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Planning for Routine Emergencies: Establishing Collaboration to Increase the ISO Rating of the City of Niagara Falls, NY

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Increase the ISO Rating of the City of Niagara Falls, NY**

Gordon G. Stewart III

Public Administration Division, SUNY Buffalo State

May 2019

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Abstract

The City of Niagara Falls, New York has maintained an Insurance Services Office (ISO) PPC grade of 3 out of 10 over the two most recent ISO evaluations, one in 2010 and another in 2016. A significant portion of the ISO rating derives from water supply as it contributes to fire suppression. In Niagara Falls, control of the water infrastructure is controlled by a public benefit corporation, the Niagara Falls Water Board, separate from city government. Through the evaluation of the most current Public Protection Classification (PPC) Reports from the ISO for the City of Niagara Falls, this study aims to highlight deficiencies in the components evaluated in calculating the PPC grade, to understand the underlying issues with the components evaluated, and to develop a strategy to improve those areas to effectively increase the city's ISO rating. Interviews with 17 key informants from the Niagara Falls Fire Department, Niagara Falls Water Board, Niagara Falls Water Authority and an ISO field representative were transcribed, coded, and analyzed to identify recommendations toward increasing the ISO rating. Issues related to collaboration between the organizations and the process cycle of improving the rating are of main focus. This investigation provides a contribution to the wider field of research regarding collaboration in emergency management, specifically concerning the planning stage of routine emergencies. It also provides insight to fire chiefs nationwide toward increasing ISO ratings and improving interagency collaboration, especially for fire departments with water supply controlled by entities external to municipal government.

Preface

As a career-professional firefighter/EMT with the Niagara Falls Fire Department for almost eight years, I am currently assigned to Platoon 3, Engine 3, serving the north end of the City of Niagara Falls, New York. This includes the Main Street, DeVeaux and Highland Avenue neighborhoods, the Niagara Gorge Rim along the lower Niagara River, including all residential, industrial, and tourist/recreation zones within Engine 3's territory. My working knowledge of the components evaluated in a Public Protection Classification (PPC) provides a perspective to interpreting the evaluation along with understanding some of the potential obstacles to enhancing aspects of the Insurance Service Office rating for the City of Niagara Falls. My intimate knowledge of fire department equipment and operations, in addition to first-hand knowledge of the importance of a properly functioning water infrastructure for fire suppression provides relevant insight to this study. Moreover, I understand and am familiar with the fire department's comprehensive training schedule, along with the dispatch and communication processes of our 911 communications team, which are important for understanding many of the factors that will be explained in the forthcoming chapters.

Chapter 1: Introduction

With some hydrants being more than 100 years old in the City of Niagara Falls, New York, in 2010 the Niagara Falls Fire Department engaged in a study of the city's water infrastructure and found that of the 2,300 fire hydrants in the city, that 72 were broken and in need of repair (Forgione, 2010, May 19). According to the Fire Chief at the time, William MacKay, the Niagara Falls Water Board's standard for working fire hydrants was well below that needed to sufficiently battle a fire. "If any water comes out of a hydrant at all, the Water Board considers it working...it has to be completely inoperable for them to consider it out of service" (Forgione, 2010, May 19). In 2017, Fire Chief Thomas Colangelo articulated that the problem has yet to be sufficiently resolved, "This isn't a new problem...It's been like this for 30 years" (Pfeiffer, 2017, October 29). A year after that article, the Niagara Falls Water Board was still under scrutiny by members of the community to fix the Niagara Falls fire hydrant system. According to recently appointed Water Board member Nicholas Forster, there were 152 broken hydrants when the new Water Board majority was appointed, and new programs have been initiated to repair broken hydrants resulting in only 50 hydrants needing to be repaired (Preval, 2018). However, in a month following that statement, a house burned down due to a malfunctioning fire hydrant that was not on the list of broken hydrants (Preval, 2018b). The current Water Board's members have made progress by initiating the routine testing and repair of hydrants, and currently there are no known hydrants needing service. However, it has been clear to residents that the effort needed to be more robust than in the past, that the challenges of an aging water infrastructure neglected for decades cannot be repaired overnight, and that

revisiting recent evaluations of the water supply by the Insurance Services Office could provide much needed guidance toward such efforts.

In evaluating the fire suppression capabilities of fire departments, fire chiefs nationwide have come to rely on the Insurance Services Office (ISO) Public Protection Classification (PPC) to not only evaluate operations, but for use in developing and budgeting for improvements (Insurance Services Office, 2016). The City of Niagara Falls, New York was most recently evaluated through PPCs in 2010 and 2016, and the current and two previous Niagara Falls fire chiefs have identified a desire to increase the PPC grade, which has remained the same across those two most recent evaluations. The PPC looks at the components of a community's fire suppression operations in regard to fire departments, water supply, fire alarm and communication systems, all specifically regarding fire suppression capabilities, and these factors are used by insurance companies to calculate homeowner insurance premiums. The National Fire Protection Association (NFPA) standards are used by ISO in their PPC criteria, and Fire Risk statistics, acquired through the U.S. Fire Administration, are used by both the NFPA and ISO in the formulation of their programs. Although most fire departments adhere to NFPA guidelines as a gold standard, the ISO requirements often go beyond the requirements of NFPA standards. There has been much criticism of the ISO over the years mainly connected to the fact they are a private company that exists to serve the insurance industry (Coe, 1983). However, the ISO rating system is a significant mechanism by which fire departments evaluate their fire suppression operations, including water supply, and the evaluation is free of charge.

A PPC grade assigns a classification to a community's specific ability to suppress fires and is not an all-encompassing evaluation of all the services provided by a fire department. The

ISO classification is 1-10, with 1 being exemplary and rare, with only 0.27% of fire departments receiving that highest rating nationwide (Insurance Services Office, 2016).

Niagara Falls Fire Department

The Niagara Falls Fire Department (NFFD) serves the City of Niagara Falls, New York containing a population of 50,193 residents and 20-25 million annual visitors (City of Niagara Falls, 2016). The city's 17 square miles of mixed properties include residential, industrial, business and tourism districts that rely on a municipal career fire department to prevent and respond to emergencies and hazards. From fire suppression to emergency medical services, auto extrication to industrial hazards, high angle and swift water rope rescues, the NFFD is staffed and trained to respond to emergencies twenty-four seven. On average, the NFFD responds to between 6,000 and 7,000 calls annually, and is made up of 139 members who are represented by the International Association of Fire Fighters Local 714 (firefighters) and Local 3359 (fire officers) under the command of the fire chief who is appointed by the mayor (City of Niagara Falls, 2016).

The city is split into five territories each covered by a fire engine (pumper): Engine 3, Engine 4, Engine 7, Engine 8, and Engine 9. Each engine is located at a firehouse identified by the engine it houses, for example Engine 3 is located at Firehouse 3. Firehouse 3 covers the north end of the city, firehouse 4 covers the southwest area of the city, firehouse 8 covers the center of the city, firehouse 7 covers the western portion of the LaSalle neighborhood, and engine 9 covers the eastern portion of the LaSalle neighborhood. Truck 1 (aerial ladder) is located at Firehouse 4 and Truck 2 (aerial ladder) is located at Firehouse 7, each covering half of the city. Rescue 1, as well as the Battalion Chief on Duty (Car 80) are located at Firehouse 8 and

respond city-wide. Each apparatus, with the exception of Rescue 1, is staffed with three to four line firefighters and fire officers who are all NYS Certified Emergency Medical Technicians (EMT-B), with no less than 26 firefighters and officers on duty at any given time (City of Niagara Falls, 2016). Also, fire headquarters is located near Firehouse 8 and houses the fire chief, fire prevention division, and training division. The apparatus division is located at the city corporation yard where they repair and maintain all of the apparatuses. Five fire department dispatchers manage the emergency 911 system from within the Public Safety Building on Main Street, which houses the Niagara Falls Police Department, and city courthouse (City of Niagara Falls, 2016). The entire organization chart for the NFFD is below in Figure 1.

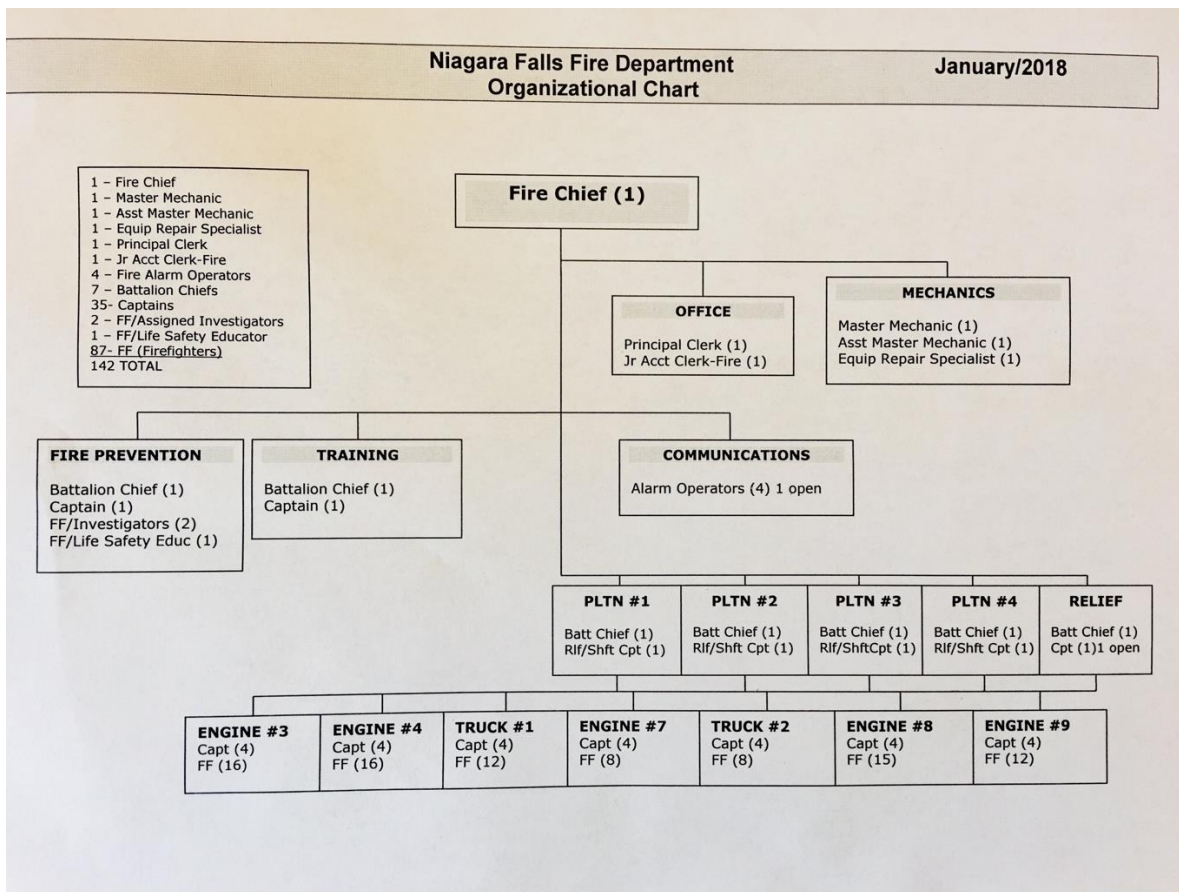
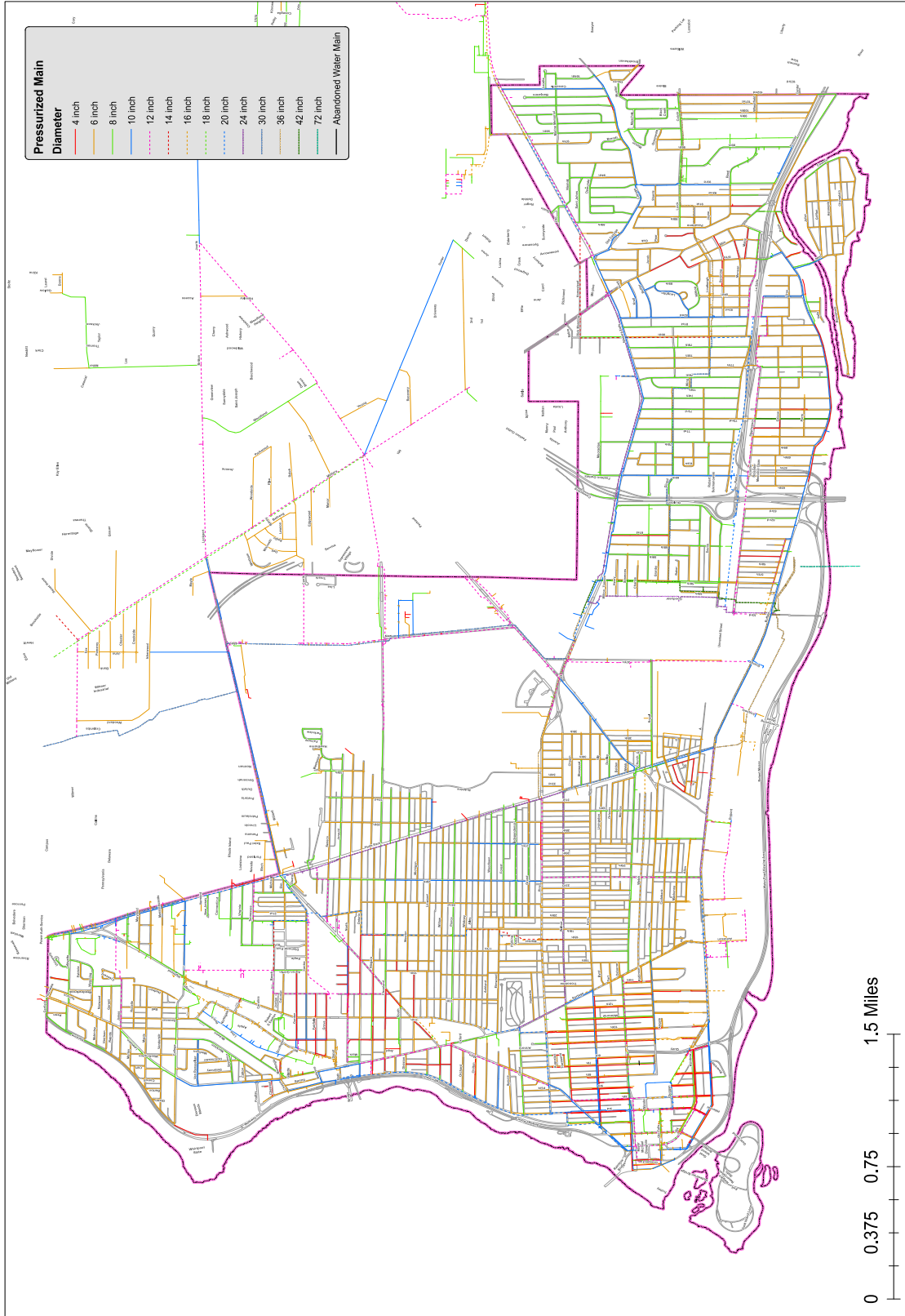


