

TO: Personnel Board

FROM: Emaan Abdel-Halim, Human Resources

DATE: 20 August 2013

SUBJECT: Water Services Inspector

Madison Water Utility General Manager Tom Heikkinen has requested a study of the Water Services Inspector classification (CG 16, Range 13) which provides specialized installation service and diagnostic meter support for the Customer Service section of the Water Utility. However, the position study was expanded to review all the inspector positions at the Water Utility in order to distinguish the range differences of each classification within the Utility, as well as to determine their correlation to other similar positions in the City. As a result, this study included a review of the Water Construction Inspector (CG 16, Range 14) and Cross Connection Control Inspector (CG 16, Range 15) classifications. Based on my review, interviews and discussions with the Customer Service Manager, Robin Piper; Water Quality Manager, Joe Grande; Principal Engineer, Al Larson; General Manager, Tom Heikkinen; as well as field visits with several incumbents in these classifications; reviewing the duties and responsibilities in each classification; and evaluating against other classifications in the City, I propose the following recommendations:

- The Water Services Inspector position title is changed to Field Service Analyst (FS Analyst) as a more reflective title of the new work these positions will perform under the Water Utility's new Advanced Metering Infrastructure (AMI) systems.
- The new Field Service Analyst classification is reclassified into CG 16, Range 14; and the existing positions and incumbents are reallocated to the new salary range.
- The Cross Connection Control Inspector classification is reclassified into CG 16, Range 16, and the existing positions and incumbents reallocated to the new salary range, as these positions have an extremely large scope of responsibility which affects the integrity of the water quality in the supply system for the entire City.

The following positions are affected by this study: Water Service Inspector #1866 (R. Marx), #1872 (M. Ertel), and #1876 (R. Puzach); and the Cross Connection Control Inspector #1794 (T. Peters), #1806 (G. Puntney), and #1852 (H. Lemkuil, Jr.).

Currently, the three Water Service Inspectors (proposed FS Analysts) are responsible for inspection-related activities in their respective sections of the City; eastside, westside and central. Their daily workload is comprised of roughly 60% field work and 40% office work related to the new tools and softwares of the AMI system. The FS Analysts work predominantly with residential and commercial customers regarding water usage, as well as with plumbers and contractors doing installation and repair work on meters. For instance, when a commercial account has an obsolete meter, it is necessary for that the meter be replaced with a different approved meter. Such issues are addressed by the FS Analysts as opportunities to educate and explain to the customer the available options and directing them

to make the best choice to solve the problem. As a result, FS Analysts are required to have an in depth and thorough understanding of the variety of meters suitable for the needs of the specific customer, and a high level of customer service to address and resolve these issues in an efficient manner. Often when a contractor applies for a new water service to be installed, a permit is taken out through the City's Building Inspection Division. The FS Analysts monitor these permits through the City's Plan Vault software and make contact with the contractor to assist in determining the appropriate type and size of meter for the needs of the project. The FS Analysts also work with residential customers to ensure meters are functioning properly. If there are problems with meter readings, the FS Analysts perform a field inspection to determine if the issue is with the meter or if other things are happening that would affect water usage, such as a running toilet or leaky faucet.

As part of Project H<sub>2</sub>O, the implementation of the new AMI system, Madison Water Utility will now obtain automated, remote meter readings to more regularly and accurately monitor residential and commercial water usage. Additionally, residents can also monitor their usage online, and the Utility can identify potential leaks and/or needed repairs using these new systems. This AMI and supporting software is a major upgrade for the Water Utility by allowing for remote meter readings on a monthly basis, and subsequently providing the City with more accuracy in monitoring anomalies within the system. FS Analysts now use the new software programs associated with the AMI system to examine and analyze water usage data in real time. This allows them to ascertain any dysfunctions in the system on a more frequent basis than the previous semi-annual meter reads. By being able to address leakages and other problems in the system, the FS Analysts are ensuring that customer's are charged accurately for their water consumption, that issues with consumption, such as leaks, are addressed quickly, and that the City is realizing more revenue from a more precise and efficient metering system.

