenue-wise was in line. Operating Expenses were a little over budget as described in the Variance Analysis notes. Year to date Revenue is a bit under $20 million compared to right at $19 million budgeted and Operating Expenses are at $16.5 million compared to year to date budget of $17.4 million. Usage trends continue with residential down about 4.4% being offset by industrial commercial with a total increase of about 4.2% over this year compared to last year. Cash Flows are positive for the month and positive for the year. The pilot payment to the City will be coming out in June.

The Board discussed how the Utility would be affected negatively if commercial/industrial usage would go down by 20% or more and that it is important to stay on top of any change in usage in the system. Commissioner Jennings noted it is imperative to be able to adapt and adjust to any changes, making sure we are willing to assist our customers while staying within the guidelines established. Keeping established customers continues to be a priority.

Mr. Bowley continued review of the financials. The Capital Spending Report had little activity for the month. He informed the Board that the reports for this year for Pension and OPEB liabilities is available and shows some better news than expected with an increase for HWU of about $300,000 and the OPEB liability going down by $400,000 instead of the $2 million or $3 million swing potential. These numbers came from the State’s actuary audit reports.
There was a positive this month for Cash Flows of about $849,000, with a positive $1.2 million for the year.

- **Plant Operations** – *Discussed and approved as submitted.*

  Kevin Roberts reviewed the Plant Operations report with the group. The question was asked concerning retaining plant operators and if the utility is having any problem currently. Mr. Roberts replied that the utility still seems to be competitive in this area.

- **Field Operations** – *Discussed and approved as submitted.*

  Kevin Roberts discussed the Field Operations report with the Board. He highlighted the new piece of equipment (Sewer Line – Rapid Assessment Tool) that was demonstrated recently and is considered a “game changer” for locating blockages in sewer lines with minimal time and staff. There is an Action Report this month for purchase of one of these tools. Tom Williams added that this is one of the benefits of sending people to training and conventions because they are exposed to these types of new products in the water, wastewater, and stormwater fields.

  Commissioner Henderson commended the crews working on the South Elm Street project. He reported that they have been very good at communicating what is being done.

- **Engineering** – *Discussed and approved as submitted.*

  Tom Williams reviewed the Engineering report with the group. He noted the South Elm Street water line is just about finished. The line work is done, and the trench is in the process of being concreted. The City will come back in the fall and mill and pave that section. The Green River Road Tank is pretty much ready to go. Contracts and insurance information have been received.

- **Human Resources & Safety** – *Discussed and approved as submitted.*

- **General Manager’s** – *Discussed and approved as submitted.*

  - **Policy A-200 Board Action Reports and Board Resolutions, Revision 1**
  - **Policy B-200 Purchasing – Requisitions, Authorizations, Approvals, and Limits, Revision 5**

  Tom Williams explained there are two policies that our changing due to the incorporation of changes made from the 2019 Legislative Session for small purchases raising the limit from $20,000 to $30,000. Anything over that amount will require sealed bids. After discussion, motion was made by Commissioner, Gary Jennings, seconded by Commissioner, John Henderson to accept revisions to Policy A-200 Board Action Reports and Board Resolutions, Revision 1 and Policy B-200 Purchasing – Requisitions, Authorizations, Approvals, and Limits, Revision 5 as detailed in the GM report attachment. All Commissioners voted Aye with no opposition. Motion passed.

  Mr. Williams continued review of the GM report noting that Hall Environmental will be taking on a bigger consulting work load due to the retirement of David Brister, Environmental Compliance and Pretreatment Coordinator. The plan is to see how this arrangement works and delay hiring a replacement Pretreatment Coordinator. One of
the tasks added will be redoing local limits which is how heavy metals are controlled from industries. This has to be renewed every 5 years. Surcharge rates will also be looked at since they have not been revised in several years. The surcharge is not solely a cost recovery but is also used as a deterrent. This does not mean there will be a change but just a review. The plan is to meet with the industries to talk about the local limits and communicate with them any changes.

The group discussed the article in the paper concerning Orsanco’s water quality standards. Tom Williams advised that they are an extra level of protection along the river but in most cases regulations from KDOW are stricter than Orsanco’s so there would be little effect from their action. Kevin Roberts added that every industry on the river has a discharge permit that they have to comply with. Orsanco is not pulling back any services that they provide. They still have 30 or so organic detection systems on the river that they are funding. Mr. Williams commented that they are a useful organization and they do provide service.

The next item discussed was concerning Cross Connections and Back Flow Control. Tom Williams explained that this is an area of risk in the water distribution system. According to the plumbing code these back flow and cross connection devices should be inspected annually by a plumber to assure they are working properly. The danger of back flow is that some chemical or contamination could potentially be sucked back into HWU’s distribution system during periods of low water pressure. Customers affected are those with irrigation systems and every industry. If a customer is required to put in one of these devises, they are required to maintain it. The group conveyed their opinions on who should be responsible for the cost of having these valves inspected. Most agreed it should be the owner of the device and not the utility. There are companies that implement these programs for a fee, or additional personnel would be required to carry this out. It was agreed to consider this further and have staff work on implementation with recommendations being brought back to the Board.

Motion was made to approve monthly reports by Commissioner, Julie Wischer, seconded by Commissioner, George Jones will all Commissioners voting Aye, no opposition. Motion passed.

F. BUSINESS

- Resolution #2019-16 – Disposing of Surplus Real Property At 206 & 208 North Alvasia Street by Sale for Economic Development Purposes

Tom Williams reviewed Resolution #2019-16 with the Board. The two lots involved are located at the SOC and are being used as gravel parking lots for employees. The properties will be sold to Rodger Brown for $12,000 contingent upon sale of other City property adjacent to the lots and the City’s approval. After discussion motion was made by Commissioner, Julie Wischer, seconded by Commissioner, George Jones, to approve the Resolution as presented. Roll Call vote was taken with all Commissioners voting Aye. Resolution passed.
• Action Report #2019-17 – Purchase of Sewer Line Rapid Assessment Tool (SL RAT)

After discussion, motion was made by Commissioner Julie Wischer, seconded by Commissioner, George Jones to approve Action Report #2019-17 – Purchase of Sewer Line Rapid Assessment Tool for $26,320 from Duke’s Root Control, Inc., as detailed in the action report. This expenditure will be taken from the “Unallocated Capital Funds” line in the FY 2019-2020 capital budget. All Commissioners voted Aye, no opposition. Motion carried.

• Action Report #2019-18 – 9th Street Water Main Replacement

After discussion, motion was made by Commissioner, George Jones, seconded by Commissioner, Julie Wischer to approve Action Report #2019-18 – 9th Street Water Main Replacement from Green Street to Adams Street in the amount of $100,000 to be taken from the “Unallocated Capital Funds” line of the FY 2019-2010 Capital Budget, as detailed in the action report. This work will be done “in-house”. Mr. Williams noted that there was an error in the Action Report chart title that should read “9th Street Water Line Replacement Project” instead of “South Elm Street Water Main Replacement Project”. All Commissioners voted Aye, no opposition. Motion carried.

• Action Report #2019-19 – Acid Alum Chemical Bid

After discussion, motion was made by Commissioner, George Jones, seconded by Commissioner, Julie Wischer to approve Action Report #2019-19 – Acid Alum Chemical Bid, as detailed in the action report. This bid is good for a term of 6 months and renewable with 3 additional six-month terms. The low bidder was Chemtrade and a bid summary is available for review. All Commissioners voted Aye, no opposition. Motion carried.

Tom Williams distributed information and briefed the Board concerning a high service pump at the North Water Treatment Plant that has failed and needs replacement as soon as possible. This is considered an emergency purchase because this pump is critical to supplying the north end of town. In order to obtain the pump in a faster time frame an evaluated-bid method was used assigning 70 points to price and 30 points for delivery time. The bids were received on Friday, June 14th, and staff is still evaluating and following up on the pumps proposed to make sure all requirements are met. This item will be brought to the Board next month in an Action Report, but will be ordered as soon as the decision is made this week. The Board agreed to move forward with this purchase and formal approval will be made in the July board meeting.

G. EXECUTIVE SESSION – None Requested

There being no request for Executive Session, motion was made to Adjourn by Commissioner, Julie Wischer, seconded by Commissioner, Gary Jennings with all Commissioner voting Aye, no opposition. Motion carried.

The next regular monthly meeting will be held on Monday, July 15, 2019.
FINANCIAL REPORT
(Verbal Summary)
PLANT OPERATIONS REPORT
General Operations:

A. Treatment Plants – Overview:

1. Regulatory:

As we have reported in the past, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are a hot topic in the water field. The Senate is working to incorporate the regulation of these compounds in the National Defense Authorization Act since the compounds are heavily used on military bases, though it is expected that amendments to this act will affect drinking water regulations as well. While the details to these regulations are not finalized, Henderson Water Utility has attempted to stay ahead of this by testing our water sources and the effectiveness of current available treatment.

In May, we were able to remove PFOS completely from our source water by feeding Powdered Activated Carbon (PAC). We saw a reduction of 66% in PFOA. Other Perfluorinated Compounds were not detected in our source water.

While the issue is not small, currently it is not a primary concern for Henderson. The Ohio River has shown to have low levels of these compounds, and we have now proven that we can reduce the levels significantly with current treatment procedures.

The downside of this, and it is a significant downside, is that while we can significantly reduce these levels, the daily cost of doing so will be annually prohibitive (in the $350K/year range of PAC). As the regulations become more clear, we will also gain more clarity in determining the best way to move forward in regards to capital planning.
2. **System Water Quality:**

   **Water Quality Calls:** There were two water quality calls in June.

   **1342 Washington Street:** On June 3rd, 2019, a customer advised that her water had a musty odor. The customer also advised of becoming ill after drinking the water the previous day. Tests results were all normal. However, the Water Quality Specialist did detect an odor in the kitchen. For the sake of thoroughness, crews flushed the distribution line to ensure there were no issues in the main. After flushing the line and the customer flushing her internal lines, the customer no longer detected an odor and was satisfied the water was not the cause of her illness.

   **724 Comanche Drive:** On June 19th, 2019, a customer called asking to have the water at his residence tested for bacteria. His wife had recently contracted E. Coli and wanted to rule out the water as a source. The sample had good chlorine levels and tested negative for bacteria. The Water Quality Specialist left a message ensuring that the water did not contain bacteria and was not the source of E. Coli.

3. **Personnel:**

   **Staffing Levels:**

   a. **Water Quality:** Heather King’s last day as one of our Water Quality Specialists was earlier this month. She had only been with us a short time but made a huge impact (for the better) in her area. The remaining two Water Quality Specialists are now direct reports to the Treatment Manager, Josh Thompson. This was how we had them structured previously under the Treatment Manager and it worked well. It was intended when the Treatment Manager position was brought back but thought it better to wait and not put too much on at once. With Heather’s resignation and the beginning of a new fiscal year, it is a good time to make the adjustment.

   b. **North Water:** Full operational staff, however Les Lange has submitted his intent to retire on September 3rd. We have hired Neil Tichenor from the current roster, and he is learning the duties of the position.

   c. **North Wastewater:** Full operational staff.

   d. **South Water:** We are in the process of hiring a replacement for Josh Perkins, the water relief shift operator. Josh resigned recently, with his last day being May 30th. The position is being filled from an existing roster.

   e. **South Wastewater:** Full operational staff.

   f. **Environmental Compliance & Pretreatment:** David Brister retired at the end of June. He had been with us for 15 years, working as both a water and wastewater treatment operator and then as our Pretreatment Coordinator. He will be missed; he did a great job.

   g. **Plant & Pump Station Maintenance:** Interviews have been completed for the position left vacant by the retirement of Jim Carnine. We have hired Taylor Jackson as a Maintenance Tech I, and he is learning the duties of the position.
h. Treatment Intern: We have filled this position, and they will be assisting the North Water Treatment Plant this summer with several projects, including Filter Evaluations.