Figure 1 – NFFD Organization Chart

Niagara Falls Water Board and Water Authority

“The fire department and the water department are not, as some may suppose, distant cousins, but full blood brothers” (Stevens, 1940). However, in the City of Niagara Falls the fire department and water supply are organizationally distant, as the water supply, fire hydrants, sewage systems for waste and storm water, along with all affiliated water facilities are no longer owned or operated by the municipality (Office of the New York State Comptroller, 2016). The Niagara Falls Water Board (NFWB), a public benefit corporation established by the New York State Legislature in 2002, purchased all water facilities and infrastructure from the City of Niagara Falls in 2003 through debt issued by the Niagara Falls Water Authority (NFWA) (Office of the New York State Comptroller, 2016). The NFWA is made up of three board members one appointed each by the mayor of the City of Niagara Falls, the New York State Senate, and the New York State Assembly, and was established to finance capital projects through the issuance of debt to the NFWB (Office of the New York State Comptroller, 2016). The NFWB oversees an annual operating budget of \$28.7 million, generated through commercial and residential user fees, controlled by five board members each appointed by one of the following: the governor of New York State, New York State Senate, New York State Assembly, mayor of the City of Niagara Falls, and the Niagara Falls City Council (Office of the New York State Comptroller, 2016). The Water Board members govern all operations related to the water infrastructure and its management, including 18,400 residential and business accounts, and operations must adhere to standards set by the United States Environmental Protection Agency, New York State Department of Environmental Conservation, and the New York State Department of Health (Johnson, Goerdel, Nicholas P. Lovrich, & Pierce, 2015). Two treatment plants are owned by the

Water Board and run by a staff outlined in the organization chart in Figure 2 who maintain the entire water infrastructure, including the water mains throughout the city that supply fire hydrants (see Figure 3). The Michael C. O’Laughlin Water Treatment Plant processes an average of 17.9 million gallons of water per day from the upper Niagara River into drinking water that also supplies the fire hydrant system (Johnson et al., 2015). The wastewater treatment plant uses a physical-chemical activated carbon process to treat and discharge an average 32.9 million gallons per day of treated wastewater into the lower Niagara River (Johnson et al., 2015). The discharge location is within sight of the international tourist attraction Niagara Falls.



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NIAGARA FALLS WATER BOARD

Water Mains & Streets



Figure 3 - Niagara Falls Water Mains and Streets

Problem Statement

The ISO rates municipalities nationwide regarding their fire protection abilities, and the rating is used by insurance companies to set premium rates for homeowners' insurance policies. The ISO rating has become a mechanism for fire chiefs to evaluate and improve their operations. The City of Niagara Falls, New York has maintained an ISO rating of 3 out of 10 over the two most recent ISO evaluations, one in 2010 and another in 2016. A major issue is that a significant portion of the ISO rating derives from the municipal water infrastructure as it contributes to fire protection, but, in Niagara Falls, control of the water infrastructure was relieved from the municipality through the creation of the independent Niagara Falls Water Board. This disconnect from municipal management has been a roadblock for Niagara Falls Fire Chiefs in meeting requirements used to formulate the Public Protection Classification Report that would increase the ISO rating. There is a clear need for collaboration between the Niagara Falls Fire Department and the Niagara Falls Water Board in order to increase the Public Protection Classification, and that will need to be a major component of any strategy to increase the ISO rating.

Study Purpose

Through the evaluation of the most current Public Protection Classification (PPC) Reports from the ISO for the City of Niagara Falls, New York, this study aims to discover deficiencies in the components evaluated in calculating the PPC grade, to understand the underlying issues with the components evaluated, and to develop a strategy to improve those areas in order to effectively increase the city's ISO rating. The components of the PPC are broken down by ISO so that 50 percent of the rating derives from an evaluation of the fire

department, 40 percent from an evaluation of the water supply used in fire operations, and 10 percent from an evaluation of fire alarm and communication systems. The relationship between the municipal fire department and the water board, an entity separate from the municipality, is of important focus as an initial review of the PPC revealed a large deficiency in the realm of water supply. Much of the scholarly work regarding collaboration in emergency management focuses on disaster events, or emergency services management, as opposed to the planning phase of routine emergencies. There is a gap in the literature regarding collaboration during routine emergencies (Nohrstedt, 2016).

When you consider that fire suppression is an intervention during a routine emergency, an investigation into the collaboration between the Niagara Falls Fire Department and the Niagara Falls Water Board may provide a contribution to the wider field of research regarding collaboration in emergency management, specifically concerning the planning stage of routine emergencies. Interviews with the ISO Community Hazard Mitigation Field Representative, the Fire Chief, members of the Niagara Falls Fire Department, commissioners and employees of the Niagara Falls Water Board will provide further insight into potential obstacles and opportunities to implementing changes necessary toward increasing the ISO rating.

Fire Risk Statistics

Fire deaths and injuries have been reduced over the past 35 years due mainly to technologic advances in fire detection and extinguishment, along with the avocation of residential sprinkler systems (U.S. Fire Administration, 2015). The most vulnerable residents in the country were calculated to be the elderly by the U.S. Fire Administration in 2015 (U.S. Fire Administration, 2015). With an aging population, the risk of fire deaths in the demographic of

those aged 65 years or older is expected to increase from the current 15% to 24% by 2060 (U.S. Fire Administration, 2015). An increase of double the amount of people 65 years old or older is expected from the current number to 98 million by 2060, and the number of people 85 or older is expected to more than triple to 19.7 million by 2060 (U.S. Fire Administration, 2015). The U.S. Fire Administration (2015, p. 13) suggests that the elderly are likely to exhibit reductions in physical and mental capabilities, negatively affected mobility, and difficulty in sight, smell, and hearing during their advanced years, which increases their risk of injury or death from fire. Initiatives have contributed to minimize fire death and injury in children 15 or younger, leading to a risk of fire death 60% lower than the general population (U.S. Fire Administration, 2015). Children ages 4 and younger, however, have an increased risk of fire death and injury compared to older children as they lack the faculties to understand the need to escape during a fire emergency, and they don't necessarily have the means to protect themselves (U.S. Fire Administration, 2015). Children and elderly fell victim to 48% of fire deaths and 25% of fire related injuries in 2015, and the U.S. Fire Administration's goal is to reduce those deaths and injuries in those populations (U.S. Fire Administration, 2015). Residential sprinkler systems have been proven to reduce risk of fire death and injury, and also cause reductions to homeowner insurance premiums and uninsured property loss (U.S. Fire Administration, 2015). But many homes lack sprinkler systems as they are only required by code for hotels and certain multifamily residences. There is a movement by the U.S. Fire Administration to push for residential sprinkler systems in all new homes built (U.S. Fire Administration, 2015).

Insurance Services Office

ISO and Public Protection Classification (PPC™)

In 1889, the National Board of Fire Underwriters began to run their program for surveying municipal fire protection, and did not at first consider water supply, although eventually they did (Carl & Murdoch, 1964). Since then, ISO has become the authority on evaluating municipal water supply for fire protection, and has been calculating fire-flow requirements for municipalities since the 1970s (Carl, Young, & Anderson, 1973). “Managers and elected officials who bring about lower insurance costs for their citizens perform an extremely positive service, especially when those savings exceed the public cost of making fire protection improvements” (Compton & Granito, 2002).

