TITLE

AN ORDINANCE FOR THE PURPOSE OF AUTHORIZING THE MAYOR AND THE DIRECTOR OF PUBLIC SERVICE AND SAFETY TO ADVERTISE FOR BIDS AND ENTER INTO CONTRACT(S) TO SECURE AND INSTALL NECESSARY EQUIPMENT OR MATERIALS FOR THE INSTALLATION OF AN EPA MANDATED PLANT DISINFECTION SYSTEM UPGRADE, AND DECLARING AN EMERGENCY.

ORDINANCE NO. 12606/15

WHEREAS, the City of Warren owns, operates and maintains a public Water Pollution Control Facility (WPC) for the purpose of converting waste water to clean water in conformation with all Government and EPA Regulations; and

WHEREAS, the Water Pollution Control disinfection system has historically experienced difficulty consistently reducing the treated water bacteria counts resulting in a condition of substantial non-compliance with the EPA coliform and chlorine residual standards; and

WHEREAS, the new EPA permit for the Water Pollution Control Department effective August 1, 2015, requires upgrade of the current manual chlorine disinfection system to a new automatic disinfection system as expeditiously as possible to be constructed and demonstrate efficient operational compliance no later than May 1, 2016; NOW THEREFORE

BE IT ORDAINED by the Council of the City of Warren, State of Ohio:

Section 1: That the Mayor and Director of Public Service and Safety be, and hereby are, authorized to advertise for bids for the equipment, materials, and professional services, and enter into contract(s) to procure and install a new disinfection system to meet the EPA requirements. After advertising for bids according to law, the Mayor and Director of Public Service and Safety are hereby authorized to enter into whatever contract(s) which may be useful or necessary to accomplish said installation.

Section 2: That said contract(s) shall be paid for from funds properly appropriated in Fund 703, Department 450, Water Pollution Control Capital based upon the estimate of costs.

Section 3: That the contract(s) first shall be approved by the Law Director, and the City Auditor be, and hereby is, authorized to disburse said funds upon receipt of proper vouchers, signed by the proper persons, for the stated purpose and for no other purpose.

Section 4: That this Ordinance is hereby declared to be an emergency measure necessary for the immediate preservation of the public peace, health, welfare and safety, and for the further reason to obtain and maintain consistent compliance with the EPA disinfection requirements. WHEREFORE, this Ordinance shall go into immediate effect.

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Passed in Council this <u>974</u> day of <u>September</u> 2015.
SIGNED: January ATTEST: Surva Court
President of Council Clerk
FILED WITH THE MAYOR: 9/9/15
DATE APPROVED: 9/9/5
WM D. F.
MAYOR, CITY OF WARREN, OHIO

Installation of an EPA Mandated Plant Disinfection System

There are many stages of treatment to convert raw sewage to clean water. Disinfection is one of the last stages in the process of cleaning the water before it is discharged to the Mahoning River. Either chlorine gas or chlorine bleach is added to the water to kill most of the remaining microorganisms to prevent disease-causing organisms from getting into the river. After the chlorine has had enough contact time to kill the disease-causing organisms, another chemical, Sodium Bisulfite, is added to neutralize the left over chlorine. Both steps are part of disinfection.

The current system at the Warren facility is a manually-operated chlorine gas system. The chlorine gas is manually drawn by vacuum, mixed with water, and added to the nearly clean treatment plant water. The location where the chlorine water is added had a mixer that has not been operable for years. The current system produced concentrations of coliform bacteria "too numerous to count" on 12 days between 2013 and 2014. The Warren EPA discharge permit dated 4/1/12 had language requiring compliance with disinfection requirements. Those requirements were not adequately addressed by the previous WPC administration. Also, chlorine gas is heavy and very dangerous. If there is a rupture in the 1-ton cylinder, the gas can escape the building and kill all animals and people in its path as the gas rolls downhill to the lowest point it can find. There is no scrubber system at WPC to neutralize a chlorine leak.

The draft of the new EPA discharge permit, effective 8/1/15, required a new disinfection system to be <u>bid</u>, <u>built</u>, <u>and operational</u> at Warren WPC by 10/1/15. We were able to negotiate that to a more reasonable <u>required date of 5/1/16</u>.

When the new draft EPA discharge permit was received by WPC, an engineering firm was sought and secured to design the new system. TNT Engineering was contracted to evaluate our current system and design the most cost-effective and safe system to achieve the EPA requirements. The new system will include use of safer chlorine bleach instead of chlorine gas. Two bleach tanks will be purchased and installed along with new pumps and instrumentation analyzers to control automatically. A new mixer will be installed. We will reuse the current Sodium Bisulfite tank. However, new bisulfite pumps will be installed and automatically controlled as well. The design drawings and descriptions have been completed and the Permit to Install Application will be submitted to the EPA once we have approval from City Council.

The current estimate for the cost of the new system is \$363,397 which will be paid out of WPC unencumbered reserves.

If you have any additional questions or would like to see the current system in person, feel free to contact me.

Ed Haller, Director WPC

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