Projects:

Plant Beautification Efforts: This effort is continuing throughout the plants on an ongoing basis.

B. North WTP:

1. Treatment Quality:

   Water Quality Goals: All regulatory goals were met.

2. Operations & Projects:

   Plant Tours: Henderson Fire Department toured the plant on two occasions this month. These tours not only showed the process but also focused on confined space and chemical hazards located within the plant to ensure the Fire Department has all available information in case of an emergency.

   Treatment Challenges: The Ohio River is again out of its banks due to the large amounts of rain we have received. The Operators continue to work diligently to ensure proper treatment.

3. Average Water Treated and Water Pumped Data Trend:

   ![Average Water Treated and Pumped Data Trend Graph]

Note: These values are current readings, but the actual billed readings are approximately 45 days behind.

C. North WWTP:

1. Treatment Quality:

   Effluent Quality: All regulatory treatment goals were met.

   Biosolids Quality & Hauling: Hazex continues to meet hauling demands, with sludge production continuing to be lower than normal.

2. Operations & Projects:

   Lab Certification: Our in-house lab continues to take on more of the testing from our contract lab. This month the onsite lab has begun running the Total Phosphorus testing for both wastewater treatment plants.
Diffusers: The diffuser systems in digesters 1 and 4 are on the schedule for repairs. This maintenance is scheduled to begin soon.

Dakota Pump: During the replacement of the valves on the reuse water line, several small leaks were found. When these valves were replaced, and the leaks were repaired, the Dakota pumps began running independently and supplying adequate water pressure on a single pump.

Codell Punchlist: The contractor has made repairs to the Mixed Liquor Distribution Structure, which was leaking into the unused cell. This repair required flow through the clarifiers to be suspended while repairs were completed. To provide time for repairs, operators emptied aeration basin #2 and placed the flow entering the plant into it. This volume is now being pumped back into Aeration Basin #1 to help ensure proper treatment.

D. South WTP:

1. Treatment Quality:

   Water Quality Goals: All regulatory goals were not met. This is further explained in the following section (Treatment Challenges) and did not result in a violation.

2. Operations & Projects:

   Treatment Challenges: During plant start-up on June 23, 2019 we believe a large amount of ammonia entered the plant. This was likely due to run-off from the rainstorms. We are not able to monitor the raw water in the line until the pumps are started and water enters the plant. Our filters had rapidly rising turbidities, with some readings above the limit of 0.3 NTU. Though this does not result in a violation, it provided a good opportunity to use it as a training exercise for the operations staff to react to it as if it had resulted in a violation. A large amount of data was gathered, and a detailed analysis of the filter conducted, as is directed by the Kentucky Division of Water when a violation occurs. The analysis was performed on the filter that caused the most trouble, but we intend to perform the same procedure on the other three as well.

   Secondary Cleaning: While conducting normally scheduled cleaning and maintenance, staff identified several rust areas and pits in the metal of the secondary. While most of these were concentrated on the floor, some less severe areas exist on the wall. Staff repaired some of the pits, but due to the number of them and the rain, full repairs were unable to be done at this time. We are investigating other methods of repair and hope to conduct them at the next scheduled cleaning.

   Beautification Efforts: Operations staff have been working on the landscaping of the plant. Some of this landscaping has been in place for several years and needed maintenance. Staff has also made additional improvements to add to the outer aesthetics of the plant.
3. **Average Water Treated and Water Pumped Data Trend:**

Note: These values are current readings, but the actual billed readings are approximately 45 days behind.

E. **South WWTP:**

1. **Treatment Quality:**

   **Effluent Quality:** All treatment goals were met. The new aeration basins are proving to be a great help with ensuring excellent effluent quality.

   **Biosolids Quality:** We continue to see a reduction in solids and believe this is an effect of the new aeration basins. While it is too early to say that this is the “new normal,” the reduction in solids production could prove to be a welcome savings.

2. **Operations & Projects:**

   **Sludge Press Rehab:** The Neptune Polyblend system is now in service, and the newly reworked sludge presses are working well.

   **Headworks Building:** Temporary handrails are in place. Paint has been ordered, and plans are being made to power wash the structure and cover the exposed metal framework with an epoxy paint that should last for years to come.

F. **Plant & Pump Station Maintenance:**

   **North Fork Pump Station:** Pumps #2 and #4 are currently in service, while repairs are being made to #1 and the control panel for #3. *(No Change)*

   **Ohio Drive Pump Station:** With the widening of Ohio Drive, the electrical panel had to be replaced and moved to the side of the new road. This will cause the station to be located under the newly widened road, adding additional complications. The panel has now been received, and the project will continue moving forward. *(No Change)*

   **Industrial Park Pump Station:** Pump #2 failed, having shorted to ground. The replacement pump has been received, and the discharge flange assembly was installed. The pump will be installed as soon as it can be scheduled. *(No Change)*

   **NWTP:** On May 10, the High Service Pump #3 which supplies water to Atkinson Park Tank failed. The pump has been bid, ordered, and will be installed once it arrives.
Hazex Pump Station: Pump #2 has been replaced with a newly ordered Flygt pump and is performing well.

Spruce Drive Pump Station: Pump #2 was pulled due to clogging issues. A new lower seal was installed, and the impeller and wear bowl assembly were replaced. The pump has been reinstalled and is pumping, currently clog free.

Cross Creek Pump Station: Pump #2 failed having shorted to ground. A new pump was purchased and installed to the existing lift rails. These pumps are small grinder pumps and are usually non-repairable due to the repair costs compared to a replacement pump.

Dollar Store Pump Station: We have had continuous problems with this pump station clogging due to “flushable” wipes. As a result, we have purchased a new pump with an anti-clogging feature, which should eliminate the issue. This pump will be installed the next time the station clogs.

NWWTP Blowers: Aeration Basin Blower #5 had its starter system fail. Repairing this would cost more than a new soft start. A new soft start has been ordered from Electric Motors Inc., being the lowest received quote.

Aeration Basin Blower #3 had a dramatic failure internally and is beyond repair. This blower is originally from 1995. We are in the process of investigating a new blower.

G. Pretreatment Program & FOG Services:

Industrial Pretreatment Activity: No updates.

Nuisance discharge: Soured egg was discharged onto the drying bed at the beginning of June. This caused neighborhood discomfort until staff could get enough neutralizing agent applied and work the material to a manageable state for hauling to the landfill. Staff has gathered information on the cost of additional treatment and will be invoicing the septic hauler for this amount. It has been made clear to our septic haulers that we will not accept this material in the future.

FOG Program: No updates.

H. Distribution Operator Update:

Fire Hydrants: Work continues identifying, flow testing, mapping, and labeling our fire hydrants to ensure accuracy for HWU and the Fire Department.

Corrosion Control: Equipment for monitoring our drinking water corrosion control program is being researched for purchase. This equipment will be placed at the plant and in the distribution system to continually monitor our efforts.
<table>
<thead>
<tr>
<th>Date</th>
<th>Crew #</th>
<th>Address</th>
<th>Comments</th>
<th>Jamie’s Comments</th>
</tr>
</thead>
</table>

00 Service Request Tags Given Out

01 Work Order Tags Given Out

01 Door Tags Returned
FIELD OPERATIONS REPORT
General Operations:

A. Overview:

1. Operational:

   Getting the Right Tools: Well, last Board Meeting I brought the SL-RAT to your attention, requesting the approval to purchase it. It is on its way and is much appreciated.

   Having the right tools to do the work we do is critical not only to efficiency, but also for employee morale. This past week we had another demo, by Red Dawg Nozzles, that showed us some jet cleaning nozzles used for cleaning out our collection lines of grease, roots, and debris. Most of the nozzles on the market are manufactured overseas. Red Dawg is in Houston, TX.

   Red Dawg attached a clear pipe section to the back of their demo van to demonstrate their nozzles. What you see in the picture below is the cutting and cleaning force of a nozzle represented by the “blowback” out of the end of the pipe. By comparison, the “nozzle of choice” in our inventory looked to be less than half of the cleaning force. It’s no wonder that we are often called back to locations that we wrongly assumed were cleaned out.

   This nozzle costs about $900 but is exponentially more efficient than what we have on our two trucks. We’re heading in this direction.

   And, again, this is the direct result of the same conference where we coordinated the demo of the SL-RAT.

2. Personnel:

   Specialist: The second Specialist position had been on hold until the new budget year took effect on July 1. It has been reclassified into a Utility System Worker 2 position.

   Utility System Worker 1: An exam for two vacant positions is scheduled for Thursday, July 18th.

   Utility System Worker 2: We should have this position filled and be at full staff by the end of the month.

   Utility System Worker 3: Fully staffed. However, we have one off work due to a work-related injury.
Crew Leader: Fully staffed. An examination is scheduled for July 25th.

Automation Specialist: Prior to July 1st, there have been two Automation Specialist positions. With the new budget, the new position of Automation Specialist, Lead was created to provide a higher level of responsible oversight in this area of work with the elimination of the Automation Manager position. Wayne Griffin, one of the current Automation Specialists, has been moved into this position. He has been performing the functions of this position since the retirement of the Automation Manager.

B. Automation Department:

Wireless Ethernet: This system is working well, so far, but we are still working on a few things before implementing it at additional locations.

Background Info: Wireless ethernet was also added at the US 60 booster station to replace the radio ethernet that had been in use. We are looking at the possibility of adding it to North Fork and Janalee Drive pump stations. This will enable us to move away from leased fiber optic lines from HMPL.

SWWTP: We relocated and repaired the wiring on the flow meter for the belt presses. Seems M. Bowling cut some wiring while the presses were being upgraded. The relocation allows the operator to see the flow closer to where he is operating and removes a trip hazard from the old conduit running across the floor.

C. SOC General / HWU General:

Mostly quiet this past month. Several projects have been buttoned up and completed.
**D. Customer Service: Customer Service Calls and Work Orders (NORTH):**

1. The tabulation below shows calls we responded to last month. This tabulation by no means represents all of the calls that came in. We provided the following services:

<table>
<thead>
<tr>
<th><strong>Water Line and Service Maintenance</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Main Repairs</td>
<td>4</td>
</tr>
<tr>
<td>Water Service Line Repairs</td>
<td>5</td>
</tr>
<tr>
<td>Water Meter Inspection</td>
<td>25</td>
</tr>
<tr>
<td>Water Meter Changes</td>
<td>11</td>
</tr>
<tr>
<td>Water Meter Repair</td>
<td>4</td>
</tr>
<tr>
<td>Water Meter Disconnected</td>
<td>2</td>
</tr>
<tr>
<td>Water Meter Reposition</td>
<td>0</td>
</tr>
<tr>
<td>Water Meter Box Cleaned</td>
<td>8</td>
</tr>
<tr>
<td>Water Meter Locate</td>
<td>1</td>
</tr>
<tr>
<td>Water Meter Leak Detection</td>
<td>6</td>
</tr>
<tr>
<td>Water Meter Consumption Check</td>
<td>7</td>
</tr>
<tr>
<td>Fire Hydrant Repairs</td>
<td>5</td>
</tr>
<tr>
<td>Low Water Pressure Calls</td>
<td>9</td>
</tr>
<tr>
<td>Water Leak Calls</td>
<td>8</td>
</tr>
<tr>
<td>Water Quality Calls</td>
<td>3</td>
</tr>
<tr>
<td>No Water Calls</td>
<td>0</td>
</tr>
<tr>
<td>Turn Water Off/On Calls</td>
<td>7</td>
</tr>
<tr>
<td>Install Temporary Hydrants</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sewer Line and Service Maintenance</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer Main Repairs</td>
<td>4</td>
</tr>
<tr>
<td>Sewer Service Line Repairs</td>
<td>0</td>
</tr>
<tr>
<td>Sewer Manhole Repairs</td>
<td>0</td>
</tr>
<tr>
<td>Sewer Main Cleaning</td>
<td>3</td>
</tr>
<tr>
<td>Sewer Main Grease Removal</td>
<td>0</td>
</tr>
<tr>
<td>Sewer Overflow Calls</td>
<td>0</td>
</tr>
<tr>
<td>Sewer Backup Calls</td>
<td>3</td>
</tr>
<tr>
<td>Sewer Blocked Calls</td>
<td>0</td>
</tr>
<tr>
<td>Sewer Odor Calls</td>
<td>2</td>
</tr>
<tr>
<td>Sewer Service LineLocates</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>New Services</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Taps</td>
<td>10</td>
</tr>
<tr>
<td>Sewer Taps</td>
<td>5</td>
</tr>
<tr>
<td>Sewer Tap Locates</td>
<td>1</td>
</tr>
<tr>
<td>Water Meter Installation</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Stormwater Maintenance</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm line Repairs</td>
<td>2</td>
</tr>
<tr>
<td>Storm Intake Repairs</td>
<td>1</td>
</tr>
<tr>
<td>Stormwater Flooding Calls</td>
<td>2</td>
</tr>
<tr>
<td>Clean/Unblock Intakes</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Miscellaneous Services</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sink Hole Calls</td>
<td>10</td>
</tr>
<tr>
<td>Inspect Misc. Items</td>
<td>8</td>
</tr>
<tr>
<td>Smoke Test Lines</td>
<td>0</td>
</tr>
<tr>
<td>Camera Inspect Lines</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Pump Station Maintenance</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Station Repairs</td>
<td>1</td>
</tr>
<tr>
<td>Pump Station Inspections</td>
<td>3</td>
</tr>
<tr>
<td>Pump Station Cleaning</td>
<td>1</td>
</tr>
<tr>
<td>Pump Station Maintenance</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regulatory Issues</strong></th>
<th><strong>Qty.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Downspout Removal Letters Mailed</td>
<td>0</td>
</tr>
<tr>
<td>Downspout Letters Mailed To Date</td>
<td>228</td>
</tr>
<tr>
<td>Downspout Removal Requests:</td>
<td>222</td>
</tr>
<tr>
<td>Total Complied and Re-inspected</td>
<td></td>
</tr>
</tbody>
</table>

**HWU Service Call Summary**

- 1 - Water Line and Service Maintenance (Total Calls in 18 Sub-Categories)
- 2 - Stormwater Maintenance (Total Calls in 4 Sub-Categories)
- 3 - Pump Station Maintenance (Total Calls in 4 Sub-Categories)
- 4 - Sewer Line and Service Maintenance (Total Calls in 10 Sub-Categories)
- 5 - New Services (Total Calls in 4 Sub-Categories)
- 6 - Miscellaneous Services (Total Calls in 4 Sub-Categories)
- 7 - Regulatory Issues (Downspout Letters Mailed)
2. Rolling 2-Year History of Monthly HWU Service Calls.

![Graph showing work orders opened and closed over time.](image1)

![Graph showing water that is unaccounted for over time.](image2)
E. Collection System:

We are conducting normal maintenance activity in the collections system.

Kudos to Mike Patterson: While a vendor was running a sewer line for a camera demo on Wood Drive, we discovered what appeared to be the end of a line with no cap on the end. It looked like dirt had silted into the end of the line. We were going to dig up the line and cap it. The end of the line was in the middle of a customer’s driveway and was 7-8 ft. deep. I sent Mike and crew to do this. Mike got with Ron and discovered that it was not dirt feeding in but was concrete acting as a cap on the end of the line. This was a huge discovery because it saved us $10,000 or more digging this out and replacing the driveway. The moral of this story is that it pays to be thorough!

A contract has been awarded to Mark Bowling, Inc., for the replacement of the Myrene Drive pump station. This is one of our old Cantex pump stations that has reached the end of its useful life and has been giving us regular problems. The limited space available for this project will make it especially challenging. Work originally scheduled to start on July 1st has been delayed due to our rejection of the contractor’s first selection for pump manufacturer that has resulted in an additional lead time for the pumps and controls. A new start date will be scheduled once a new delivery date can be confirmed for these items.

F. Distribution System:

HMG was finally able to work us in and get the directional drill done on Old Madisonville Road. All residents are tied on to the new line. All that is left to complete this job is cut and cap the old main. We expect to be done with everything by the end of the week.

The S. Elm St. project is complete. Crews put the finishing touches on the yards affected and have moved on to other things.

I have been informed that parts for the 9th St. water main replacement job should be in very soon. We will be jumping on that quickly when they arrive.

We replaced a small water line on Burris St. that fed 5 houses. The old line was in very poor condition, so we thought it was best to replace it. This took about 3 days to complete.

G. Stormwater Projects:

The pipeline installation and final restoration are complete on Phase 1 of the Countryview Storm Sewer project. A final additive change order is anticipated reflecting the many field changes and adjustments necessitated due to conflicts with existing utilities. Design for Phase 2 of this project is approximately 10% complete.

H. Stormwater Phase II:

Along with the specialized training that took place at the recent Kentucky Stormwater Association annual conference attended by Bart Boles and Ken Ferry, it was announced by KDOW that three communities in central Kentucky and two in western Kentucky will be audited by the USEPA in 2020. These communities were handpicked by the KDOW program director to represent either the best or worst in the Commonwealth. Fortunately, Henderson is not one of the five. This is an enormous deal that will involve KDOW working with each community for the week prior to the USEPA visit to help
them prepare and will likely involve citations for even the best programs. This is a bullet that we cannot expect to dodge indefinitely.

I. **Information Technology Department:**

**Security Awareness Training:** Recently we began Security Awareness Training. Training and testing were purchased from KnowBe4, which is the world’s leading Security Awareness Training organization. They will help us create a “human firewall” which can protect us against malicious emails. Our end goal is to increase security awareness and decrease the number of clicks on malicious emails. We began by sending out a simulated phishing email to determine how at risk we are to phishing attacks. Next, we will schedule employee-wide training and periodic phishing tests for all employees to help them learn how to identify and avoid phishing emails.

**Solid State Drive (SSD) Storage:** Obtaining quotes for new SSD storage for our Dell Storage Area Network (SAN) which is where all of our VMWare virtual machines are hosted. SSD storage allows for faster data throughput than traditional hard drives due to their lack of moving parts. For instance, we occasionally get error messages due to SAN data-read latency. Evolving server and application requirements have outpaced the capabilities of the SAN’s current hard drives. The old drives will be repurposed for storing data which is not accessed as often. The Dell hardware automatically manages where the data is stored for maximum efficiency. This project is expected to cost between $25,000 and $30,000.

J. **GIS Department:**

**Engineering Intern:** Warner Mattingly is working as an Engineering Intern for the summer. He is majoring in Civil Engineering at the University of Kentucky. Warner has been working on editing easements in the GIS and attaching digital (pdf) plats and deeds to easement features.

**Training:** I attended an online instructor-led ESRI training July 11th and 12th titled “Sharing GIS Content Using ArcGIS”.
<table>
<thead>
<tr>
<th>Date</th>
<th>Crew #</th>
<th>Address</th>
<th>Comments</th>
<th>Jamie's Comments</th>
</tr>
</thead>
</table>

00 Service Request Tags Given Out
01 Work Order Tags Given Out
01 Door Tags Returned
ENGINEERING REPORT
A. Water Projects

1. South Water & Wastewater Plants – Influent/Effluent Lines and River Intake:
   Plans to implement our 2014 study to reconstruct our potable influent and wastewater effluent lines, as well as modifications to the Big Rivers intake structure on the Green River are being developed. J.R. Wauford has completed pick-up survey work to make sure conditions haven’t changed since plans were drawn up and will ask for reapproval of a construction permit from DOW. When approval is received, we will plan for bidding and construction.

   The intake modifications will take longer to design and permit, so will likely follow in a couple of years. Bart met with BREC and Wauford on-site on 14 May. That meeting led to some minor changes in layout of the new pumps, and was a useful information sharing session. This engineering work is subject of an Action Report for this meeting. Our relationship with BREC continues to be a good one.

2. South Elm Street (Clay to Washington) Water Line: (Project all but Complete)
   Work has been completed on the section of old main on S. Elm, from Jefferson all the way to Washington Street. All that remains is final paving, which will include milling over the trench and paving as an “inlay”, to leave a neat and clean street cross section. Project went very well, and we’ll drop it from future reports unless something comes up.

3. Green River Road Tank:
   Next in line of our tanks to be painted and rehabbed, bids were opened for the Green River Road Tank on 17 April 2019, and the project was awarded to Tank Pro, Inc. Engineer has started the shop drawing process, a preconstruction meeting was held on 27 June, and work has begun. Plans include full containment due to proximity to residences. Our new logo will be painted on the side of the tank that faces the City’s golf course. We also contracted through HMPL with their tree trimming contractor to clear some overhanging trees from the site. Appreciate their help and cooperation.

4. South Main Street Water Transmission Main – Hancock to Yeaman: (No change since last report)
   Strand Associates has prepared plans for this project, which is estimated at $1.5-1.8 million and will be critical if a large water user locates in the South/College pressure zone (Riverport area). At this point, funds for this project are planned for FY 2020, and our model shows it to be a priority, even without new industrial use in the South/College pressure zone. Plan approval has been received from DOW.

5. South Water Treatment Plant – Backwash Pump System and New Clearwell: (No change)
   This project came out of an operational review of the South WTP, which shows that the filters undergo backwash for extended periods, reducing the production of water for sale. To speed up the backwash process, we have designed a pumped backwash system that will provide more head differential, speeding the process and allowing the filters to be returned to service much faster after cleaning. Project will cost around $420,000, and is our next candidate project for a grant application, which will include the replacement of the Clearwell, at an additional $940,000.
B. **Wastewater Projects**

6. **Atkinson Sewershed Study - Myrene Drive & Atkinson Park Sewer Pump Station and Force Mains:**
   We have all the easements signed on the Myrene FM portion of the work. One that remains outstanding is on the Atkinson Park Medical Building, part of the Atkinson FM.

   Bids were received on the Myrene Pump Station on 6 February. A pre-construction meeting was held on April 25th, and we expect construction activity to begin on site around 1 July. Pump delivery delays will push completion of this project back into the fall.

   Other phases will follow, depending on availability of funds, on about an 8 to 10-month schedule.

C. **Stormwater and Separation Projects**

7. **Countryview Subdivision Stormwater Project:**
   Bids on the first big phase were received 15 August, and award of a contract with a reduced scope was negotiated with the low bidder, after the bids came in higher than anticipated. Work on the actual stormwater system has been completed, and we’re talking to the City about a strategy for paving the portions that have been completed.

8. **Riverdale Court:**
   Investigation in this area off South Main Street revealed a previously unknown storm sewer pipe that ties into the Downtown Interceptor near the River. Taking that line off the Interceptor and running a separated storm line to the River will allow about 2-1/2 acres of area to be taken off the combined system, at relatively low cost. Was awarded to M. Bowling Inc in May, contracts and bonds have been signed and returned, and work should get underway shortly.

9. **Chestnut/Norris Stormwater Project: (No change since last report)**
   This small stormwater project will allow us to separate 9.1 acres of land out of the combined sewer system. We contracted with Qk4, local engineering firm, to do survey and design work on this project. Drafting of the plans is now 95% complete. Have met with a couple of homeowners who will be asked to grant easements. We will also be tying down easements on some existing lines where we haven’t been able to find any easements that were recorded.