The ISO is a member of the Verisk Analytics group of companies, a private company based in New Jersey with offices across the United States, as well as other countries, that provides information concerning risk of fire loss to insurance companies, insurance regulators, fire departments, and communities (Insurance Services Office, 2016). Research from ISO shows that quality public fire protection has a definite impact on commercial and homeowner insurance fire losses (Baker, 2008). The data from ISO is used by insurance companies for underwriting, marketing, and to calculate premiums for homeowner and commercial fire insurance (Insurance Services Office, 2016). ISO refers to itself as “an advisory organization, and insurers may use our information, modify it, or not use it, as they see fit” (2018). Evaluations are provided to communities free of charge, but are tailored for use by the insurance industry. Through use of its Fire Suppression Rating Schedule (FSRS), ISO gathers and evaluates data on the structure fire suppression capabilities of communities nationwide, including over 48,000

fire protection areas (Insurance Services Office, 2016). Through the FSRS, a Public Protection Classification (PPC) is assigned to the area being evaluated. Generally, “the price of fire insurance in a community with a good PPC grade is substantially lower than in a community with a poor PPC grade, assuming all other factors are equal” (Insurance Services Office, 2016, p. 1). The PPC is updated when the possibility of a change to a community’s classification is identified. First alarm structure fires are the only focus of the FSRS in calculating the PPC, and even though it may only be a portion of what a fire department’s services include, “only features related to reducing property losses from structural fires are evaluated. Multiple alarms, simultaneous incidents and life safety are not considered in this evaluation” (Insurance Services Office, 2016, p. 1). Small to average size buildings are considered in a PPC, whereas larger facilities with a needed fire flow more than 3,500gpm receive their own evaluation and separate PPC. According to ISO, the point of the evaluation is to predict future fire losses as a “community’s investment in fire mitigation is a proven and reliable predictor of future fire losses. Statistical data on insurance losses bears out the relationship between excellent fire protection – as measured by the PPC program – and low fire losses” (Insurance Services Office, 2016, p. 1). The PPC includes the assignment of a grade, a number 1 through 10, with class 1 representing “an exemplary fire suppression program,” and class 10 representing a failure to meet the minimum criteria of ISO (Insurance Services Office, 2016). 10% of the total PPC derives from evaluation of emergency communications, 50% from fire department operations, and 40% from water supply. In addition, there is an additional contribution to the PPC grade called Divergence that provides recognition of discrepancy between fire department operations and water supply that could contribute to ineffectiveness. Divergence subtracts from the total

score according to relative disparity between fire department and water supply totals during the final equation (Insurance Services Office, 2016). Table 1 below represents the categories by which ISO's criteria is applied in calculating a PPC grade:

ISO's PPC criteria utilizes standards from both the National Fire Protection Association and the American Water Works Association. A PPC is calculated based on the following:
➤ Needed Fire Flows: representative building locations used to determine the theoretical amount of water necessary for fire suppression purposes.
➤ Emergency Communications: including emergency reporting, telecommunicators, and dispatching systems.
➤ Fire Department: including equipment, staffing, training, geographic distribution of fire companies, operational considerations, and community risk reduction.
➤ Water Supply: including inspection and flow testing of hydrants, alternative water supply operations, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires up to 3,500gpm.

Table 1: PPC Categories (Insurance Services Office, 2016)

PPC Grades Nationwide

To give an idea of the quality of fire protection areas nationwide, below in Figure 4 is the distribution of PPC grades as published in 2015 (Insurance Services Office, 2016). As you can see from the chart, it is extremely rare to receive a class 1 rating from the ISO. There is a defined bell curve putting classes 5 and 6 at the top of the bell, but a large spike at class 9 that is occupied largely by volunteer departments who do not meet the requirements for higher fire protection classification according to the ISO Fire Suppression Rating Schedule.

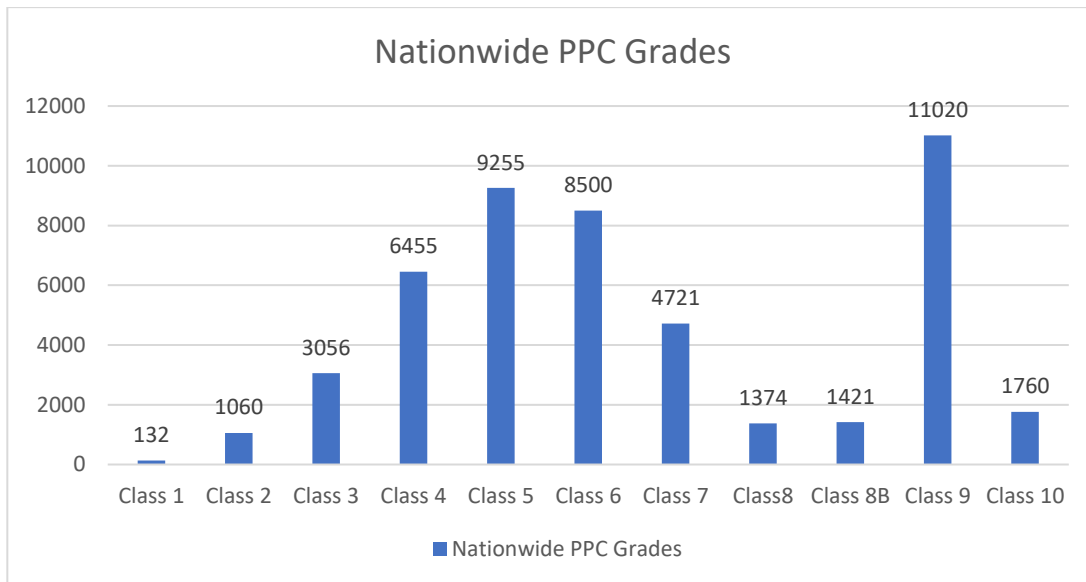


Figure 4: Nationwide PPC Grades (Insurance Services Office, 2016)

Fire Suppression Rating Schedule (FSRS)

The ISO's Fire Suppression Rating Schedule (FSRS) is an outline of the criteria used to evaluate fire prevention and suppression capabilities of fire departments, and is used in the development of PPCs which are used by insurance companies to calculate homeowners insurance premiums (Insurance Services Office, 2012). Fire prevention and suppression systems are measured and given points through the FSRS to assign a rating between 1 to 10, with 1 being exemplary. The FSRS is a tool for property insurance rating and is not intended to evaluate all elements of a fire department's operations. The PPC created through the FSRS is only one aspect used to develop the cost of property insurance loss and underwriting information, other aspects include exposures, occupancy, construction, hazards, and private fire protection (Insurance Services Office, 2012). The key terms used in the criteria and in the PPC are defined in the FSRS to include: Organization, Firefighter Response to Alarms, Training,

Emergency Communications, Apparatus, and Housing (Insurance Services Office, 2012). The first portion of the FSRS is dependent on the fire department's facilities and water systems. To receive a Class 1-8 on the PPC the fire department must meet the minimum criteria for apparatus outlined in the FSRS, with at least 4 firefighters responding to first alarm structure fires, and must meet the criteria for water systems as outlined in the FSRS (Insurance Services Office, 2012). Needed fire flow is calculated considering building construction, occupancy, exposure, and communication of each subject building, as well as automatic fire sprinkler systems. The details of each criteria are technical in nature, and fully described in the FSRS.

Recent ISO Class 1 Ratings in NYS

The two most recent fire departments in New York State to receive a PPC grade of Class 1 are the Auburn Fire Department and the Binghamton Fire Department. Only seven fire departments out of 2,000 rated by the ISO in New York State have received an ISO rating of 1 (Borrelli, 2017). The Auburn Mayor, a former member of the Auburn Fire Department, noted that in the 1990s Auburn was a Class 3 city (like Niagara Falls) and he attributed the previous lower classification to a lack of documentation (Blarr, 2017). These two departments operate in cities that are of comparable size and call volume to the Niagara Falls Fire Department. Fire department officials from each city are potential points of contact to utilize as resources for the City of Niagara Falls in working toward increasing its ISO classification.

PPC Grade for City of Niagara Falls, NY

ISO's review of the fire suppression features of the City of Niagara Falls, NY in 2016 resulted in a community classification of Class 03/3X (Insurance Services Office, 2016). The first number in the classification is for all properties in a 5-road-mile range of a fire station and

within 1,000 feet of a fire hydrant or alternate supply of water. The second number is for all properties outside of 1,000 feet of a fire hydrant but in a 5-road-mile range of a fire station (Insurance Services Office, 2016). This puts Niagara Falls in the top 4,248 departments out of 48,754 departments nationwide that were evaluated by ISO. In Table 2 below, the scores from the 2010 and 2016 PPC for the City of Niagara Falls are combined for comparison. Comparing the two PPC reports is important, because point decreases identified from 2010 to 2016 will reveal opportunities to regain points lost through an investigation of what changed in the department to cause the decrease in points. If the department was able to secure those points in 2010, then it would seem possible to address the changes that caused the decrease and regain those points next time. The percentage difference between earned credit and credit available was calculated in Table 2 to better identify the biggest opportunities for improvement. In column 2016, the scores with a percentage difference between earned and available credit of 75% or less are highlighted in red, and the scores with a percentage difference of 85%-76% are highlighted in orange. Using those highlighted percentages, the actual point amount for each category was then dropped into the Priority #1 column for those highlighted red, and into the Priority #2 column for those highlighted orange. The totals at the bottom of the priority columns represent the total amount of points available to secure in an effort to increase the overall PPC grade.

FSRS Feature	2010 Earned Credit	2010 Credit Available	2016 Earned Credit	2016 Credit Available	2010	2016	Priority #1	Priority #2
Emergency Communications								
414. Credit for Emergency Reporting	2.00	2	2.10	3	100.00%	70.00%	0.90	
422. Credit for Telecommunications	2.37	3	4.00	4	79.00%	100.00%		
432. Credit for Dispatch Circuits	2.25	5	1.50	3	45.00%	50.00%	1.50	
440. Credit for Emergency Communications	6.62	10	7.60	10	66.20%	76.00%		
Fire Department								
513. Credit for Engine Companies	9.76	10	5.02	6	97.60%	83.67%		0.80
523. Credit for Reserve Pumpers	0.97	1	0.41	0.5	97.00%	82.00%		0.09
532. Credit for Pump Capacity	5.00	5	3.00	3	100.00%	100.00%		
549. Credit for Ladder Service	4.98	5	3.87	4	99.60%	96.75%		
553. Credit for Reserve Ladder and Service Trucks	0.97	1	0.48	0.5	97.00%	96.00%		
561. Credit for Deployment Analysis	3.61	4	8.24	10	90.25%	82.40%		1.76
571. Credit for Company Personnel	9.71	15	9.29	15	64.73%	61.93%	5.71	
580. Credit for Training	6.75	9			75.00%			
581. Credit for Training	n/a		5.53	9		61.44%	3.47	
730. Credit for Operational Considerations	n/a		2.00	2		100.00%		
590. Credit for Fire Department	41.75	50	37.84	50	83.50%	75.68%		
Water Supply								
616. Credit for Supply System	27.55	35	23.67	30	78.71%	78.90%		6.33
621. Credit for Hydrants	1.98	2	2.97	3	99.00%	99.00%		
631. Credit for Inspection and Flow Testing	1.30	3	0.00	7	43.33%	0.00%	7.00	
640. Credit for Water Supply	30.83	40	26.64	40	77.08%	66.60%		
Divergence	-1.29		-1.82					
1050. Community Risk Reduction	n/a		4.51	5.5		82.00%		
Total Credit	77.91	100	74.77	105.5	77.91%	70.87%	18.58	8.98

Table 2 Niagara Falls 2010 & 2016 PPC Credits (Insurance Services Office, 2016) & (Insurance Services Office, 2010)

According to the 2016 PPC Summary Report (see Table 2), Niagara Falls was given 74.77 total points which falls in the range of 70-79.99 for a PPC grade of Class 3. A PPC grade of 2 is given to a point range of 80-89.99, therefore in order for Niagara Falls to increase its PPC grade from a 3 to a 2 there will need to be an effort to secure at least an additional 5.23 points than were awarded in the 2016 PPC. Given the 18.58 points calculated as opportunities for improvement in the Priority #1 column of Table 2, this seems extremely feasible. An increase of 7 points alone could potentially be gained through FSRS feature 631 Credit for Inspection and Flow Testing by initiating an inspection and flow testing program for fire hydrants in collaboration with the Niagara Falls Water Board. This initiative alone could result in an increase of PPC grade from its current 3 to a 2. A review of the comparison of the 2010 and

2016 PPC could also reveal other opportunities to gain points where decreases occurred between the PPCs, and where fire department and water board officials could assist investigating the cause of those changes that contributed to point decreases. This data clearly proves an opportunity to increase the PPC grade from a 3 to a 2 fairly easily, and it even seems in the realm of possibility to improve to a rating of Class 1, which is rare and requires at least 90 points. In 2008, only 0.1% out of approximately 44,000 fire response jurisdictions evaluated by ISO were given a Class 1 rating of exemplary, and less than 1% received a Class 2 rating (Baker, 2008). By 2015, 0.27% out of 48,754 fire response jurisdictions evaluated were given a Class 1 rating, and 2.21% received a Class 2 rating nationwide (Insurance Services Office, 2016).