Given these new duties, the Water Utility is proposing the current Water Services Inspector classification series be retitled to Field Service Analyst (FS Analyst) which better describes the nature of the work now performed after the transition to AMI. Since this is consistent with the titles of Field Service Representative and Field Service Leadworker that were recently created, I agree the proposed new title is appropriate and reflects the new expectations for analysis as part of the job.

To determine the appropriate salary range for the FS Analysts, this study included field visits with Water Construction Inspectors and Cross Connection Control Inspectors; where I was able to witness the related duties of each of these classifications (see attached class specifications). Water Construction Inspectors have an integral role in monitoring the construction activities of the City's water mains and ensuring the process is in accordance with plan specifications of the design engineers. The Construction Inspectors are required to work closely with construction contractors to make design adjustments as necessary, confirm measurements are to specifications, and maintain a daily record of all the materials used on the job site. Their fundamental role is making sure the construction process is aligned with design standards, and to track quantities and quality of materials in a project; for both compliance purposes as well as for contractor payment. Water Construction Inspectors must have an understanding of the water system as they are responsible for identifying the correct shut off points for a construction site. Failure to properly identify the shut off points could result in

unintentional loss of water service to residential and commercial customers. The Construction Inspectors also maintain a final drawing, the “as-built,” showing exactly what was done on the jobsite. This drawing becomes the Utility’s official record so that the Utility can track exactly where it has mains and what material the mains are made from.

Cross Connection Control Inspectors are responsible for the vital role of ensuring the water supply is safe from contaminants related to the industrial and commercial industries in the City. This includes all the laboratories, hospitals, commercial businesses, and industrial manufacturers that use the City’s water supply. These Inspectors are required to examine these facilities when new equipment is added to the system, and ensure the appropriate back flow protectors are installed to prevent contaminants from entering the water supply. In some high hazard situations (as deemed by Wisconsin DNR), these inspections are required every two years to maintain safety compliance. These Inspectors require vast knowledge of the unlimited types of equipment used in a variety of commercial and industrial settings; from pedicure chairs and restaurant dishwashers to the specialized equipment used in laboratories. The Cross Connection Control Inspectors are expected to maintain state certification requiring ongoing continuing education to learn of code updates and exceptions for the various requirements in each industrial/commercial setting. For instance, standards are higher and more complicated for industries dealing with food grade materials and hospital or laboratory products; each setting is unique and has differing standards. Lastly, these Inspectors provide customers with consultation services that educate them on the needs and standards required for each piece of equipment. This potentially saves the customer the cost of unneeded back flow preventers that plumbers are often quick to recommend and install.

Further analysis of these three classifications required a review of each classification’s required knowledge, skills and abilities, training and experience, specialized training/certification, decisional impacts, level of authority, hazard situations, and other factors. These factors were evaluated relative to each other as well as to comparable position in other City agencies.

This analysis revealed that the FS Analysts role is more on par with the Water Construction Inspectors, in that their work has a direct impact on the fiscal and revenue measures connected to the City’s budget. FS Analyst duties require investigation of unusual water usage, determine source of leaks and recommend necessary corrective actions. This work directly affects the revenue collected by the Water Utility and the water usage fees paid by the customers. The new AMI system in place now allows the FS Analysts to identify problems in a more timely and efficient manner, and therefore improving the water systems supply and revenue fees collection. In the past, the FS Analysts were not required to use computer programs and proactively determine the source of excessive water use by customers. This has complicated their position and justifies a review of the appropriate salary range. The Water Construction Inspectors are primarily responsible for the oversight for the installation of new and replacement water main projects. Their main role is to verify the quantity and quality of materials used, as well as the specifications of the design plan as the project is built. This work directly affects how the contractors are paid for multi-million dollar construction projects. Water Construction Inspectors also use computers to perform CAD drawings and both positions are required to perform a high level of analysis: FS Analysts in determining the source of leaks and recommending an appropriate meter based on anticipated and/or actual water consumption;

and Water Construction Inspectors in analyzing the job site to determine the appropriate shut-off location for the water, and in making changes to plans when problems are encountered in the field.