10. **Center & Julia Phase III-B Stormwater Project:**
    This stormwater project includes a crossing under the CSX tracks near the old depot. We have signed a task order with J.R. Wauford for updated survey and design work. We have provided insurance information to CSX for our permit, and have received a revised invoice, reflecting savings from insurance we already carry that was included on the first invoice; this cut the cost from about $40k to $20,400. Have signed the agreement and forwarded it with payment to CSX. When issued, the permit will have a five-year time limit to start construction, so we’ve moved the project up in the Strategic Plan to accommodate that timeframe. Received plans from Wauford on May 31st that are nearly complete. Acquiring easements from adjacent property owners is going well; We have one signed, and have made contact with three others. Completion of the project will be contingent on availability of funds.

D. **General Administrative / SOC**

11. **Vactor and Wash Truck Garage at the SOC: (No change since last report)**
    Working on a plan to construct a 3-bay metal storage building at the SOC, so that the Wash Truck and the two Vac Trucks can be stored in one easily accessible place.
HUMAN RESOURCE & SAFETY REPORT
**Staffing Levels:**

1. **Water Treatment Operator I [1 position]:** considering last applicant on register; will test again to maintain an active register

2. **Maintenance Technician I [1 position]:** hired 7/1

3. **Utility System Worker I [2 positions]:** exam is 7/18

4. **Treatment Plants – Seasonal Worker [3 positions]:** no request for action

5. **Seasonal Treatment Intern [1 position]:** intern started on June 10th

6. **Water Quality Specialist – Lead [1 position]:** starting work on position

7. **Environmental Compliance & Pretreatment Coordinator [1 position]:** Current employees are performing duties

**Safety Report (as of 6/30/2019):**

<table>
<thead>
<tr>
<th>HWU</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Worked</td>
<td>71,340</td>
</tr>
<tr>
<td>Total Cases</td>
<td>2</td>
</tr>
<tr>
<td>Days Away/Restricted Time Cases</td>
<td>1</td>
</tr>
<tr>
<td>Days Away From Work Cases</td>
<td>1</td>
</tr>
<tr>
<td>Actual # Days Away From Work</td>
<td>66</td>
</tr>
<tr>
<td>Transfer/Restricted Cases</td>
<td>1</td>
</tr>
<tr>
<td>Actual # Days Restricted Duty</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incident Rates</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Recordable Rate</td>
<td>5.61</td>
</tr>
<tr>
<td>DART Incident Rate</td>
<td>2.80</td>
</tr>
<tr>
<td>DAFW Rate</td>
<td>2.80</td>
</tr>
<tr>
<td>Trans / Restrict. Rate</td>
<td>2.80</td>
</tr>
</tbody>
</table>

- 2012 NAICS is the classification for Utilities: Water, Sewage, and other systems
- DART = Days Away, Restricted, or Transferred
- DAFW = Days Away From Work
- How incident rates are calculated: [(# Cases) x 200,000] / Employee Hours Worked
- Change data compared to data at the end of the previous month.

- 1 recordable/lost time/restricted case occurred in June.
  1 February 2019 case lost time is now 66 days off work.
  1 October 2018 case also remains off work; now at 259 days off work.
- No fixed facility audit was conducted in June.

**Other:**

**Upcoming City-wide Events:**
GENERAL MANAGER’S REPORT
Regulatory Issues

Some movement on the draft KPDES Permit for our North Wastewater Treatment Plant reported by our consultant, John Lyons (Strand). Involves some technical assessment that will be needed to argue that our CSO discharges, Post-LTCP, will not have an impact on water quality on the River.

Budget 2019-2020

2019-2020 Operating and Capital Budget was passed on final reading by the City Commission on June 25th and is now in effect. We have been processing some of the position and classification changes made as part of this plan.

Surplus Property Transfers – Cleaning up Property Lines

In April 2018, we agreed to transfer the house and vacant lot next to the Administration Building to HMPL for their use as a parking lot (Board Resolution 2018-07). Last month, as they had a survey performed to begin design of the parking area, it was discovered that the assumed property lines on this block of Fifth Street are not correct. HMPL has had a plat prepared to move the property lines between their lot and the Bobo property to the east, and between our parking lot and the lot we conveyed to HMPL. We request your assent to have our Board Chairman sign that plat, agreeing to the new lot lines, and authorizing signature of a deed formalizing the transfer. HMPL is also dedicating a sewer easement across the lot for a line that serves the Bobo house and another house that fronts on Main Street.

The same issue with property lines not being where we thought they were has occurred on the property on Alvasia Street (206 & 208 N. Alvasia) that we are selling to Rodger Brown (Board Resolution 2019-16). In that case, a new consolidation plat will rectify the fact that our training building was built over a lot line, where we owned both lots. Again, your assent to have Chairman Bird sign the plat will grease the skids.

Apparently in the past, we never had anything surveyed before we bought or sold property.

Sewer Use Ordinance

Included on this agenda is approval of changes to Chapter 23 of the City Code, commonly called the Sewer Use Ordinance, including three major items.

First, changes to language on Cross-Connections and Backflow Prevention will allow us to set up a program to deal with all places where these items exist. That does not mean we will immediately start to do that. We’re discussing internally with Staff how to best implement that, including a schedule for inspections (maybe inspecting every three years instead of yearly), and who on our staff
would have time to work on that. We will bring those policy questions to you for further discussion, prior to implementation.

Second, these changes incorporate the new Local Limits, which as we’ve discussed, are the limits we put on local industries for heavy metal discharges. After review of those changes with our consultant, we believe that local industries can meet the new limits with the pre-treatment facilities they have in place, if they are operated correctly. There are separate sets of limits for the North and South systems. The Local Limits are still under review by DOW in Frankfort, but we are processing these changes tonight to get a step ahead on the process of introducing the changes through the City Commission, which will be done at two readings in August.

Lastly, we are adding a new surcharge for Chemical Oxygen Demand. The following is a little dense and hard to follow, but the best I’ve been able to write, so bear with me.

We measure the strength of wastewater in several ways, using laboratory tests related to the different constituent parts of the waste. Biochemical Oxygen Demand (BOD) is the test that measures the amount of oxygen needed to break down organic material in a water sample, at a specified temperature over 5 days. When we say “organic material” we are talking about virtually any plant, animal, object, or compound that contains carbon. A pristine river might have a BOD₅ below 1 mg/l (part per million, or ppm). The Ohio River is considered moderately polluted, with a BOD₅ of 5 ppm. The wastewater arriving at the North Wastewater Treatment Plant averages 200 ppm, and our treated wastewater averages below 2 ppm when we discharge back to the Ohio River.

Total Suspended Solids (TSS) and Chemical Oxygen Demand (COD) are two other standards that we use to measure wastewater strength. TSS is just what it sounds like, the solid material suspended in the flow. It can be an organic compound, or a grain of sand. COD is very similar to BOD, but where BOD measures the amount of oxygen consumed by the biological activity in a sample, COD measures that, plus the amount of oxygen consumed by chemicals in the water, too. We use a very strong testing agent that completely oxidizes all organic compounds in the COD samples.

We require industries to pretreat their wastewater to remove all these constituents (BOD, COD & TSS) to levels below which the wastewater treatment plant can handle the waste loads and allow us to meet our permit limits for discharge to the rivers. In the sewer use ordinance, these levels are set at 400 ppm for BOD and TSS, and 800 ppm for COD. The reason for a higher COD limit is that some of the chemicals in the wastewater will escape in the air, or be “volatilized”, so more COD load can be handled by the process than BOD loading. Also, the BOD is a part of the COD.

When an industrial discharge exceeds the 400/800 ppm limits, our ordinance specifies a surcharge, based on the pounds of loading that’s above the limit. This is computed based on flow and monthly average loading. In a typical year, these charges to industries in both our North and South service areas total approximately $200,000. While not a large amount of revenue (and not something we count on to balance the books), this does act as an incentive for industry to meet the pretreatment standards. Under the regulations we’re required to enforce, our response to violations is proportional and cumulative, like speeding tickets. We can’t and don’t allow an industry to continually exceed the discharge standards and in effect push their treatment burden
off to our other customers. If they do, we issue Notices of Violation and require remedial plans from the industry.

Our charges for BOD, TSS, and Oil & Grease, another measurement of wastewater strength, have been set at 26 cents per pound of loading for several years. They were set to approximate the additional costs associated with treatment of higher strength waste. As a reference, Owensboro and Paducah wastewater agencies have surcharges in the 22 to 24 cent range (note, both city’s concentration limits are lower than ours at 265 to 350 ppm).

Solvents and/or cleaning solutions, in high concentrations, cause problems at our wastewater plants. These types of chemicals would not include a biochemical component, and thus would not be detected in a BOD sample. Their use causes difficulties that raise the costs of treatment, but the current system does not assess any fees, surcharges, or penalties for their use. Some of the organic material measured by the COD test is biological (BOD), and there could be an issue with double charging, by having a straight fee attached to COD on top of a charge for BOD.

A method exists to avoid this problem by subtracting out the BOD loading from the COD test results and instituting a surcharge that’s based on the higher of the two factors. Our COD standard of 800 ppm would thus account for a BOD level of up to 400 ppm, plus 400 ppm of chemical loading that is subject to dissipation in the air during the treatment process, before the COD charge would kick in. Other cities in Kentucky have instituted this change or are preparing to.

Looking at the proposed ordinance revisions attached, you’ll see the two formulae for surcharge calculation which are identical save for the BOD and COD portion of the calculations. Future surcharge amounts would be ruled by the formula giving the higher amount.

To be clear, revisions to the Local Limits are not something that we instigated. Changes to the KPDES permits issued to our wastewater treatment plants by the Division of Water, and changes to the Kentucky water quality standards require that the discharge limits established in our Sewer Use Ordinance be revised to continue in compliance with federal and state regulations. This is done every five years, and the last time we went through this process was 2014.

With your approval tonight, we will work to get these revisions on the agenda for City Commission approval at the City’s first available meeting following. I believe the best strategy will be to explain them as part of an “Ordinance Review” of Chapter 23, then we would move forward with two readings of the changes.

**Strategic Plan**

Every year about this time, we talk about implementation of the updated *Capital Improvement Program and Strategic Plan* that spells out our projects for the next 10 years, and how it informs our spending decisions in the short term, over the next 2 to 3 years. Below is my attempt to bring that 10-year view into better focus for the next three fiscal cycles.

This year, we’ve allocated quite a bit of our new Capital spending to projects that are already started, either due to overruns, or because we knew that some expenditures from 2018-19 projects would be delayed and not actually incurred until the 2019-2020 FY. The biggest of these is the Green River Road Tank Painting project, and the Myrene Drive Pump Station project also took a big chunk.
So first, here’s a rundown on planned expenditures from the $3.5 million committed to Capital spending, in the new budget year. Most of these projects are underway, either in the Construction or Design phase. Those above the line are the ones that have been committed to in an Action Report.