Fire Risk Statistics

Fire deaths and injuries have been reduced over the past 35 years due mainly to technologic advances in fire detection and extinguishment, along with the avocation of residential sprinkler systems (U.S. Fire Administration, 2015). The most vulnerable residents in the country were calculated to be the elderly by the U.S. Fire Administration in 2015 (U.S. Fire Administration, 2015). With an aging population, the risk of fire deaths in the demographic of those aged 65 years or older is expected to increase from the current 15% to 24% by 2060 (U.S. Fire Administration, 2015). An increase of double the amount of people 65 years old or older is expected from the current number to 98 million by 2060, and the number of people 85 or older is expected to more than triple to 19.7 million by 2060 (U.S. Fire Administration, 2015). The U.S. Fire Administration (2015, p. 13) suggests that the elderly are likely to exhibit reductions in physical and mental capabilities, negatively affected mobility, and difficulty in sight, smell, and hearing during their advanced years, which increases their risk of injury or death from fire.

Initiatives have contributed to minimize fire death and injury in children 15 or younger, leading to a risk of fire death 60% lower than the general population (U.S. Fire Administration, 2015). Children ages 4 and younger, however, have an increased risk of fire death and injury compared to older children as they lack the faculties to understand the need to escape during a fire emergency, and they don't necessarily have the means to protect themselves (U.S. Fire Administration, 2015). Children and elderly fell victim to 48% of fire deaths and 25% of fire related injuries in 2015, and the U.S. Fire Administration's goal is to reduce those deaths and injuries in those populations (U.S. Fire Administration, 2015). Residential sprinkler systems have been proven to reduce risk of fire death and injury, and also cause reductions to homeowner insurance premiums and uninsured property loss (U.S. Fire Administration, 2015). But many homes lack sprinkler systems as they are only required by code for hotels and certain multifamily residences. There is a movement by the U.S. Fire Administration to push for residential sprinkler systems in all new homes built (U.S. Fire Administration, 2015).

Water Supply for Fire Fighting

Essentials of Fire Fighting

The Niagara Falls Fire Department uses the textbook *Essentials of Fire Fighting and Fire Department Operations* (2013) to guide operations. The chapter concerning water supply is prefaced with a case history about a firefighter fatality caused by insufficient water supply, which well emphasizes the importance of water supply to set the tone for the section. The chapter is organized through the following nine objectives: 1) Explain the ways water supply system components are used by firefighter; 2) Describe the types of fire hydrants and hydrant markings; 3) Explain fire hydrant operation and inspection considerations; 4) Explain alternate

water supply sources and methods of access; 5) Describe methods used for rural water supply operations; 6) Operate a hydrant; 7) Make soft-sleeve and hard suction hydrant connections; 8) Connect and place a hard-suction hose for drafting from a static water source; and 9) Deploy a portable water tank (2013, p. 782).

Key Terms

Key terms include backflow preventer, butterfly valve, circulating feed, circulating hydrant, combination systems, dead-end hydrant, direct pumping system, drafting, dry-barrel hydrant, flowmeter, gate valve, gravity system, loop system, outside stem and yoke (OS&Y) valve, portable tank, post indicator valve (PIV), pumper outlet nozzle, relay pumping, steamer connection, water main, water shuttle operation, and wet-barrel hydrant (2013).

Standards

The chapter utilizes NFPA 1001, Standard for Fire Fighter Professional Qualifications; NFPA 1963, Standard for Fire Hose Connections; NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants; NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting; and NFPA 1901, Standard for Automotive Fire Apparatus (2013).

Systems and Hydrants

The primary extinguishing agent in the firefighting arsenal is water, and so systems must be in place to transport water from its source to the location desired (2013). The chapter does well to demonstrate what a water system is and to detail all of the aspects of a fire hydrant. Water distribution systems are a grid of interconnected pipes with adequate pressure to push fresh water through primary feeders, secondary feeders, and distributors to homes, buildings, and fire hydrants (2013). Water mains are made from cast iron, ductile iron, asbestos cement,

steel, PVC plastic, or concrete that interact with the water moving through the pipe to create different levels of friction depending on the material used (2013). Fire hydrants are situated into the grid so that they are either a dead-end hydrant, or a circulating hydrant (2013). The City of Niagara Falls uses dry-barrel hydrants exclusively.

Water Supply for Fire Suppression

Water supply is important to fire suppression efforts, as it is the most available extinguishing agent (Baker, 2008). A municipal water system is most desirable for fire suppression, compared to those in rural areas, but has challenges as well. Older neighborhoods can have smaller diameter mains and are arranged in a dead-end layout, and water storage system reserves can be easily depleted causing low pressure (Baker, 2008). In a nationwide survey of fire chiefs and other fire officers conducted by the Opinion Research Corporation and commissioned by ISO, the study showed concern by those surveyed regarding adequate water supply with only 52% saying that fire hydrants supply all or almost all of their response area (ISO surveys fire chiefs, 2008). 23% said that their hydrants are inspected and flow-tested less than once a year. The most important way to address such an issue is to assure that the management of the water supply and of the fire department are in communication and collaboration to overcome the “legitimate differences of perspective between the fire service industry and the water supply industry” (Bowe, Bendix, & Smith, 2004).

The ISO provides communities with a list of needed fire flows and evaluates all elements of a water supply system (Hickey, U.S. Fire Administration, & Society of Fire Protection Engineers, 2008). The U.S. Fire Administration’s Water Supply Systems and Evaluation Methods (Hickey et al., 2008) is probably the most comprehensive outline of all aspects of a water supply

system including specific regard for fire suppression. The author also wrote the FSRS for ISO and brings a wealth of knowledge through the U.S. Fire Administration’s publication for water supply in fire suppression. The fundamentals of water supply, including distribution and system design are covered, along with in-depth chapters on needed fire flow, water supply and effective fire protection and emergency water supplies (Hickey et al., 2008). “Without careful attention, long-term planning, and adequate funding, communities risk deterioration in their protection, especially in these fast-growing areas. The threat is real, even in communities where fire protection is adequate today” (Hickey et al., 2008, p. 121).

An overview of water supply includes key terms used in the FSRS, and the highlights considered by ISO in evaluating a water supply include those listed below in Table 3:

Main Components of Water Supply Evaluated by ISO
Part of the City (Community) Unprotected: If any part of the city is not within 1,000 feet of a recognized water system, the unprotected area may receive a Class 9 rating. A recognized water system must delivery 250 gpm for a duration of 2 hours.
Maximum Daily Consumption Rate (MDC): The maximum daily consumption rate is the average rate of consumption on the maximum day. The maximum day is the 24-hour period during which the highest consumption total is recorded in the last 3-year period. High consumption that will not occur again due to changes in the water system, or water loss caused by unusual conditions (i.e., a water main break lasting less than 1 hour) will not be considered.
Minimum Pressure: A water system is reviewed at a residual pressure of 20 psi.
Fire Flow and Duration: The fire flow duration should be 2 hours for needed fire flows up to 2,500 gpm, and 3 hours for needed fire flows of 2,000 and 3,500 gpm as determined under Section I of the Grading Schedule. Requirements under Section II of the Grading Schedule call for a 4-hour duration for fire flows ranging from 4,000 gpm to 12,000 gpm.
Service Level: A service level is a part of the city distribution system that is served by one or more sources of supply but that is separated from the remaining distribution system by closed valves, check valves, or pressured regulating equipment, or is not connected.

Review of Supply System: The ability of the water supply system to deliver needed fire flow at representative locations throughout the city is reviewed under the following bullet items. For each representative location, the supply works, mains, and hydrant distribution are reviewed separately.

Supply Works: The absolute minimum supply available from water sources under extreme dry conditions should not be taken as the measure of the normal ability of the source supply. The normal sustained flow of supplies should be used as the normal capacity of the water source. If the water supply is regularly reduced for a period exceeding 1 month, the available supply is to be prorated by the time it is available. This evaluation covers:

- Minimum storage
- Pumps
- Filters
- Emergency supplies
- Alternative water supplies (i.e., See Chapter 6)

Water Main Capacity: The normal ability of the distribution system to deliver needed fire flows at representative risk locations throughout the community, as determined by the ISO are to be evaluated. The results of flow tests at each representative test location will indicate the ability of the water mains to carry water to that location. The AWWA/ISO methods of flow testing are covered in Manual II on Water Supply Evaluation Concepts.

Fire Hydrant Distribution: Only fire hydrants located within 1,000 feet of a representative risk location measured as fire hose can be laid by responding fire apparatus is credited to satisfy needed fire flow requirements. Maximum credit for each fire hydrant within 1,000 feet of and identified fire risk is as follows: 1) Credit up to 1,000 gpm for each hydrant within 300 feet of the location, 2) 670 gpm from hydrants within 301 to 600 feet of the location, and 3) 250 gpm from hydrants within 601 to 1,000 feet of the risk location. Furthermore, the maximum credit for each fire hydrant maybe limited by the lack of a pumper connection and the number of 2-1/2-inch house outlets and a minimum water delivery capability of 250 gpm.

Fire Hydrants—Size, Type and Installation: Point awards for installed and connected fire hydrants to water delivery piping of 4 inch or larger are prorated according to the following:

Installation Condition Points

with 6" or larger branch, a pumper outlet and 2 to 2-1/2" outlets (100 points), with 6" or larger branch, no pumper outlet and 2 to 2-1/2" or more outlets (75 points), with 1 to 2-1/2" outlet only (25 points), with less than a 6-inch branch (25 points), Flush type (25 points), Cistern or suction point (25 points)

Inspection and Condition of Fire Hydrants: The inspection and condition of fire hydrants should be in accordance with AWWA Manual M-17—Installation, Maintenance, and Field Testing of Fire Hydrants. (3) To receive full credit under this item, fire hydrants need to be inspected every 6 months. Reduced prorated credit is given for less frequent inspection and flow testing up to 5 years. After 5 years a hydrant is considered “unreliable” and no credit is given for the fire hydrant in protecting a specific fire risk. (3)

Table 3: Main Components of Water Supply Evaluated by ISO (Hickey et al., 2008, pp. 122-123)

Fire Alarm and Communications Systems

Emergency communications including facilities, 9-1-1 service, computer-aided dispatch, alarm receipt and processing, dispatch circuits, and the training and certification of dispatchers are grouped into one portion of the FSRS criteria that contributes to a fire department’s PPC (Insurance Services Office, 2012). The technical details of each component are laid out in the FSRS. In a nationwide survey of fire chiefs and other fire officers conducted by the Opinion Research Corporation and commissioned by ISO, 98% said their departments had the ability to communicate via radio directly with neighboring fire departments, 95% said they could communicate directly with local emergency medical services, and 84% said they could communicate directly with local police (ISO surveys fire chiefs, 2008).

The resource used by the Niagara Falls Fire Department to guide emergency communications operations is the textbook *Essentials of Fire Fighting and Fire Department Operations* (2013). In regard to fire department communications, the book utilizes NFPA 1001, Standards for Fire Fighter Professional Qualifications, and NFPA 1221, Standards for the Installation, Maintenance, and Use of Emergency Services Communication Systems (2013). Key terms include alarm assignment, automatic location identification (ALI), base station radios, clear text, global positioning system (GPS), intrinsically safe equipment, National Fire Incident

Reporting System (NFIRS), personnel accountability report (PAR), and public safety answering point (PSAP) (2013). Similarities and differences between ISO’s FSRS and the NFPA standards regarding emergency communications operations must be identified and those specifications of the ISO FSRS not covered by the NFPA standards must be met by the fire department in order to contribute to an increased PPC grade.