Support for placement of both positions in CG16, Range 14 (a one-range increase for the FS Analysts, and the same placement for the Water Construction Inspector) is found by reviewing the Engineering Construction Inspector I (CG15, Range 9) which is represented by LIUNA Local 236 union. According to this classification specification their role is described as,

...**inspection and documentation work on varied concurrent public works projects**, or assisting a Construction Inspector 2 on multi-inspector or complex, large projects. This work is characterized by independent initiative and **judgment in the resolution of complex construction problem** such as those ...situations requiring the **integration of a large number of public works**, utilities, or disruption of services consideration. [emphasis added]

The Engineering Construction Inspector has very similar responsibilities as the Water Construction Inspectors for a variety of project types. Although represented by a different union, this classification's salary scale is aligned with that of the Water Construction Inspectors (see table below). There is a Construction Inspector 2 represented by Local 236, which is 2 ranges higher than the Construction Inspector 1, but a review of the class specification shows that the critical difference in the 2 levels is leadworker responsibility on the part of the 2, responsibility not currently found in the FS Analyst or Water Construction Inspector classification.

Additionally, the salary placement of both of these classifications is also in line with the Playground Technician (CG16/14) position in Parks. As the classification specification describes the responsibilities of this position as,

... **specialized technical work inspecting**, installing, servicing, repairing and maintaining city playgrounds, and playground equipment and surfacing. Work includes directing and performing duties related to playground **equipment safety and inspection**, and providing technical information and assistance to supervisors, seasonal staff, equipment installation contractors and manufacturers, other park staff and the general public. [emphasis added]

The Playground Technician is responsible for the citywide inspections of all parks equipment for safety and compliance standards; and also has the authority to shut down a park that is deemed unsafe. This is on track with the Water Construction Inspectors as they also have the authority to shut down a construction site for non-compliance issues. For these reasons, I recommend the Field Service Analysts be reclassified into CG 16, Range 14; the same as the Water Construction Inspectors.

Additionally, the duties and knowledge required of the Cross Connection Control Inspectors are more in line with the Weights and Measure (W/M) Inspector 2s found in Building Inspection in that they are performing high level inspection work throughout the City and may take appropriate remedial action when there are violations. Their work also has a direct impact on the water quality for the entire City's water supply. As noted above, the Cross Connection Control Inspectors are required to have knowledge of a wide variety of backflow devices and other equipment. Similarly, the W/M Inspectors are required to have knowledge of a wide

variety of devices, including scales, dispensers, timing and measurement devices, etc. Given this broad level of responsibility, I recommend the Cross Connection Control Inspectors be consistent with the objective level W/M Inspector 2 and reclassified to CG 16, Range 16. All of these recommendations include reallocating the incumbents into the new positions/classifications.

We have prepared the necessary Resolution to implement this recommendation.

Editor’s Note:

Proposed Position Title	Current Position Title	Comp Group /Range	2013 Annual Min (Step 1)	2013 Annual Max (Step 5)	2013Annual Max +12% longevity
	Water Service Inspector	16/13	\$46,834	\$52,192	\$58,448
Field Service Analyst		16/14	\$48,080	\$54,120	\$60,060
	Water Construction Inspector	16/14	\$48,080	\$54,120	\$60,060
	Engineering Construction Inspector I	15/9	\$45,774	\$53,493	\$59,904
		16/15	\$49,260	\$55,735	\$62,426
-	Cross Connect Control Inspector	16/16	\$50,378	\$57,781	\$64,714

- cc: Tom Heikkinen – Water Utility General Manager  
 Robin Piper – Customer Service Manager  
 Al Larson—Principal Engineer Water  
 Joe Grande—Water Quality Manager  
 Greg Leifer – Employee and Labor Relations Manager