### 2019 - 2020 Fiscal Year – Pre-Allocated per Adopted Budget

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost (USD)</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green River Road Tank (Action Report 2019-13)</td>
<td>$375,774</td>
<td>Construction</td>
</tr>
<tr>
<td>Myrene Drive PS (Action Report 2019-05)</td>
<td>$202,121</td>
<td>Construction</td>
</tr>
<tr>
<td>Vehicles (Action Report 2019-07)</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>Fair Street Booster Station (Action Report 2019-12)</td>
<td>$75,000</td>
<td>Construction</td>
</tr>
<tr>
<td>Countryview Storm Sewer – Phase II</td>
<td>$100,000</td>
<td>Design</td>
</tr>
<tr>
<td>Sellars Ditch Water Line Crossing</td>
<td>$75,000</td>
<td>Construction</td>
</tr>
<tr>
<td>Bentley-Hughes PS removal</td>
<td>$160,000</td>
<td>Design/Construction</td>
</tr>
<tr>
<td>Chestnut &amp; Norris Separation</td>
<td>$150,000</td>
<td>Design/Construction</td>
</tr>
<tr>
<td>Clay – Dixon Separation</td>
<td>$125,000</td>
<td>Design</td>
</tr>
<tr>
<td>Other Stormwater &amp; Water Projects</td>
<td>$424,350</td>
<td>Design &amp; Construction</td>
</tr>
</tbody>
</table>

**Sub-Total** $1,787,245

Those budget allocations leave $1,712,755 from the 2019-2020 Capital Budget to spend on new projects. Here’s a tentative **One-Year Plan**, followed by two more years that are less likely to be correct:

### 2019 - 2020 Fiscal Year (started 1 July)

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Rat (Action Report 2019-17)</td>
<td>$26,320</td>
</tr>
<tr>
<td>9th Street Water Main (Action Report 2019-18)</td>
<td>$100,000</td>
</tr>
<tr>
<td>NWTP High Service Pump (Action Report 2019-20)</td>
<td>$45,000</td>
</tr>
<tr>
<td>Myrene Drive PS – Force Main Replacement</td>
<td>$400,000</td>
</tr>
<tr>
<td>Sewer Camera &amp; Truck</td>
<td>$100,000</td>
</tr>
<tr>
<td>Generators at 5 locations</td>
<td>$175,000</td>
</tr>
</tbody>
</table>

**Sub-Total** $991,320

The four items above the line were approved last month or should be approved at this meeting. The other three are planned for the remainder of the year. This plan would leave $721,435 ($1,712,755 minus $991,320) unallocated, moving into the 2019-2020 fiscal year.

That $721,435 will be a start on the **Raw Water Influent/Wastewater Effluent Lines** project at the South Plants/Big Rivers Complex. The plan at this point is to bid that project in spring 2020, and the remainder of its cost (of a total of $1.5 million) will come from next years’ capital plan, which will include the projects listed here.
2020 - 2021 Fiscal Year

Complete Influent/Effluent Lines – South Plants (Project 1) 800,000
Paint and Rehab the Four-Star Tank 225,000
South Main Street Water Main – Hancock to Yeaman 1,500,000
South Water Treatment Plant – Clearwell (Project 3) 950,000
Countryview Storm Sewer – Phase II 200,000
Sub-Total $ 3,675,000

2021 - 2022 Fiscal Year

Paint and Rehab the Graham Hill Tank $ 220,000
Atkinson Park Sewer Pump Station 565,000
Atkinson Park Force Main 758,000
Atkinson – Clay Stormwater 150,000
South Water Treatment Plant – Intake Pumps (Project 5) 1,600,000
Countryview Storm Sewer – Phase II 200,000
Sub-Total $ 3,493,000

Our cash flow projection from January 2019 shows spending $ 3.0 million in each of these two years, so we may need to increase one or both of those years to accommodate this plan.

History shows that we’ll spend everything we allocate; there are just many, many needs.
BUSINESS

• Action Report # 2019-20 – North Water Treatment Plant – High Service Pump #3
• Action Report # 2019-21 – South WTP – Raw Water Pumps & Pipelines
• Resolution # 2019-22 – Recommending Changes to Chapter 23 of the City of Henderson Code of Ordinances
• Resolution # 2019-23 – Acceptance of Stormwater Management System Maintenance Agreement – 2429 U.S. Hwy. 60 East
• Action Report # 2019-24 – Cleaning, Painting & Upgrades to Fire Hydrants
Henderson Water Utility
Action Report # 2019 - 20

To: Henderson Water & Sewer Commission
From: Tom Williams, P.E., General Manager
Subject: North Water Treatment Plant – High Service Pump # 3
Project #: 22.1802.0106
Date: 15 July 2019

Project Background:

- The North Water Treatment Plant (NWTP) has three High Service pumps that distribute finished potable water out into our Distribution System. These 200 HP, 3,200 gallon per minute pumps were installed in the High Service building on the west side of Water Street when the “new” plant was constructed in 1962, alongside the 1.4 million-gallon Clearwell. There also is a “backwash” pump located there, that uses finished water from the Clearwell to clean the sand filters, and there were formerly two Low Service pumps that boosted the Raw Water flow into the plant across the street, which were retired when we rebuilt the River Intake in 2012-2013.

- The High Service system has been reconfigured a couple of times over the years, and in the current set-up, High Service Pump # 3 is dedicated to pump finished water to the Atkinson Park Tank to act as an extension of the Clearwell. This allows additional contact time for our disinfection chemicals.

- High Service Pump # 3 is original equipment from 1962, and it experienced a total failure at the end of May. Since this is a critical piece of the NWTP infrastructure, we declared an emergency, quickly put together specs and a bid package, and asked for bids in a shortened 7-day period. We also sought bids on a slightly larger pump, in order to explore the possibility of increasing capacity while we’re replacing this unit. This was an interesting procurement, since we don’t buy big water pumps every day.

- Bids were received on 14 June 2019, and the low bidder was Wastewater Solutions, LLC at a total cost of $40,727.

- We used the evaluated-bid method to award this, assigning 70 points for price and 30 points for delivery time, since time is critical in this case, and we want to reduce the risk of losing another High Service Pump while awaiting this replacement. As things played out, this evaluated bid process did not lead to award to the low-dollar-cost bidder. The point-based evaluation is shown on the attached. The bid documents also included a penalty clause for running over the vendor-specified delivery time, to prevent “gaming” of the evaluation, to some extent.

Legal/Budget/Financial Considerations:

- Funds for this work will be taken from the Unallocated Capital Funds line in the 2019-2020 Capital Budget.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of the new High Service Pump</td>
<td>40,727</td>
</tr>
<tr>
<td>Contingency &amp; Possible Modifications required in HS Building</td>
<td>4,273</td>
</tr>
<tr>
<td><strong>Appropriation Needed (including some contingency on Low Bid)</strong></td>
<td><strong>$ 45,000</strong></td>
</tr>
</tbody>
</table>

- Procurements necessary for the completion of this project have and will follow the Kentucky Model Procurement Code.
Recommendations & Approvals:

- Staff recommends the award to Wastewater Solutions, LLC, in the amount of $ 40,727.
- Board approval includes endorsement of the decision to declare an emergency in this situation, and authorizes all work necessary to complete the scope of work for this project, including issuance of any additional bids, purchase orders, engineering services, change orders, easement acquisition, or other authorizations required to complete the work without unnecessary delays.

Respectfully Submitted for Approval:

___________________________
Tom Williams, P.E.
General Manager

BOARD ACTION – 15 July 2019

PASSED:_______ FAILED:_______ TABLED:_______ DATE:_______
### Option 1

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Wastewater Solutions, LLC</th>
<th>Xylem</th>
<th>Straeffer Pump &amp; Supply, Inc.</th>
<th>Chase Pump &amp; Equipment</th>
<th>S &amp; K</th>
<th>JAGS Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pump Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boesch Model 14HH-2C (3 Stage)</td>
<td></td>
<td></td>
<td>Hydroflo Model 14HL-2-Stage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goulds, VIT-CATM 14 FHC s-Stage</td>
<td></td>
<td></td>
<td>American Turbine Model H-14-MC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pump Price</strong></td>
<td>$40,727.00</td>
<td>$33,505.00</td>
<td>$49,975.00</td>
<td>$45,400.00</td>
<td>$43,515.00</td>
<td>$47,950.00</td>
</tr>
<tr>
<td><strong>Points for Price (70 max)</strong></td>
<td>57.59</td>
<td>70.00</td>
<td>46.93</td>
<td>51.66</td>
<td>53.90</td>
<td>48.91</td>
</tr>
<tr>
<td><strong>Weeks to delivery ARO</strong></td>
<td>7</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Points for Delivery (30 max)</strong></td>
<td>30.00</td>
<td>17.50</td>
<td>23.33</td>
<td>17.50</td>
<td>13.13</td>
<td>13.13</td>
</tr>
<tr>
<td><strong>Total Evaluated Points</strong></td>
<td>87.59</td>
<td>87.50</td>
<td>70.26</td>
<td>69.16</td>
<td>67.02</td>
<td>62.04</td>
</tr>
<tr>
<td><strong>Lowest $</strong></td>
<td>$33,505.00</td>
<td>$33,505.00</td>
<td>$33,505.00</td>
<td>$33,505.00</td>
<td>$33,505.00</td>
<td>$33,505.00</td>
</tr>
<tr>
<td><strong>Total Points available</strong></td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td><strong>This Bid</strong></td>
<td>$40,727.00</td>
<td>$33,505.00</td>
<td>$49,975.00</td>
<td>$45,400.00</td>
<td>$43,515.00</td>
<td>$47,950.00</td>
</tr>
<tr>
<td><strong>Total Points - Price</strong></td>
<td>57.59</td>
<td>70.00</td>
<td>46.93</td>
<td>51.66</td>
<td>53.90</td>
<td>48.91</td>
</tr>
<tr>
<td><strong>Shortest Delivery (weeks)</strong></td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total Points available</strong></td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>This Bid</strong></td>
<td>7</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total Points - Time</strong></td>
<td>30.00</td>
<td>17.50</td>
<td>23.33</td>
<td>17.50</td>
<td>13.13</td>
<td>13.13</td>
</tr>
<tr>
<td><strong>Total Points for Evaluation</strong></td>
<td>87.59</td>
<td>87.50</td>
<td>70.26</td>
<td>69.16</td>
<td>67.02</td>
<td>62.04</td>
</tr>
</tbody>
</table>

### Option 2

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Wastewater Solutions, LLC</th>
<th>Xylem</th>
<th>Straeffer Pump &amp; Supply, Inc.</th>
<th>Chase Pump &amp; Equipment</th>
<th>S &amp; K</th>
<th>JAGS Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pump Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boesch Model 16WF-1C (3 Stage)</td>
<td></td>
<td></td>
<td>Hydroflo Model 16MH-2-Stage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goulds, VIT-CAFM 16 RGLC 3-Stage</td>
<td></td>
<td></td>
<td>American Turbine Model E-18-LC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pump Price</strong></td>
<td>$56,301.00</td>
<td>$51,786.00</td>
<td>$61,750.00</td>
<td>$61,008.00</td>
<td>$58,072.00</td>
<td>$61,280.00</td>
</tr>
<tr>
<td><strong>Points for Price (70 max)</strong></td>
<td>64.39</td>
<td>70.00</td>
<td>58.70</td>
<td>59.42</td>
<td>62.42</td>
<td>59.16</td>
</tr>
<tr>
<td><strong>Weeks to delivery ARO</strong></td>
<td>7</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Points for Delivery (30 max)</strong></td>
<td>30.00</td>
<td>17.50</td>
<td>23.33</td>
<td>17.50</td>
<td>13.13</td>
<td>13.13</td>
</tr>
<tr>
<td><strong>Total Evaluated Points</strong></td>
<td>94.39</td>
<td>87.50</td>
<td>82.04</td>
<td>76.92</td>
<td>75.55</td>
<td>72.28</td>
</tr>
<tr>
<td><strong>Lowest $</strong></td>
<td>$51,786.00</td>
<td>$51,786.00</td>
<td>$51,786.00</td>
<td>$51,786.00</td>
<td>$51,786.00</td>
<td>$51,786.00</td>
</tr>
<tr>
<td><strong>Total Points available</strong></td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td><strong>This Bid</strong></td>
<td>$56,301.00</td>
<td>$51,786.00</td>
<td>$61,750.00</td>
<td>$61,008.00</td>
<td>$58,072.00</td>
<td>$61,280.00</td>
</tr>
<tr>
<td><strong>Total Points - Price</strong></td>
<td>64.39</td>
<td>70.00</td>
<td>58.70</td>
<td>59.42</td>
<td>62.42</td>
<td>59.16</td>
</tr>
<tr>
<td><strong>Shortest Delivery (weeks)</strong></td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total Points available</strong></td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>This Bid</strong></td>
<td>7</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total Points - Time</strong></td>
<td>30.00</td>
<td>17.50</td>
<td>23.33</td>
<td>17.50</td>
<td>13.13</td>
<td>13.13</td>
</tr>
<tr>
<td><strong>Total Points for Evaluation</strong></td>
<td>94.39</td>
<td>87.50</td>
<td>82.04</td>
<td>76.92</td>
<td>75.55</td>
<td>72.28</td>
</tr>
</tbody>
</table>
Henderson Water Utility
Action Report # 2019 - 21