National Fire Protection Association (NFPA) Standards

The NFPA is a nonprofit trade association formed in 1896 through a cooperative effort of insurance companies to standardize the cutting-edge technology of sprinkler systems (Grant, 2017). The NFPA has grown over the years through the avocation of “scientifically-based consensus codes and standards, research, and education for fire and related safety issues” (Grant, 2017) to become the gold standard for the fire service. ISO’s FSRS uses many NFPA Standards to guide its evaluation criteria, and NFPA standards are also used to guide Niagara Falls Fire Department operations. Table 4 is a complete list of the NFPA standards that ISO uses to formulate its FSRS:

NFPA 1, Fire Code
NFPA 13, Standard for the Installation of Sprinkler Systems
NFPA 13D, Standard for the Installation of Sprinkler Systems in ON- and Two-Family Dwellings and Manufactured Homes
NFPA 13R, Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies
NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
NFPA 101, Life Safety Code
NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants

NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
NFPA 1001, Standard for Fire Fighter Professional Qualifications
NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications
NFPA 1021, Standard for Fire Officer Professional Qualifications
NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plan Examiner
NFPA 1033, Standard for Professional Qualifications for Fire Investigators
NFPA 1035, Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Firesetter Intervention
NFPA 1062, Professional Qualifications for Public Safety Telecommunications Personnel
NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting
NFPA 1201, Standard for Providing Emergency Services to the Public
NFPA 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
NFPA 1401, Recommended Practice for Fire Service Training Reports and Records
NFPA 1402, Guide to Building Fire Service Training Centers
NFPA 1403, Standard on Live Fire Training Evolutions
NFPA 1410, Standard on Training for Initial Emergency Scene Operations
NFPA 1451, Standard for a Fire and Emergency Services Vehicle Operations Training Program
NFPA 1452, Guide for Training Fire Service Personnel to Conduct Dwelling Fire Safety Surveys
NFPA 1500, Standard on Fire Department Occupational Safety and Health Program
NFPA 1521, Standard for Fire Department Safety Officer
NFPA 1561, Standard on Emergency Services Incident Management System and Command Safety
NFPA 1620, Standard for Pre-Incident Planning
NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments

NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments
NFPA 1901, Standard for Automotive Fire Apparatus
NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus
NFPA 1962, Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances
NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services

Table 4: NFPA Standards Used in FSRS (National Fire Protection Association, 2014)

Differences Between NFPA and ISO Requirements

Fire departments are mainly concerned with meeting the requirements of the National Fire Protection Association (NFPA), which is expected because the NFPA is the gold standard in the fire service. However, although the ISO uses NFPA standards in their evaluation of fire operations and equipment, the ISO requirements in some cases go beyond the NFPA standards and departments have to recognize the differences in order to increase their PPC grade (Cavette, 2006). For example, NFPA 1901 is the standard for fire apparatus, but the focus of the NFPA is on the performance and safety of apparatus, whereas ISO is focused on the specific capability of an apparatus to provide fire suppression (Cavette, 2006). NFPA and ISO requirements for equipment on pumpers that are different include requirements for hose, monitors, ground ladders, foam and radios (Cavette, 2006). On aerial apparatus, the differences are found regarding SCBA, ground ladders and radios, as well as requirements to carry generators, lights, saws and salvage covers (Cavette, 2006). Looking at the FSRS is important to the effort of increasing PPC grade, along with those NFPA standards utilized by ISO.

History and Criticism of Rating Systems

Although ISO is mostly accepted as a way to evaluate fire suppression capabilities of a fire department, local government leaders often disagree on the meaning of an ISO report, particularly concerning the cost-effectiveness of meeting its requirements (Compton & Granito, 2002). A poor understanding of the process often leads cities to receive less credit than they deserve. This is an area that should be of focus for city leaders since increased performance based on the PPC process is the only area of local government that can create taxpayer savings through a reduction to property insurance premiums (Compton & Granito, 2002).

Criticism of fire suppression evaluation systems is nothing new. The National Board of Fire Underwriters was the first to survey fire conditions in the largest American cities after a huge fire in Baltimore in 1904 left 80 blocks of the city burned to the ground (Coe, 1983). The massive financial loss incurred by insurance companies led to urgent interest in evaluating potential fire loss nationwide, a system that was called the Grading Schedule assigned cities a rating of class 1-10 with 1 being the best (Coe, 1983). The system was used to motivate fire chiefs to improve their operations and prevent losses to insurance companies. It came under criticism over time for being too subjective, too arbitrary, had too much emphasis on suppression, and a lack of recognition for improved performance (Coe, 1983).

In 1971, ISO was formed to serve 1,200 affiliate insurance companies, and considering the criticisms of the old Grading Schedule, a new version was created that still came under attack by the International City Management Association and the nonprofit research and development corporation Public Technology Incorporated that served in the interest of innovative technological developments for state and local government (Coe, 1983). The ISO

acknowledged formally in its new version what fire chiefs had argued before, that the system's sole purpose is only to serve the insurance industry (Coe, 1983). The criticisms continue through the decades up to today, with the "recognition by many that fire ratings are not an accurate measure of performance, nor will an improved rating necessarily result in lower insurance premiums" (Coe, 1983, p. 74). There is a persistent yet inadequate interest in reforming the ISO system with the suggestion of a new program run through either the federal or state government that would shift focus of the system toward the greater good of citizens as opposed to the needs of insurance companies (Coe, 1983). But this idea comes with criticism as well by state and local governments who would rather not have additional mandates placed on them. With political and financial implications in the way, and ISO's system being readily available as it is, it doesn't seem likely that any changes are on the horizon (Coe, 1983).

Fire Department Strategic Planning

In building a strategic plan that addresses the areas of improvement identified in the PPC reports, fire leadership must build policy by utilizing input from a wide spectrum of sources to guide the planning process (Compton & Granito, 2002). "Because simply hoping for the best is not an action plan, managers and their fire chiefs need to prepare themselves by learning what their ISO visit will assess and how to gain the maximum possible credits" (Compton & Granito, 2002, p. 35). The planning process should include four steps: establishing goals and objectives, identifying resources, correlating communication capabilities, and focusing on the elements of an agreement (Compton & Granito, 2002). One of the specific goals identified by Compton and Granito is "Fire Insurance Classification Goals" (2002, p. 500). This identification of integrating ISO classification includes cooperative agreements. A look at the 2016 PPC

Summary Report for Niagara Falls shows a point reduction due to a lack of an automatic response plan that would deploy neighboring departments to first alarms fires within the jurisdiction (Insurance Services Office, 2016). Of all the goals and strategies explored in *Managing Fire and Rescue Services* (Compton & Granito, 2002), it is interesting to find that increasing the fire classification of the fire department is highlighted in the book as one of the main goals of managing a fire department. Therefore, the effort to increase the ISO classification should evolve from the benign effort it is currently, and into a formal goal as part of a larger strategic plan for the NFFD, as well as the NFWB. The strategic plan should not only look at long-term planning, but short and medium operational goals, objectives and action plans as well (Wallace, 2006). Between the 2010 PPC and the 2016 PPC there was no formal effort by neither the NFFD or the NFWB to strategize increasing the ISO rating. Even today, there has been no formal planning or strategy developed on how to address deficiencies in the PPC reports. Identifying, sorting by category, and combining into one location all of the mandates of the fire department from the Occupational Safety and Health Administration, Environmental Protection Agency, Department of Transportation, Department of Human Services, Department of Homeland Security, FEMA, U.S. Fire Administration, along with the guidelines and standards of the NFPA, and the ISO, would be a great way to initiate building a comprehensive strategic plan that is responsive to the evolution of the fire department while working toward increasing the ISO rating (Wallace, 2006).

Conclusion

Chapter 1 revealed several areas of opportunity that the Niagara Falls Fire Department can focus toward increasing its ISO rating. In order of lowest score to highest score, the biggest

deficiencies in the PPC included: 1) Credit for inspection and flow testing of hydrants, 2) Credit for dispatch circuits; 3) Credit for training; 4) Credit for company personnel; 5) credit for emergency reporting (Insurance Services Office, 2016). The first two are the best place to focus on improvement toward gaining points in those areas during the next ISO evaluation and to contribute toward an increased ISO rating. According to the 2016 PPC Summary Report, Niagara Falls was given 74.77 total points which falls in the range of 70-79.99 for a PPC grade of Class 3. A PPC grade of 2 is given to a point range of 80-89.99, therefore in order for Niagara Falls to increase its PPC grade from a 3 to a 2 there will need to be an effort to secure at least an additional 5.23 points than were awarded in the 2016 PPC. With opportunity identified to potentially increase the score in the areas highlighted below in Figure 7, it is important to note these areas as the greatest opportunities for increasing the PPC grade.

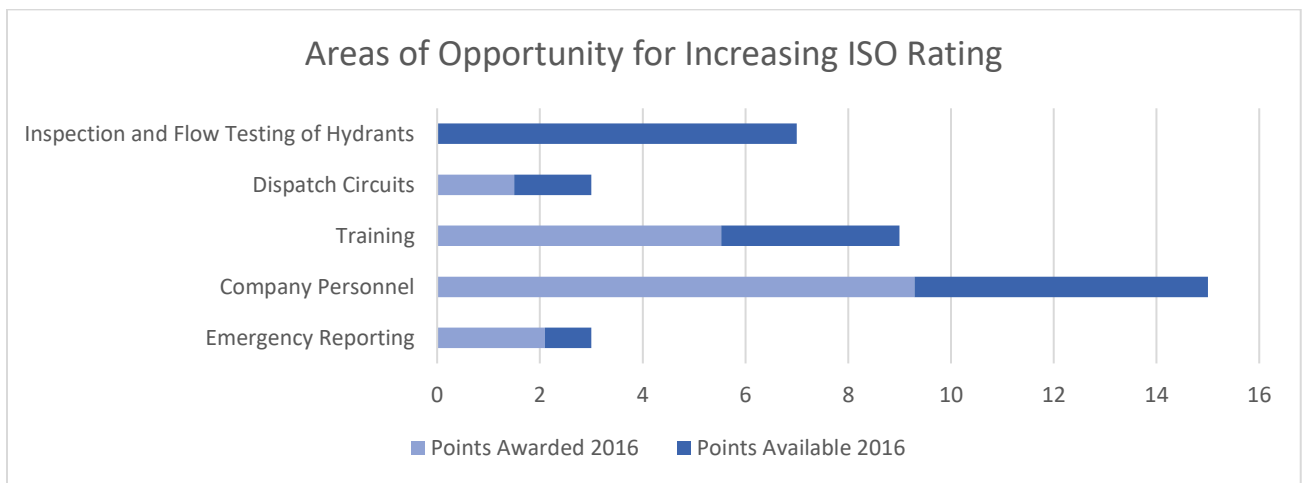


Figure 5 - Areas of Opportunity for Increasing ISO Rating

A total of 18.58 points were left on the table in those categories during the last PPC and represent opportunities for improvement toward increased ISO rating. Along with some strategic planning, this data clearly proves an opportunity to increase the PPC grade from a 3 to a 2 fairly easily, and even possibly to improve the rating further to secure the Niagara Falls Fire

Department a place along with 0.27% of fire departments nationwide who were awarded the rare Class 1 ISO designation. That opportunity will not be achieved, however, without the establishment of a collaborative relationship between the NFFD and NFWB in order to increase and maintain the ISO rating.