To:    Henderson Water & Sewer Commission
From:  Tom Williams, P.E., General Manager
Subject: Water Tank Projects
Project No: 22.1802.0096 – South WTP – Raw Water Pumps & Pipelines
Date: 15 July 2019

Background:

- **This Action Report supplements and amends Action Report 2014-37, which authorized a design study at the South Water Treatment Plant (SWTP), approved on 15 September 2014.**
- We issued an RFP for engineering services in July 2013 for a study to investigate maintenance and repair issues at the South Water Treatment Plant. Staff sought engineering assistance to perform a complete analysis of the plant.
- The primary objectives of this study were:
  - Consideration of options for expansion of capacity at this plant.
  - Include projects that would allow the current plant to be renovated, extending its service life.
  - Study of the Raw Water feed lines, and options for bypass/emergency pumping, or taking over the intake if needed in the future.
  - Publishing a final report that allowed staff to program repairs and upgrades.
- J.R. Wauford & Company (JRWC) of Nashville, Tennessee, performed the study and submitted a final report in August 2014, which also detailed critical items that needed to be addressed in the short term. The primary items of work identified were taken to a 10% design level.
- We authorized JRWC to proceed with design of improvements to the Raw Water and Wastewater Effluent Lines, along with a design for an entirely new South WTP in Action Report 2014-37 in September 2014. A pilot study to choose and verify the choice of membrane technology was conducted, nearly final plans for a new water plant were completed, and those have been held until such time that a new plant is required. Pricing for the membranes was locked in with one manufacturer, so that an expedited schedule could be accomplished, should the need for the new plant project ever come to be.
- We also proceeded with a project to paint the conical clarifiers at the plant, and that work was performed in early 2016 (Action Report 2016-05), at a total cost of $215,000. This project extended the life of critical metal elements of the plant by approximately 10 years.
- A Clearwell renovation project was designed and bid, but bids came in greatly over budget, so that project was revamped to provide an entirely new Clearwell, rather than renovate. That project is on hold as we have attempted to obtain outside funding through a grant tied to job creation.

New Developments:

- Big Rivers Electric Corp. has notified us that their large cooling water pumps, which serve as the source of raw water for the SWTP, are subject to imminent shutdown. We anticipated this development in the study authorized in 2014 and are now ready to proceed with “Project 5” from the Wauford study, **HWU Dedicated Raw Water Pumps**. This project will include demolishing existing items as required, installation of up to three (3) new dedicated raw water pumps, a new electrical room with gear to control and operate the new pumps, and discharge
piping to connect to the new raw water lines. The project scope will also include an option to
design a backup generator, should that be deemed necessary.

- Some open questions remain as we move into this project, including the source of power for
the HWU dedicated pumps. There may be additional survey and design required for these
options, as we work through to final plans. The project design will dovetail with renewed
negotiations with Big Rivers to tie down questions of responsibility for maintenance of the
intake structure and appurtenances, such as the intake screens, the concrete intake structure
itself, and other issues that were not addressed at the time we renegotiated our contract with
Big Rivers in August 2015.

- Wauford’s estimate of the costs of the HWU dedicated pump design phase, through bidding
and up to construction, is $145,000. We anticipate this design effort taking us into calendar
year 2020, so that construction of the new pumps might be accomplished in the 2020-2021
fiscal year.

- Work on these various projects to date has been included under the rubric “SWTP
Rehabilitation – Membrane”, (Project # 22.1802.0051), but we believe it now makes sense to
split this work out as a separate project, in order to highlight the amounts being spent to
provide these raw water facilities.

- Later in this fiscal year (2019-2020) we will be bidding and constructing the improvements to
the Raw Water Influent and Wastewater Effluent lines that were included in “Project 1” of the
Wauford study. They are included in Project No. 22.1802.0096, previously referenced in a GM
Report, and we will return to you for action on that project, likely in Spring 2020.

Legal & Budgetary Considerations:

- Procurements necessary for the completion of this work have and will follow the Kentucky
Model Procurement Code.

Recommendations & Approvals:

- Staff recommends proceeding through design and bidding of the HWU Dedicated Raw Water
Pumps project, and authorization of $145,000 for this project, with the funds being
appropriated from the current 2019-2020 Capital Budget.

- Board approval authorizes the General Manager to initiate all work necessary to complete this
work up through bidding of the general construction contract, including easement acquisition,
issuance of purchase orders, engineering services, task orders, change orders, or other
authorizations required.

- After bidding, award of the actual construction of this project will be authorized by further
Board action.

Respectfully Submitted for Approval:

______________________________
Tom Williams, P.E.
General Manager

Commission Action – 15 July 2019

PASSED: _____________ FAILED: _______________ TABLED: _______________
Resolution No. 2019 – 22
Recommending Changes to Chapter 23 of
The City of Henderson Code of Ordinances

The following Resolution was duly adopted by the Water & Sewer Commission of
the City of Henderson at a regular meeting held on Monday, 15 July 2019, at which
meeting a quorum was present.

WHEREAS, the Henderson Water Utility (HWU) operates and maintains two
water treatment and distribution, and wastewater collection and treatment systems, serving
the City of Henderson, Henderson County, and other localities in the region; and

WHEREAS, the Safe Drinking Water Act, and other Federal and State laws and
regulations have established regulatory standards that apply to all water users, which standards
are enforced locally by HWU; and,

WHEREAS, the Henderson Water Utility is responsible for enforcement of
plumbing code and drinking water regulations and standards in our water distribution system
related to cross connection control and backflow prevention; and,

WHEREAS, the Clean Water Act, and other Federal and State laws and
regulations have established national Pretreatment program standards that apply to all
wastewater discharges from non-domestic sources, which standards are enforced locally by
HWU; and,

WHEREAS, industries and other wastewater dischargers must meet effluent
limitations for certain heavy metals, in order that the final process effluent and solids produced
in the treatment processes will not cause exceedance of water quality standards or land
application criteria for disposal of sludge; and
WHEREAS, new local limits for effluent discharges have been calculated for the Henderson North and South Wastewater Treatment Plants; and

WHEREAS, HWU wishes to enact a surcharge for Chemical Oxygen Demand (COD) discharges from industries and other wastewater dischargers, in order to better protect the publicly owned treatment works from upsets or damage; therefor

BE IT RESOLVED, that the Water and Sewer Commission of the City of Henderson, under the authority granted to the Board of Commissioners under Chapter 23 Article II Division 3 Sections 23-36 through 23-45.1 of the City Code of Ordinances hereby recommends to the Board of Commissioners of the City of Henderson, Kentucky, that the City of Henderson enact and adopt revisions to portions of Article II of Chapter 23 of the City Code of Ordinances, commonly referred to as the “Sewer Use Ordinance”, incorporating changes to Cross-Connection and Backflow Preventer Inspections; adding a definition for Chemical Oxygen Demand (COD); modifying Pollution Discharge Limits (Local Limits); revising requirements for Floor Drains; modifying Industrial User Cost Recovery and Pretreatment Program Fees; and establishing the Method of Computing Surcharges, as well as minor semantic and grammatical changes as recommended by the staff of the Water and Sewer Commission, and herewith transmitted to the City by attachment to this resolution.

The General Manager is hereby authorized to deliver this Resolution to the City of Henderson, and to pursue the changes enumerated above as shown on the attached Code sections.

These changes will become effective upon the date of adoption by the Board of Commissioners of the City of Henderson, Kentucky.
IN WITNESS WHEREOF, having come before the Board of Commissioners on Monday, 15 July 2019, and upon Motion made by Commissioner ____________, and seconded by Commissioner ______________, the Board of Commissioners voted as follows:

<table>
<thead>
<tr>
<th></th>
<th>AYE</th>
<th>NAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissioner, Paul Bird</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioner, George Jones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioner, John Henderson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioner, Gary Jennings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioner, Julie Wischer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tom Williams, P.E.
General Manager
Henderson Water Utility
ARTICLE II. WATER AND SEWER SERVICE

DIVISION 1. GENERALLY

Sec. 23-16.1 Cross connections [defined, prohibited; installation [and inspection] of backflow prevention devices for water services.

(a) [Cross-connection means a physical connection or arrangement between two (2) otherwise separate systems, one (1) of which contains potable water and the other being either water of unknown or questionable safety, or steam, gas or chemicals, whereby there may be flow from one (1) system to the other, the direction of flow depending on the pressure differential between the two (2) systems. (Defined in 401 KAR 8:010(14)).]

(a)(b) Cross connections between the public water system and any actual or potential source of contamination are prohibited. The General Manager may at his discretion, and after official notice is made, order that public water service be shut off to any premises where a cross connection is found to exist or may potentially exist.

(b)(c) Protection against backflow and back siphonage shall be provided on any potable water opening, outlet, or connection serving a [residential, commercial or industrial building or property, [where required by ] in conformance with the Kentucky State Plumbing Code. Backflow and back siphonage devices shall be installed by the owner and shall be properly maintained[, in accordance with HWU policy.] For all fire suppression systems, and for all potable water services larger than two inches (2") [where applicable,] backflow and back siphonage devices shall be tested and inspected in conformance with the Kentucky State Plumbing Code. Test results shall be certified by a qualified individual, and shall be made available for inspection by the General Manager or his authorized representative.

(Ord. No. 06-11, 3-22-11)

DIVISION 2. SEWER USE REGULATIONS

Sec. 23-26. General provisions; definitions.
Add the following definition to this section:

[Chemical oxygen demand (COD). A measure of the oxygen equivalent of the organic matter content of a sample that is susceptible to oxidation by a strong chemical oxidant, usually reported as mg O₂/L.]
Sec. 23-30. Pollutant discharge limits.

(a) General conditions. The following described substances, materials, waters or wastes shall be limited in discharges to the Henderson sanitary sewer system to concentrations or quantities which: (i) will not harm either the sewers, wastewater treatment processes or equipment, (ii) will maintain and protect water quality in the receiving stream, and (iii) will not otherwise endanger lives, limb, public property, or constitute a nuisance. The General Manager or his designee may set additional limitations or limitations more stringent than those established in the provisions of this ordinance, if in his opinion more severe limitations are necessary to meet the above objectives. In forming his opinion as to the acceptability of a discharge, the General Manager or his designee shall give consideration to such factors as the quantity of subject waste in relation to flows and velocities in the sewers, materials of construction of the sewers, the wastewater treatment process employed, capacity of the wastewater treatment plant, and other pertinent factors.

(b) Restricted discharges.

(1) Wastewater containing more than fifty (50) milligrams per liter of petroleum oil, nonbiodegradable cutting oils, or products of mineral oil origin.

(2) Wastewater containing floatable oils, fat, or grease, whether emulsified or not, in excess of one hundred fifty (150) milligrams per liter (mg/l) or containing substances which may solidify or become viscous at temperatures between $32^\circ$--$150^\circ$F ($0^\circ$--$65^\circ$C).

(3) Any garbage that has not been properly shredded. Garbage grinders may be connected to sanitary sewers from homes, motels, institutions, restaurants, hospitals, catering establishments, or similar places where garbage originates from the preparation of food in kitchens for the purpose of consumption on the premises or when served by caterers. Ground paper products such as cups, dishes, napkins, and milk containers shall not be discharged to the sewer system.

(4) Any wastewater containing toxic pollutants in sufficient quantity or quantities, either singly or by interaction with other pollutants which injure or interfere with any wastewater treatment processes, constitute a hazard to humans or animals, causes the City to violate the terms of its KPDES permit, prevents the use of acceptable sludge disposal methods, or exceed a limitation set forth in a Categorical Pretreatment Standard.

(5) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the City in compliance with applicable State or Federal regulations.

(6) Any water or wastes which by interaction with other water or wastes in the public sewer system, release noxious gases, form suspended solids.
which interfere with the collection system, or create a condition deleterious to structures and treatment processes.

(7) Any wastewater with objectionable color which cannot be removed to an acceptable level within the operation of the wastewater treatment process unless otherwise specifically noted in the Industrial User Permit (IUP).

(8) Waters or wastes containing substances which are not amenable to treatment or reduction by the wastewater treatment processes employed to the extent required by the City’s NPDES/KPDES permit.

(9) Any waste(s) or wastewater(s) classified as a hazardous waste by the Resource Conservation and Recovery Act (RCRA) without a sixty (60) day prior notification of such discharge to the General Manager. This notification must include the name of the hazardous waste, the EPA hazardous waste number, type of discharge, volume/mass of discharge and time of occurrence(s). The General Manager may prohibit or condition the discharge(s) at any time.

(10) Any water or wastes which have characteristics based on a twenty-four-hour composite sample, grab or a shorter period composite sample, if more representative, that exceed the following normal maximum domestic wastewater parameter concentrations:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum allowable concentration without surcharge fee assessment (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>400</td>
</tr>
<tr>
<td>COD</td>
<td>800</td>
</tr>
<tr>
<td>TSS</td>
<td>400</td>
</tr>
<tr>
<td>NH₃-N</td>
<td>50</td>
</tr>
<tr>
<td>Oil and grease</td>
<td>150</td>
</tr>
</tbody>
</table>

Any person discharging wastewater exceeding the allowable concentrations as noted in Table 1, will be subject to a surcharge fee for each pound loading over and above the allowable concentration. Any other amenable constituents requiring the addition of specific chemicals for proper treatment will also be subject to surcharge as noted on the industrial user permit. Exceedance of the effluent limits specified in Table 1 shall not be deemed to constitute a violation of a permit condition or this
ordinance if the appropriate surcharge fee is paid and the discharge does not cause interference or pass through to the POTW.

(11) The discharge limitations as established in Tables 2 and 3 of this Ordinance are for characteristics of any wastewaters to be discharged into the municipal sewer system, to the North and South Wastewater Treatment Plants (POTW’s), subject to any compliance schedule as must comply with these limitations where they are more stringent than applicable state and/or federal regulations. Based upon the sampling program at the Henderson wastewater treatment plants, the discharge limitations given in Tables 2 and 3 may be adjusted to reflect the POTW's needs. The City shall give public notice when any change results in a limitation less stringent than currently exists.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Daily Maximum Discharge Limit (milligrams per liter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (As)</td>
<td>0.34[0.26]</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>0.06</td>
</tr>
<tr>
<td>Chromium, total (Cr)</td>
<td>0.77[1.71]</td>
</tr>
<tr>
<td>Hexavalent Chromium (Cr VI)</td>
<td>0.53[0.35]</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>1.43</td>
</tr>
<tr>
<td>Cyanide, Amenable (Cn, Amen)</td>
<td>0.26</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>0.24</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>0.01</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>1.64</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>0.44[0.04]</td>
</tr>
<tr>
<td>Silver (Ag)</td>
<td>0.39</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>1.60[1.48]</td>
</tr>
</tbody>
</table>
Table 3
Effluent Discharge Limitations
Henderson South Wastewater Treatment Plant
City of Henderson, Kentucky

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Daily Maximum Discharge Limit (milligrams per liter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (As)</td>
<td>0.17</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>0.11</td>
</tr>
<tr>
<td>Chromium, total (Cr)</td>
<td>2.77[1.71]</td>
</tr>
<tr>
<td>Hexavalent Chromium (Cr VI)</td>
<td>1.55[0.35]</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>2.03[0.68]</td>
</tr>
<tr>
<td>Cyanide, Amenable (Cn, Amen)</td>
<td>0.65[0.55]</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>0.69</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>0.004</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>4.57[1.45]</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>0.38</td>
</tr>
<tr>
<td>Silver (Ag)</td>
<td>0.24</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>1.48</td>
</tr>
</tbody>
</table>

(12) The City[HWU] has received authority through the U.S. EPA and state statutes to enforce the requirements of 40 CFR Subchapter N and 40 CFR Part 403. All users shall comply with the requirements of these federal regulations.

(c) Dilution of wastewater discharge. No user shall ever increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the federal categorical pretreatment standards, or in any pollutant specific limitation developed by [HWU] or the City or State.

(d) Grease, oil, and sand interceptors.

(1) Grease, oil, and sand interceptors shall be installed when, in the opinion of the General Manager or his designee, they are deemed necessary for the proper handling of liquid wastes containing any type of floatable grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of type and capacity approved by the General Manager or his designee and shall be located as to be readily and easily accessible for inspection by HWU staff.[ Design of grease controls and interceptors shall be governed by policy documents promulgated and enforced by HWU.]
(2) The design and capacity of the interceptor shall be the responsibility of the owner(s); however, the General Manager or his designee must approve the unit. The HWU collection system must be provided adequate protection from prohibited substances traveling through the sewer line(s).

(3) No user shall discharge to the POTW, any solid or viscous pollutants in amounts which could cause obstruction to the flow in the sewers, or cause interference with the operation of, or cause damage to the POTW, including grease or other materials which may coat or clog a sewer line or appurtenances.

(4) Users shall periodically examine their interceptors and update the interceptor if there is evidence of the unit being too small, worn, broken, or otherwise no longer functioning properly.

(5) The City[HWU] may require the interceptor to be cleaned on a more frequent basis if there is evidence of problems occurring, such as due to grease build-up, occurring in the sewer line(s). The City[HWU] may require reporting of such information for review on a regular basis.

(6) In the maintaining of an interceptor, the owner(s) shall be responsible for the proper removal and disposal by appropriate means of the captured material and shall maintain records of the dates, and means of disposal for a period of not less than three (3) years. The City[HWU] reserves the right to recover any costs associated with cleanup in the collection system from the owner(s) of the interceptor due to failure of the unit for any reason.

(7) Any removal and hauling of the collected materials not performed by owner(s) personnel must be performed by currently licensed disposal firms. Interceptors shall also comply with the applicable regulations of any other local, State or Federal agency having jurisdiction.

(e) Floor Drains. Floor drains are prohibited unless the following conditions exist:

(1) If the business is an existing user and floor drains are already present in the facility, every precaution and safeguard will be expected from the facility to protect the POTW from slugs, spills, negligence, etc. This includes all users, not just those participating in the HWU Pretreatment Program. The General Manager or his designee may inspect the floor drains at any time. The General Manager or his designee may request that the drains be sealed in cases where there is a potential harm to the POTW.

(2) Permission from the General Manager or his designee must be granted before floor drains may be installed on new construction or renovation projects. Floor drains that connect to any part of the municipal separate storm sewer system (MS4) or to any creek, watercourse, stream, or ditch are prohibited.
(3) If floor drains are allowed by the General Manager or his designee, an interceptor must accompany them to provide protection to the POTW from petroleum-based products and flammable liquid wastes. The design and capacity of the interceptor shall be the responsibility of the owner. Refer to Sec. 23-30 – Pollutant discharge limits, Paragraph Bb, Restricted discharges (all sub-paragraphs).

(4) Regular maintenance and cleaning shall be performed on interceptor units to the satisfaction of the General Manager or his designee. More frequent cleaning of the interceptor may be required by the General Manager or his designee if deemed necessary.

(5) The owner of property containing floor drains is responsible for cleaning and maintenance of those drains. Any costs that the HWU may incur due to failure on the part of the owner to keep up performing cleaning and maintenance shall be reimbursed by the owner.

(f) **Special industrial pretreatment requirements.**

(1) Pursuant to the requirements imposed on publicly owned wastewater treatment works by the Federal Water Pollution Control Act Amendments of 1972 and later amendments, all pretreatment standards promulgated by the U.S. Environmental Protection Agency for new and existing industrial dischargers to public sewer systems are hereby made a part of this ordinance. Any industrial waste discharge which violates these EPA Pretreatment Standards shall be in violation of this ordinance.

(2) Where pretreatment or flow equalizing facilities are provided or required for any waters or wastes, the industry shall be solely responsible for the continued maintenance in satisfactory and effective operation of such facilities and at their expense. The City is authorized to assume these responsibilities, in which event some or all of the provisions of subsection 23-30(b)(10) may be inapplicable, provided proper and appropriate arrangements for compensation are made to the City for providing pretreatment services to the industry.

(g) **Trucked and/or hauled wastes.**

(1) Any person who transports septic tank, seepage pit or cesspool contents, liquid industrial waste or other batch liquid waste and wishes to discharge such waste to the public sewer system shall first have a valid Domestic Hauler’s Discharge Permit. All applicants for a Domestic Hauler’s Discharge Permit shall complete the application form, pay the appropriate fee, and receive a copy of the City’s regulations governing discharge to sewers of liquid wastes from trucks. All persons receiving such permits shall agree, in writing, to abide by all applicable provisions of this ordinance, and any other special provisions that may be established by the City as necessary for the proper operation and maintenance of the sewage system.

(2) Discharge of septic tank, seepage pit, interceptor or cesspool contents, or other wastes containing no industrial wastes may be made by
trucks holding a valid permit at a location designated by the General Manager or his designee for that purpose. Discharge of truck-transported grease pit contents or industrial wastewater shall take place only after notification is made to the General Manager or his designee and then only at the locations specified by the General Manager or his designee. HWU requires payment as hereinafter provided for treatment and disposal costs.

(3) HWU reserves the right to refuse permission to discharge any waste that may cause interference or upset at the POTW, or any waste that violates any provision of this ordinance.

(4) Any person holding a valid permit and wishing to discharge to the POTW must submit to the operator of the POTW a sample of each load prior to discharge. A fee and payment schedule shall be established in the permit to cover cost of the required analysis.

(5) It shall be illegal to discharge any batch liquid waste into any manhole or other part of the public sewer system, or any building sewer or other facility that discharges to the public sewer system, except at designated points of discharge specified by the General Manager, or his designee, for such purpose.

(6) Any liquid waste hauler illegally discharging to the public sewer system or discharging wastewater not authorized in the permit shall be subject to immediate revocation of discharge privileges and further subject to the penalties and enforcement actions prescribed in Sec. 23-35 of this ordinance, including fines and imprisonment. A suspended permittee shall immediately cease discharging any wastes to the sanitary sewer system of the City or to facilities that discharge directly or indirectly into its system. Should a suspended permittee fail to voluntarily comply with any suspension order, the General Manager or his designee shall take such actions as are deemed necessary or appropriate to prevent or minimize damage to the POTW and/or to protect the health and welfare of the general public.

(7) A suspended permit may be reinstated by the General Manager upon submission of assurances satisfactory to the General Manager that the suspended permittee will comply with this division and the rules and regulations promulgated pursuant to this section plus payments of such fines or other penalties as may be levied by the HWU. The General Manager or his designee shall require that within fifteen (15) days after the date of any such occurrence, the suspended permittee submit a written report to the HWU detailing the nature and extent of the violation(s), including any nonpermitted discharges, and the measures taken by the suspended permittee to prevent any future occurrence.

(8) Waste haulers who have been granted permission to discharge to the public sewer system shall pay fees for such discharge in accordance with a fee schedule established by the General Manager and approved by the Water and Sewer Commission. The Henderson Water and Sewer Commission shall establish, and from time to time may
alter, a schedule of fees, rates and charges for the Domestic Hauler’s Discharge Permit to cover the costs of treatment and disposal of all wastes governing permit issuance, requirements, conditions, suspensions and all other matters necessary or appropriate to implement this section.