Chapter 2: Literature Review

A Needs Assessment of the US Fire Service

The most current needs assessment of fire departments across the nation was reviewed to identify whether any of the deficiencies discovered in the PPC credits in Chapter 1 might emerge as a common deficiency in fire departments nationwide. The NFPA conducted a survey in 2016 to identify areas of improvement in the U.S. fire service through the comparison between what fire departments have with what is needed according to government regulations and other nationally recognized guidance documents, to substantiate safety and effectiveness (National Fire Protection Association, 2016). Improvements often rely on grants to fund programs, staff, and equipment, and the survey is used to identify areas where funding may be needed (National Fire Protection Association, 2016). The survey utilized three prior reports developed by the NFPA along with an ad hoc technical advisory committee made up of professionals from fire and hazards organizations throughout the nation, and revisions made from the input of the International Association of Fire Fighters, International Association of Fire Chiefs, National Volunteer Fire Council, National Association of State Fire Marshals, and the International Association of Women in Fire and Emergency Services (National Fire Protection Association, 2016). The paper survey was sent to every fire department listed in the NFPA fire service inventory, as well as being offered online, with half of the 5,106 fire departments responding through the paper survey and half through the online option (National Fire Protection Association, 2016). The response rate was 19% with a range of 11% for departments protecting populations less than 2,500 to 82% response for those fire departments with protection populations 500,000 or more (National Fire Protection Association, 2016).

The survey discovered six categories of needs that the report used to organize the collected data, including: 1) Personnel and their capabilities; 2) Facilities and apparatus; 3) Personal protective equipment; 4) Community risk reduction: fire prevention and code enforcement; 5) Ability to handle unusually challenging incidents; and 6) Communications and advanced technology (National Fire Protection Association, 2016).

Personnel and Their Capabilities

Staffing

The survey identified that a change toward each engine or pumper being staffed with at least 4 career firefighters as recommended through compliance of NFPA 1710 (National Fire Protection Association, 2016). The smaller the protection population among respondents, the higher the percentage of those departments failing to comply with NFPA 1710 to staff each rig with at least 4 firefighters (National Fire Protection Association, 2016).

Training

The training needs have grown since the prior report, according to respondents, with 49% of all departments not formally training personnel in structural firefighting, compared to 46% in 2010 (National Fire Protection Association, 2016). The top three needs regarding training for departments was identified to be fire prevention, code enforcement, and technical rescue (National Fire Protection Association).

Facilities and Apparatus

Vehicles and Apparatus

Fire department engines and pumpers were found to be aging, with 43% being at least 15 years old as opposed to 51% in 2001 (National Fire Protection Association, 2016). However,

the trend was discovered to be toward updating fleets, as regular schedules for the replacement of apparatus suggest that funding is available for such replacements (National Fire Protection Association, 2016).

Personal Protective Equipment

Self-contained breathing apparatuses (SCBA) were found to be aging, with 69% of departments reporting they were at least 10 years old, an increase from 55% in 2010 (National Fire Protection Association, 2016). 72% of departments reported that personal protective clothing was at least 10 years old, an increase from 63% in 2010 (National Fire Protection Association, 2016). In communities of 25,000 or more, personal protective clothing was found to be inspected annually by 75% of departments, and 94% of departments offer laundering services, showing that more departments offer laundering services for personal protective clothing than are annually inspecting them (National Fire Protection Association, 2016).

Community Risk Reduction: Fire Prevention and Code Enforcement

Education Programs

The top five educational needs were reported to be: a wildfire safety program based on a national model, home fire sprinkler education, car seat installation, an older-adult fire safety program based on a national model, and home safety visits (National Fire Protection Association, 2016). Almost all departments identified having at least one educational program, with the population being protected without an educational program being less than 1% nationwide (National Fire Protection Association, 2016).

Fire Inspection and Investigation

Fire departments without personnel conducting fire code inspections was 20%, down from 24% in 2010, with the percentage of departments utilizing full-time fire department inspectors being 18% (National Fire Protection Association, 2016). 40% of departments employ fire investigators to determine if fires are deliberately set, up from 33% in 2010 (National Fire Protection Association, 2016).

Ability to Handle Unusually Challenging Incidents

Of the departments protecting the largest communities surveyed, 83% reported they were able to find enough people locally with specialized training, and specialized equipment, to address technical rescue and EMS for a building with occupants after structural collapse following a fire or no-notice catastrophic event such as an earthquake or tornado (National Fire Protection Association, 2016). Half of departments in communities with less than 250,000 people could handle situations with 2 to 5 structures burning simultaneously using only local resources, with half of these departments needing regional or state support (National Fire Protection Association, 2016).

Communications and Advanced Technology

Calls made to 911 were reported to be answered 98% of the time directly by fire departments, and departments in smaller communities were more likely than larger ones to have fire calls processed by the same facility answering initial 911 calls (National Fire Protection Association, 2016). 38% of fire departments report not having a backup dispatch facility (National Fire Protection Association, 2016). Computer aided dispatch is being used by 95% of departments in communities greater than 50,000, and tablet software is being employed by

50% of departments in communities greater than 25,000 (National Fire Protection Association, 2016). Aerial robotics were reported to be used by 8-14% of departments in communities of 100,000 or more (National Fire Protection Association, 2016).

Collaboration

Internal Insight into Collaborative Networks

In the field of public management, it has been established that collaborative networks have become a permanent feature, that networks enrich hierarchy and markets, that managers are engaged in collaborative horizontal and vertical networks, and that serious attention needs to be given to networks (Agranoff, 2006). Through the study of 14 public management networks including federal, state, regional, local and nongovernmental managers, Agranoff (2006) raises issues through a grounded theory methodology using field-based data that was gathered during discussions with over 150 public officials combined with field observation and network documentation analysis to further define how collaborative bodies work internally (Agranoff, 2006). The inner workings of collaborative networks are overviewed both to contribute to literature on collaborative management and to provide insight to managers who operate in this realm (Agranoff, 2006).

Managers in the study identified that their work within networks serves as only one facet of their collaborative contacts (Agranoff, 2006). Through technology such as email, contacts from other agencies through grants, contracts, shared services and collaborative agreements are more accessible than they once were through face-to-face and telephone contact (Agranoff, 2006). Although these collaborative networks flourish through horizontal relationships, the idea that they are replacing hierarchies was not supported by the managers in the study (Agranoff,

2006). They reported that 15 to 20 percent of their time at work was spent on collaborative activity, including within networks, and that the rest of their time was occupied in nonnetwork collaboration internally within their organization (Agranoff, 2006). Networks provide managers value that motivates continued participation in them, such that expand resources, provide new solutions or ideas, and provide efficiencies and increased performance (Agranoff, 2006). Networks still integrate aspects of traditional organizations such as missions, goals, objectives, rules of operation, and routines, except they do so without the rigid hierarchy of bureaucratic fame (Agranoff, 2006). Managers in the study also revealed four separate types of networks including: informational, developmental, outreach, and action networks (Agranoff, 2006). Managers defined their collaborative decisions within their network to be more along the lines of reaching agreements as opposed to parliamentary procedure style decision making (Agranoff, 2006). Knowledge management was a major focus identified by the managers within their networks, a value that contributes to the expansion of supportive information for their organizational operations (Agranoff, 2006). Conflict between network partners was not absent from the insight of the managers regarding their networks, highlighting that collaboration is not without conflict and power struggles (Agranoff, 2006). Further, the managers revealed that the relinquishment of autonomy inherent to participating in networks can be problematic as the managers can feel a loss of control or resources (Agranoff, 2006). Time and opportunity loss, extended decision-making processes, power struggles, decision agendas, and public policy barriers were all negative aspects conveyed by the managers (Agranoff, 2006). The study was able to well convey that networks come with their problems, but they are not replacing the public bureaucracies that are integrated into them (Agranoff, 2006).

Establishing Collaborative Networks

The formation of a special task force created in California in 2002 to identify and eliminate a poultry disease called Exotic Newcastle Disease (Bowe et al.) threatened the nation's food supply as it rapidly began to spread to neighboring states (Moynihan, 2005). The disease had not been experienced on this scale since the 1970s, and there was a lack of sufficient and relevant resources from any one agency (Moynihan, 2005). However, the outbreak was eventually neutralized by a task force made up of 10 state and federal agencies, local governments, and temporarily employed private sector employees (Moynihan, 2005). A case study was conducted by Moynihan (2005) to include an analysis of a focus group of managers who were involved in the formation of the task force in order to identify lessons learned regarding the collaborative networks that addressed the END outbreak.

With the trend in emergency management being away from rigid hierarchical structures and into coordinated collaborative efforts between both the public and private sectors, as well as nonprofit organizations, the need to understand such networks is becoming ever-important (Moynihan, 2005). Since 9/11, a focus on homeland security has provoked intention toward improving command and coordination processes such that are used in National Emergency Response Policy and the National Incident Command System (Moynihan, 2005). Moynihan identifies that the term "wicked problems" has come to define such problems as 9/11 that are of such complexity that the use of collaborative networks is imperative to any level of sufficient response (Moynihan, 2005). Moynihan defined collaborative networks as a concept used to describe the interconnected characteristic of the world, including the interpersonal connections between individuals, and the transfer of information through social networks (Moynihan,

2005). Networks within public management utilize the benefits of a nonhierarchical operation emphasizing horizontal relationships, and a focus on expertise, information, and self-organizing (Moynihan, 2005). “The variety of actors involved may share overlapping goals, but each individual organization will have incentives to use the network to benefit financially or increase policy influence” (Moynihan, 2005, p. 7). The delivery of services in the emergency response context is reliant upon the formation of a collaborative network either voluntarily and proactively, or else out of necessity amidst the chaos of a wicked problem.

By analyzing the process that formed the task force to address the END outbreak, Moynihan identified 6 key lessons from the case and 5 recommendations for the effective use of emergency networks. Lessons: a) emergency networks are essential to address animal disease outbreaks; b) The management of emergency networks is best learned while operating within an emergency; c) The faster a network is established the better; d) The Incident Command System is effective and flexible enough for the management of emergency networks; e) Although EM management is trending away from rigid hierarchy and SOPs, they are effective ways to create shared understanding and processes; f) Staff turnover during emergencies is overcome by maintaining continuity of key staff, communication between rotating staff, returning staff to positions previously served, and maintaining teams used to working together (Moynihan, 2005). Recommendations: a) Conduct preplans with the understanding that the emergency may require further planning and/or flexibility in order to appropriately address the scenario; b) Match resources needed with the most relevant organization who can provide them; c) Rely on the trust in pre-existing relationships between individuals working together and create a network culture to be used to overcome where trust does not already exist; d)

Utilize technology to increase efficiency and coordination; e) Install and communicate through a formal system of procedure to assure staff understand the tasks they should be conducting (Moynihan, 2005).

Organizational Structure and Collaboration

Rivera (2016) identified a lack of research concerning how the structure of organizations influence cross-sector collaboration in emergency management (EM), specifically regarding the connection between organizational structure and decision-making. Although his analysis focuses on voluntary organizations, aspects of collaboration related to organizational structure, as well as the identification of gaps in the literature, provide direction for studying collaboration in emergency management. An organization's ability to be flexible in its decision-making and to be efficient is important (Rivera, 2016), particularly in the context of emergency management. The National Center for the Study of Counties from the Carl Vinson Institute of Government at the University of Georgia conducted the National Survey of Emergency Management in County Government in 2006. The survey aimed to evaluate the ability of counties regarding emergency and disaster planning and response, and provides quality insight into the organizational characteristics of EM, and, in that regard, stands as the most comprehensive data set available in the United States (Rivera, 2016). Using data from this web-based survey administered to county managers, administrators, and commissioners in all 3,066 counties of the United States, Rivera (2016) analyzed the data to advance two ordinary least squares regression models, as well as variance inflation factor tests, to discover whether a particular organizational structure was more likely to promote cross-sector collaboration between government and volunteer organizations within the context of EM (Rivera, 2016).