(9) Only wastes approved by the General Manager or his designee and originating from within the City of Henderson, Henderson County, or Webster County [other locations as approved by the General Manager], shall be allowed under this permit. Dumping hours shall be fixed by HWU and shall be limited to 6:00 a.m. to 6:00 p.m., local time, Monday through Saturday, excluding HWU holidays. Dumping after hours or on holidays may be allowed by permission only from the operator on duty at the HWU wastewater treatment plant.

(10) The permittee shall complete a load report for each load of waste deposited into the City [HWU]’s sewer system. The information on the load report shall be recorded and signed by an employee of the permittee, or the permittee himself, and shall be in duplicate on forms furnished by the HWU. The original copy of all load reports, a summary monthly report and accompanying payment based upon the current rate per one thousand (1,000) gallons of approved liquid waste plus the current rate per one thousand (1,000) gallons for contents from grease traps which were discharged into the City [HWU]’s drybed system for the previous month, shall be submitted to the HWU’s Administrative Office [General Manager] or its [his] designee by the fifteenth day of the month following the discharge.

(11) Discharge of all liquid wastes allowed under this section shall take place only at the location(s) designated by the General Manager or his designee. The designated location to be used under the Domestic Hauler’s Discharge Permits may be changed by the General Manager or his designee as deemed necessary.

(12) The discharge of trucked and/or hauled wastes from industrial plating processes or radiator businesses is prohibited.

(13) Nothing in this ordinance shall relieve waste haulers of the responsibility for compliance with Henderson County Health Department, State, or Federal regulations.

(h) Protection from accidental and slug discharges.

(1) Each significant industrial user shall provide protection from accidental and/or slug discharges of prohibited materials or other substances regulated by this division which adversely affects the POTW. Facilities to prevent accidental and/or slug discharges of prohibited materials shall be provided and maintained at the owner or user’s own cost and expense. Periodically, the General Manager or his designee will determine whether each industrial user needs to develop or update a plan to control slug discharges. If the General Manager or his designee
determines that a slug control plan or revision is necessary, the plan shall contain the following:

a. Description of discharge practices;

b. Description of stored chemicals;

c. Procedures for notifying POTW;

d. Prevention procedures for spills.

In the case of all possible or actual accidental and/or slug discharges, it is the responsibility of the user to immediately telephone and notify the POTW of the incident. The notification shall include location of discharge, type of waste, concentration and volume, and corrective actions.

(2) Written notice. Within five (5) days following an accidental discharge, the user shall submit to the General Manager a detailed written report describing the cause of the discharge and the measures to be taken by the user to prevent any future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability which may be incurred as a result of damage to the POTW, fish kills, or any other damage to person or property, nor shall such notification relieve the user of any fines, civil penalties, or other liability which may be imposed by this article, the enforcement response plan or other applicable law.

(3) Notice to employees. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees whom to call in the event of a dangerous discharge. Employers shall insure that all employees who may cause or suffer such a dangerous discharge to occur are advised of the emergency notification procedures. Proof of this notification and training may be demanded at any time by the General Manager or his designee.

(i) State requirements. State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those in this division.

(j) City's right of revision. The Water and Sewer Commission reserves the right at the recommendation of the General Manager to establish by majority vote of its board of commissioners more stringent limitations and/or requirements on discharges to the POTW if deemed necessary to comply with the objectives presented in this division.

(k) Federal categorical pretreatment standards. Upon the promulgation of the federal categorical pretreatment standards for a particular industrial subcategory, the federal standard, if more stringent than limitations imposed under this division for sources in that subcategory, shall immediately supersede the limitations imposed under this division.

(Ord. No. 06-11, 3-22-11; Ord. No. 20-14, 6-24-14)

(a) **Purpose.** This article provides for the recovery of costs from industrial users of the POTW for the implementation of the pretreatment program established herein and for other costs associated with the monitoring and treating of wastewaters. The applicable charges and fees shall be as set forth in the City’s schedule of charges and fees.

(b) **Charges and fees.** The City may adopt charges and fees which may include:

1. Fees for reimbursement of costs of setting up and operating the pretreatment program;
2. Fees for monitoring, lab tests, inspections, and surveillance procedures;
3. Fees for reviewing accidental discharge procedures and construction;
4. Fees for permit applications;
5. Fees for filing appeals;
6. Fees for consistent removal by the POTW of excessive strength conventional pollutants;
7. Fees for all costs directly related to investigation of a prohibited discharge;
8. Other fees as the City may deem necessary to carry out the requirements contained herein. A minimum fee will be charged to all customers based upon water consumption or metered flow.

These fees relate solely to the matters covered by this ordinance and are separate from all other fees chargeable by the City.

(c) The following surcharge rates shall apply to each user of the POTW that has received permission from the General Manager to contribute wastewater with a greater strength than normal domestic wastewater:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Surcharge Rate per Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD$_5$</td>
<td>$0.26</td>
</tr>
<tr>
<td>TSS</td>
<td>$0.26</td>
</tr>
<tr>
<td>COD</td>
<td>$0.26</td>
</tr>
<tr>
<td>NH$_3$-N</td>
<td>$0.53</td>
</tr>
<tr>
<td>Oil and Grease (total)</td>
<td>$0.26</td>
</tr>
</tbody>
</table>

(d) **Method of Computing Surcharges:** The excessive strength surcharge shall be based on a formula, with the total billed to affected users:

\[
\text{Surcharge Payment} = (A \times (F-400) + B \times (G-400) + C \times (H-50) + D \times (J-150)) \times 0.00834 \times M.
\]
Or, Surcharge Payment = \( (E \times (K-800) + B \times (G-400) + C \times (H-50) + D \times (J-150)) \times 0.00834 \times M \). 

where the formula giving the larger payment due will be used in calculating the surcharge for each billing period.

The formula components are as follows:

A. Surcharge rate for BOD\(_5\), in $/pound.
B. Surcharge rate for TSS, in $/pound.
C. Surcharge rate for NH\(_3\)-N, in $/pound.
D. Surcharge rate for O&G (Total), in $/pound.
E. Surcharge rate for COD, in $/pound.
F. User’s average BOD\(_5\) concentration, in mg/l.
G. User’s average TSS concentration, in mg/l.
H. User’s average NH\(_3\)-N concentration, in mg/l.
J. User’s average O&G (Total), in mg/l.
K. User’s average COD concentration, mg/l.
M. User’s monthly flow to sanitary sewer system, per 1,000 gallons.

No reduction in wastewater service charges, fees, or taxes shall be permitted for wastes discharged to the POTW which contain less than normal domestic wastewater contaminant limits.

(e) Fees applicable to trucked and/or hauled wastes. The applicable fees pertaining to the discharge of trucked and/or hauled wastes into the City’s sanitary sewer system[POTW] shall be as follows:

(1) An application fee shall accompany each permit application to cover the cost of the annual discharge permit. New permit applications received during the year shall be pro-rated based on the number of full months remaining in the year;

(2) Fees for all costs incurred by the HWU in monitoring, inspections, and surveillance procedures may be assessed. These fees will be billed on a regular basis to the Industrial User applicable;

(3) Fees for all costs directly related to investigation of a prohibited discharge shall be assessed to the source of such discharge;

(4) Fees for all costs incurred as a result of the filing of appeals may be assessed to the appellant; and,

(5) Other fees and expenses for all costs incurred by the HWU to carry out the requirements contained in this ordinance.

(f) These fees relate solely to the matters covered by this ordinance-section and are separate from all other fees chargeable by [HWU and ]the City.

(Ord. No. 06-11, 3-22-11)
Resolution No. 2019 - 23
Acceptance of Stormwater Management System
Maintenance Agreement – 2429 U.S. Highway 60 East

The following Resolution was duly adopted by the Board of Commissioners of the Henderson Water & Sewer Commission at a regular meeting held on Monday, 15 July 2019, at which meeting a quorum was present.

BE IT RESOLVED, that the Henderson Water and Sewer Commission by and through its Board of Commissioners under the authority granted to the Board of Commissioners under Chapter 23 Article II Division 3 Sections 23-36 through 23-45.2 of the City Code of Ordinances hereby recommends to the Board of Commissioners of the City of Henderson, Kentucky, that the City of Henderson accept the attached Stormwater Management System Maintenance Agreement herewith transmitted to the City, as required by City Code of Ordinances section 23-27.5 (i), and as recommended by the staff of the Water and Sewer Commission, and that the Mayor and City Clerk be authorized to sign on the City’s behalf.

This Agreement provides for perpetual maintenance of certain Permanent Components of a private Stormwater Management System for property currently owned by Lighthouse Storage of Henderson LLC, PVA ID # 65-44, located at 2429 U.S. Highway 60 East. The requirements of the Agreement run with the property and are binding upon the current owner and their heirs, executors, successors, and assigns.

The General Manager is hereby authorized to deliver this Resolution to the City of Henderson.
IN WITNESS WHEREOF, having come before the Board of Commissioners on Monday, 15 July 2019, and upon Motion made by Commissioner ____________, and seconded by Commissioner ________________, the Board of Commissioners voted as follows:

<table>
<thead>
<tr>
<th>AYE</th>
<th>NAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissioner, Paul Bird, Jr.</td>
<td></td>
</tr>
<tr>
<td>Commissioner, George Jones, III</td>
<td></td>
</tr>
<tr>
<td>Commissioner, John Henderson</td>
<td></td>
</tr>
<tr>
<td>Commissioner, Gary Jennings</td>
<td></td>
</tr>
<tr>
<td>Commissioner, Julie Wischer</td>
<td></td>
</tr>
</tbody>
</table>

___________________________
Tom Williams, P.E.
General Manager
Henderson Water Utility
Henderson Water Utility  
Action Report #2019 - 24

To: Henderson Water & Sewer Commission  
From: Tom Williams, P.E., General Manager  
Subject: Cleaning, Painting & Upgrades to Fire Hydrants  
Date: 15 July 2019

Background & Update:
- This Action Report supplements and amends Action Report 2016-12, which authorized the first group of hydrants, and was approved on 18 April 2016.
- We entered into a contract in April 2016 to paint 250 of our fire hydrants and install the quick-connect “Storz” nozzles, which allow fire personnel to make quicker and safer (ergonomic) connections of pumper hoses. That contract included a provision for renewal, which we exercised in 2017, painting another 250 hydrants. The City participated in this two-year effort by paying for the costs of the nozzle installations.
- We have approximately 600 hydrants remaining to be painted.
- We solicited bids in May, after skipping this function in 2018. No bids were received at the bid opening, but one bid did arrive the next day, from Muscat Painting of East Dundee, Illinois. Model Procurement allows us to enter negotiations on pricing, when no timely bids are received.
- We have negotiated pricing for prep, priming and painting, at $ 97.00 per hydrant. Where the hydrants have better flow (blue and green tops, 176 locations) we will furnish the Storz nozzles and the contractor will install them for $ 100 each. Our cost the nozzles is $ 125 each, $ 22,000 total.
- These agreed prices are below what we paid for the previous bid work.

Legal & Financial Considerations:
- All procurements necessary for the completion of this work have and will follow the Kentucky Model Procurement Code.
- Funding will come from an operational account, not from the capital budget.

Recommendations & Approvals:
- Staff recommends award of a contract to Muscat Painting & Decorating, of East Dundee, Illinois, in an amount not to exceed $ 41,850.00. Total for this project will be $ 63,850, all in.
- Board approval authorizes the General Manager to initiate all work necessary to complete this work, including issuance of any bids, purchase orders, engineering services, task orders, change orders, or other authorizations required.

Respectfully Submitted for Approval:

__________________________
Tom Williams, P.E.
General Manager

Commission Action – 15 July 2019

PASSED: _____________ FAILED: _____________ TABLED: _____________
EXECUTIVE SESSION

• None Requested