The number of full-time employees working for an EM agency were found to be correlated to the involvement of voluntary organizations in EM planning processes (Rivera, 2016). Terror concern and non-disaster activities were found to be positively correlated with the involvement of voluntary organizations in the EM planning process, whereas the social vulnerability index was found to be negatively correlated (Rivera, 2016). This means that with a greater concern for future terrorist attacks, voluntary organizations are more involved in EM planning processes. The study found that “when volunteers are used in routine, non-emergency operations by EM agencies, these agencies involve voluntary organizations in the plan’s development more” (Rivera, 2016, p171). The study found voluntary organizations to be less involved in EM planning processes as a county’s social vulnerability increased (Rivera, 2016). The level of voluntary involvement in the EM planning process was not found to be influenced by organizational autonomy (Rivera, 2016). Further, the study found a significant relationship to the involvement of voluntary organizations with EM planning processes when the EM agency is structurally located within a county’s department of health (Rivera, 2016).

The study identified an opportunity for future research to verify if EM structure has a positive influence on the involvement of voluntary organizations with the EM planning process through the use of larger samples, and to discover whether the characteristics identified encourage cross-sector collaboration in EM agencies located in county departments of health or fire (Rivera, 2016). Rivera (2016) suggests that future research could also include exploring how organizational structure affects cross-sector and intergovernmental relationships through the construction of variables that reveal any influence of organizational structure in various bureaucratic contexts and beyond the purview of planning processes (Rivera, 2016). “With the

current deficit in research on organizational structure in the realm of EM, it is important that future research learns from the possible limitations of past studies” (Rivera, 2016, p173).

Challenges of Cross-Sector Collaboration

Structure fires are routine emergencies, meaning they are disruptive events that are relatively predictable and can be handled by predetermined systems arranged for response (Nohrstedt, 2016). In the aftermath of disasters, there is a major need for collaboration across organizations, yet, compared to collaboration regarding disasters there is little research addressing collaboration during routine emergencies (Nohrstedt, 2016).

Nohrstedt (2016) uses interviews with municipal fire leadership, property managers, housing administration, and representatives from health and social care to identify the challenges of establishing cross-sector collaboration regarding fire prevention specifically for vulnerable groups (Nohrstedt, 2016). Open-ended questions were utilized to garner responses to provide depth regarding experiences, perceptions, opinions, and knowledge (Nohrstedt, 2016). Interviews were semi-structured using a guide, since the researchers knew the themes being studied, while seeking to uncover unexpected information and perspective relative to those themes (Nohrstedt, 2016). The themes explored included: 1) Practices for identifying risk for vulnerable residents in the community; 2) Collaboration practices across sectors about fire safety for vulnerable groups; 3) Opportunities and obstacles for such collaboration (Nohrstedt, 2016). The researchers interviewed 23 professionals over 20 interviews conducted at either the participant’s workplace, or over the telephone, with each interview taking around one hour, with two researchers in attendance, and with the data being audio recorded to later be transcribed, anonymized, and analyzed (Nohrstedt, 2016).

The researcher found that all of the interview participants identified a need for increased collaboration to reduce the risk of fire for vulnerable groups (Nohrstedt, 2016). The challenges to collaboration identified were grouped into issues on the national, municipal, and professional levels (Nohrstedt, 2016). Three main challenges were identified: 1) National regulatory obstacles; 2) Lack of strategy and facilitation of cross-sector collaboration on the municipal level; and 3) Uncertainty regarding professional boundaries (Nohrstedt, 2016). The researchers developed recommendations to address the challenges on three different levels: 1) National level: a) Initiatives to achieve cross-sectoral coordination of regulations at the national level; b) Establish support functions and methods that might assist the municipalities in achieving cross-sector targets; c) Develop shared “safety at home” check lists and other tools; 2) Municipal Level: a) Comprehensive and cross-sectoral approach to local mapping of social vulnerability and fire risk; b) Establish structural measures that support and encourage cross-sectoral collaboration; c) Provide arenas and facilitated processes for exploring the potentials of collaborative efforts; 3) Professional level: a) Emphasizing and clarifying the professionals’ responsibilities in terms of life safety for vulnerable residents; b) Discussion and reflection on the boundaries between the confidentiality code and the duty to notify, specifically in cross-professional settings; c) Explore how professional values and norms affect the quality of cross-sector collaboration (Nohrstedt, 2016).

This research does well to contribute to approaches to fire prevention through social science, collaboration, as well as fire safety for vulnerable groups (Nohrstedt, 2016). When you consider emergency services organizations being structured to handle routine emergencies through SOPs, collaboration could pose conflict between differing SOPs and create difficulty

with multi-organizational collaboration. “[T]heorists acknowledge the complexity and nonlinearity of the relationship between collaborative activity and outcomes, which raise the need to explore multiple frameworks” (Nohrstedt, 2016, p. 138). Like disasters, routine emergencies involve environmental and economic costs to society (Nohrstedt, 2016), however routine emergencies occur more frequently and thus should be utilized to frequently solidify collaborations in their manageability so that collaborative efforts are better deployed during more complex disaster events. But such coordination must be part of a larger strategy that is actively implemented in a preventative and ongoing manner.

Collaboration During Disaster Preparedness

Research has recently suggested that collaborative networks are crucial to emergency management that is effective (Kapucu & Hu, 2016). Interorganizational networks built through collaboration between emergency management organizations allow for the type of information sharing, financial resource pooling, and manpower that can move a disaster event into the realm of a manageable operation much faster than without (Kapucu & Hu, 2016). Collaboration between sectors and governments is typical during disaster response and during recovery efforts, and the federal government coordinates with state governments to create and achieve goals regarding disaster preparedness (Kapucu & Hu, 2016).

Kapucu & Hu (2016) set out to answer three questions through their research: 1) What is the relationship between friendship networks and collaboration networks during disaster preparedness? 2) Can disaster response networks be predicted based on preestablished friendship networks and disaster preparedness networks (Kapucu & Hu, 2016)? 3) Do structural characteristics of emergency management systems affect the relationship among friendship

networks, preparedness networks, and response networks (Kapucu & Hu, 2016)? The researchers reviewed relevant literature, and then proposed a theoretical framework before exploring three categories of networks in emergency management: a) friendship networks, b) preparedness networks, and c) response networks (Kapucu & Hu, 2016).

Using a nominalist approach, the research looked at two metropolitan counties and their Comprehensive Emergency Management Plans (CEMP) to discover the representatives and organizations involved with response efforts and compile them into a list (Kapucu & Hu, 2016). The list was shared with each representative and the representative was asked to identify who on the list they knew and who they collaborate with during disaster preparedness and response efforts in order to identify friendships and collaborative ties (Kapucu & Hu, 2016).

A multiple regression was conducted with quadratic assignment procedure to analyze the connections between friendship ties and collaborations ties in both preparedness and disaster response networks (Kapucu & Hu, 2016). The results represent well that friendship networks were found to be correlated to preparedness networks, and response networks were correlated with preparedness networks (Kapucu & Hu, 2016). This research supports the importance of relationship building between preparedness and response organizations before disasters happen, and that formal collaborations be established through disaster preparedness activity (Kapucu & Hu, 2016). The researchers recommend that future research explore the context of political culture toward building interorganizational collaboration, as well as broadening to include a larger sample of cities (Kapucu & Hu, 2016).

Lack of Cooperation Concerning Water and Fire

In a column in the Journal of the American Water Works Association, Jack Hoffbuhr discusses a survey by the Opinion Research Corporation (Hoffbuhr, 2003). The survey asked 500 fire chiefs, fire marshals and fire commissioners to identify their biggest challenges toward increasing fire protection in their jurisdiction (Hoffbuhr, 2003). 91% indicated lack of funding to be a challenge, but more interestingly, 69% indicated difficulty in accessing adequate water supply, and 46% noted that a lack of cooperation with the local water company to be a key issue (Hoffbuhr, 2003). Hoffbuhr highlights the lack of cooperation to be a major concern in the survey results, and suggests the solution to be increased communication, and suggested that water industry readers should “Take your fire chief to lunch, and have a good talk” (2003, p. 6).

Conclusion

The literature reviewed here provided insight into establishing collaborative networks, organizational structure and collaboration, internal perspectives from collaborative networks, collaboration during cross-sector collaboration, and cooperation between water and fire management. Structure fires are routine emergencies and the extent to which their impact is can be determined by how the hazard interacts with the affected community’s vulnerabilities (McEntire, 2015). A major vulnerability is the effectiveness and efficiency of water supply. Unless there is a deliberate effort to routinely communicate and collaborate, fire departments and water departments will not be prepared to the best of their ability to not only respond to routine emergencies such as structure fires, but also to disasters and catastrophes. This can best be achieved by establishing a collaborative relationship between the NFFD and NFWB during routine emergencies in order to best assure the water infrastructure is at least sufficient

toward fire suppression operations, and at most sufficiently contributory toward all disaster response, mitigation, and recovery efforts.

Chapter 3: Methods

Introduction

Through the 2016 PPC report from ISO, opportunities were identified in Chapter 1 to increase the ISO rating for the City of Niagara Falls. One of the largest deficiencies in points contributing to the PPC grade was identified to be “631. Credit for Inspection and Flow Testing,” which falls under the purview of the Niagara Falls Water Board, a public benefit corporation separate from the Niagara Falls municipal government. Because of the separation of the water supply system from municipal government and into the control of a public benefit corporation, most of the literature reviewed in Chapter 2 related to collaboration in emergency management. A review of literature related to collaboration attempted to identify how best to establish a collaborative relationship between the fire department and the water board, not only to work toward increasing the ISO rating for the City, possibly reducing homeowner insurance premiums for residents, but also because water supply is essential to fire suppression and other emergency management operations.

Primary data for this research were collected through conducting key informant interviews with the leadership of the organizations relevant to the ISO rating of the City of Niagara Falls, as well as regarding the cultivation of the collaborative relationship between the organizations to assure coordination regarding water supply and emergency management operations. This chapter includes the presentation of the methodological procedure, recruitment of participants, development of interview questions, qualitative interview and transcription process, procedure for analysis, researcher bias, and validity.

Key Informant Interviews

To work toward the goal of the Niagara Falls Fire Chief to increase the ISO rating for the City of Niagara Falls, it was important to gather data from the leadership of the organizations capable of implementing any recommended actions toward such goal. The sample was concentrated using purposive sampling (Lindlof & Taylor, 2011), and the collection of qualitative data was managed by conducting semi-structured (Creswell, 2014) face-to-face and telephonic interviews that were audio recorded and transcribed by the researcher using word processing software. Such strategic sampling (Frey, Botan, & Kreps, 2000) was appropriate since the research is very specific to the ISO rating of the City of Niagara Falls, which involves a limited population of key informants. The administration of interviews has long been established as an effective measure toward research in emergency management (Oliver-Smith, 1996; Phillips, 2002, 2014; Rodriguez, Anderson, & Kennedy, 2007). Each key informant interviewed was asked about their experiences regarding collaboration and to share their insight into the current collaborative relationship between the NFFD and NFWB. Open-ended questions were utilized as “[e]lites especially—but other highly educated people as well—do not like being put in the strait jacket of close-ended questions” (Aberbach & Rockman, 2002, p. 674). The use of open-ended questions in a semi-structured interview allows the key informants to fully articulate their insights (Aberbach & Rockman, 2002). Another benefit to the use of open-ended questions is the escalation of response validity by the freedom open-ended questions provided to the key informants who advance answers through their own frameworks (Aberbach & Rockman, 2002). Such authenticity is further supported in this research by triangulation of the data (Creswell, 2014) through the use of; 1) key informant

interviews; 2) a focus group; 3) review of NFFD, NFWB, and ISO websites, the NYS laws that created the NFWB and NFWA, and the City of Niagara Falls Charter. The goal was to extract information regarding the collaborative relationship, or lack thereof, between the NFFD and NFWB, along with any useful information about the ISO rating, and present the possibility for what Aberbach, Chesney, and Rockman (1975) refer to as global coding. Global coding is used by researchers to use the judgement of the coder informed by the data from the interview concerning general traits or styles deriving from the interpretation of the researcher. This could result in the discovery of either concerns, or no concerns, regarding the collaborative relationship between the NFFD and NFWB as shared by the key informants. Themes were revealed and used to identify the collaborative environment and possibly to improve it through the formulation of recommendations to the leadership of the NFFD and NFWB. Although there are drawbacks to the use of open-ended questions to the researcher regarding increased time in conducting the interviews, transcribing, and analyzation (Aberbach & Rockman, 2002), ultimately it is worth the insight gathered toward winnowing data to be used for recommendations through the various perspectives utilized.

Phase 1 of the interviews focused on informants who could build toward a collaborative relationship between the NFFD and the NFWB, not only to work toward a sustained effort to increase and maintain the ISO rating for the City, but also to work toward a sustained cooperation, as water supply is essential to fire suppression and other emergency management operations. Therefore, all five members of the NFWB were interviewed, and all three members of the NFWA were contacted to participate. However, the NFWA has three seats and only one member of the NFWA ultimately participated, with one seat being discovered to be vacant, and

the other member who initially agreed to be interviewed deferring questions regarding the ISO to the executive director of the NFWB for unknown reasons; in an initial conversation over the telephone with that NFWA member it was clear the member had zero knowledge of the ISO, which may have affected his decision to stop responding to subsequent communication attempts by the researcher. All members of the NFFD relevant to the various portions contributing to the PPC report were also interviewed including the fire chief, chief of fire prevention, chief of training, chief mechanic, senior dispatcher, and senior radio technician.

Phase 2 of the interview process was more closely related to the specific requirements of the ISO in rating the City of Niagara Falls. The initial goal of this research was to uncover recommendations to be used toward increasing the PPC grade. To assure that the recommended areas of improvement to the PPC grade identified in Chapter 1 are sufficient and appropriately addressed, a semi-structured interview was attempted telephonically with the ISO Field Representative assigned to the City of Niagara Falls by the Insurance Services Office. The field representative is the main contact between the ISO and both the NFFD and the NFWB regarding PPC reports, and is tasked with compiling and calculating credits that add up to the total ISO rating and communicating such with the fire department. With written consent provided by the fire chief of the NFFD for the researcher to act as the contact between the NFFD and ISO in place of the fire chief, the ISO field representative agreed over the phone to participate, but required the approval of his supervisor since the conversation would be audio recorded. The researcher's initial intention was to first conduct the interview with the ISO field representative, who is the subject matter expert on the ISO rating process, before the other interviews so that insight gathered could contribute to and guide the data collected in all other

interviews. However, due to the red tape of gaining approval for audio recording by the management of the Insurance Service Office, a private corporation, this did not transpire. After continuous contact with the field representative throughout the process, who kindly kept the researcher in the loop, due to time restraints the researcher made the decision to conduct the other interviews first. Regardless, the information provided from the interview with the ISO field representative was utilized to formulate guidance for the NFFD fire chief and the NFWB executive director in the development of recommendations. The interview with the ISO field representative was sought also to add validity to the data collected in the other interviews and recommendations made, as the ISO field representative is the subject matter expert on the PPC grading process. After several weeks of waiting for approval for the telephonic interview to be audio recorded, due to time restraints of this study the researcher offered the option to instead provide questions for the ISO field representative to answer in written interview form via email. Approval was immediately granted for the written interview by ISO management that same day. Although this did not allow the researcher to gain more in depth and detailed technical questions as intended with a telephonic interview, email correspondence has become a commonly utilized alternative method in qualitative research (Hawkins, 2018; Gibson 2010; Walker, 2013), and in this case was essential for access to the data provided by the key informant.

The methodology of this approach relied on four assumptions: 1) The interviews with the NFFD chief of fire prevention, NFFD senior dispatcher, senior radio technician, and the NFFD training chief would reveal opportunities and limitations to building a collaborative relationship with the NFWB; 2) The interviews with the commissioners and employees of the NFWB, and the

member of the NFWA, would reveal opportunities and limitations of building a collaborative relationship with the NFFD; 3) The interviews with the NFFD fire chief and the NFWB executive director would reveal opportunities and limitations of building a collaborative relationship between the two organizations, and also provide insight toward workable recommendations for increasing the PPC grade; 4) The interview with the ISO field representative would provide specific targeted guidance toward actually increasing the PPC grade.

Development of Interview Instruments

The initial list of questions for the interview with the ISO field representative were compiled utilizing the analysis of the most recent Niagara Falls PPC Report (Insurance Services Office, 2016) to assure the main areas of opportunity were being communicated in order to gain information on the steps necessary to meeting the requirements of the ISO that would secure credit toward increases to the PPC grade. The second list of questions used in the interviews with all other key informants was developed with the goal of discovering the opportunities and limitations of increasing collaboration between the NFFD and NFWB for securing credit to increase the PPC grade, as well as assuring such collaboration is in place during all planning and response phase operations regarding emergency management within the city.

Access to Key Informants

Due to the researcher's employment with the NFFD, and the fact that the focus of this entire study was chosen at the behest of the Niagara Falls fire chief, the researcher was able to take advantage of achievable access to the ISO field representative via written permission to act as the NFFD's representative. The researcher was also able to utilize professional relationships

with two members of the NFWB that were willing to usher access to the executive director, who furthered access to all other NFWB employees and all five members of the NFWB.

The researcher's previous experience as chairman of the Niagara Falls City Democratic Committee and as vice chairman of the Niagara County Democratic Committee presented the possibility of refusal by some of the politically appointed members of the NFWB and NFWA. It was possible they would feel compelled by such history to allow partisan politics as an interference and obstacle to accessing the key informant insights. This potential was not realized during the course of data collection, however, and participation was easy to garner considering the goals of the project as they focused on increasing the ISO rating which could possibly lower homeowners' insurance premiums for taxpayers/ratepayers. Most importantly, increased collaboration between the NFFD and NFWB promotes greater protection for residents through stronger planning and response activity regarding routine emergencies. The proposition of those benefits falls in line with the purpose of the key informants in their roles: to serve ratepayers and taxpayers alike.

Kew Informants and Dates of Interviews

Interviews were conducted with each key informant on the dates as follows: NFFD Senior Dispatcher on March 26th, 2019; the NFFD Chief Mechanic on March 27th, 2019; NFWB Commissioner on March 27th, 2019; NFFD Fire Chief on March 28th, 2019; NFFD Chief of Fire Prevention on March 28th, 2019; NFFD Chief of Training on March 28th, 2019; NFWB Commissioner on March 28th, 2019; NFWA Member on March 28th, 2019; NFFD/NFPD Senior Radio Technician on April 1st, 2019; a focus group with the following participants: NFWB Executive Director, NFWB Superintendent, NFWB Supervisor of Outside Maintenance, NFWB

General Counsel, and NFWB Senior Engineering Technician, which took place on April 3rd, 2019; NFWB Chairman on April 4th, 2019; NFWB Commissioner on April 4th, 2019; and NFWB Commissioner on April 4th, 2019. The NFWA Chairman deferred any questions regarding the ISO to the NFWB executive director, and a member of the NFWA was contacted and communicated that he previously resigned from his seat, which was not known by the researcher or the other members of the NFWA. City of Niagara Falls Mayor Paul Dyster was contacted and confirmed that the vacancy left by Mr. Starks' resignation had not yet been filled.

Interview Locations and Participants

To assure the greatest comfort to the informants in participating, the option was given whether to conduct the interview face-to-face at a location of their choosing, or telephonically. Eight informants chose to participate in one-on-one interviews telephonically, and four participants chose face-to-face one-on-one interviews. Seven additional participants chose to participate in a face-to-face focus group with the researcher where the same interview instrument as the one-on-one interviews was utilized for consistency. The NFFD chief mechanic chose to meet the researcher for his interview at NFFD's Firehouse 9 at 1124 North Military Road, Niagara Falls, New York, 14304. Coincidentally, this municipal property houses a NFWB pump station in a portion of the building through an agreement between the City of Niagara Falls and the NFWB, however, this fact did not affect the data collected. The NFFD fire chief invited the researcher to the NFFD headquarters located at 3115 Walnut Avenue, Niagara Falls, New York, 14301 to conduct interviews in those offices with the NFFD fire chief, chief of fire prevention, and chief of training. The executive director of the water board invited the researcher to conduct his interview in a conference room of the Michael C. O'Laughlin Water

Treatment Plant at 5815 Buffalo Avenue, Niagara Falls, New York, 14304. The executive director had assembled a group of other NFWB employees he believed to be relevant to the ISO rating. This basically resulted in a flash snowball sampling (Lindlof & Taylor, 2011) that expanded the participants from the intended one-on-one interview into a focus group of seven people. The focus group was conducted with the NFWB executive director, general counsel, superintendent, supervisor of outside maintenance, senior engineering technician, chief operator, and secretary. The chief operator and secretary did not actually speak during the focus group, and the chief operator had to leave for a work-related obligation during the focus group, so no data was actually collected from either of those two individuals.

Saturation

The researcher originally planned to interview two additional key informants, the former NFFD fire chief, and a recently retired NFFD senior dispatcher. Those two individuals were involved in the most recent PPC grading process and could have provided further insight. The former fire chief is responsible for directing the researcher to work toward increasing the ISO rating while he was still in that role, as led to this study.

Participants made recommendations to the researcher regarding other officials and employees to interview that may or may not have been useful to this research. Some of those interviews were conducted, however, those recommended that were not interviewed include the NFWB safety officer, NFWB financial director, and NFWB human resources director. As the interviews were being transcribed and coded in between other scheduled interviews, it became clear to the researcher that a level of saturation had already been achieved (Creswell, 2014), and the plan to interview all of the above five additional key informants was bypassed for the

sake of the timeframe of the study. Contributing to the level of saturation was the unintended snowball sampling (Lindlof & Taylor, 2011) that occurred from both the NFWB and NFFD interviews and provided key informants not originally identified, a welcome occurrence since extremely relevant participants were gained in this way.

Interview Procedure

The key informants were told that although their positions would be identified in the data culled from the interviews, the confidentiality of their names would be kept intact if they so choose, and none of the participants chose anonymity. The interviews generated data that was recorded with a digital audio recorder for later transcription, along with supplemental notes taken by the researcher, and were analyzed as explained below. In accordance with required protocols for research involving human subjects, the procedures developed for data collection, informed consent forms, and interview instruments were approved by the Buffalo State College Institutional Review Board prior to the data collection process.

Chapter 4. Analysis

Interview Analysis

The key informant interviews were analyzed utilizing an approach congruent with framework analysis technique (Ritchie & Spencer, 1994), by first identifying similarities and differences in the data prior to identifying the relationship between them in order to identify themes. Audio data that was collected on a portable digital audio recorder at both the in-person and telephonic interviews was uploaded to a digital audio software application on the researcher's computer to enhance the clarity of the audio data. Using headphones, transcripts of the audio were created with word processing software by the researcher through meticulous playback. At this point in the process, the researcher began to gain a general impression and tone of the data collected. The transcript was then read repeatedly for further rigor in comprehension of the data collected, and notes were taken as information emerged that pointed toward possible themes for the coding step of analyzation. Categories were then created based upon the themes that emerged as identified by the researcher in the data culled from the interviews. The data was indexed to highlight focal points, first broadly being separated into two categories: 1) NFFD; 2) NFWB and NFWA. This was done for two reasons: 1) to encourage the identification of interconnectedness and similar perspective in the data by virtue of grouping based on the organization that the participants are employed; and 2) to aid in assuring any recommendations formulated through the analysis remained such that would best be disseminated to the relevant leadership, and further disseminated to the employees, who could utilize the recommendations. Specific quotes were isolated using the comment function of the review tab in Microsoft Word, and then reorganized using copy and paste into a

Microsoft Excel spreadsheet under relevant themes identified to be used for comparison and contrast between them. This reduction and reorganization of the data (Krueger, 1994) into a matrix resulted in a more navigable set of data that was more easily digestible by the researcher toward analyzation and later construction of recommendations. Finally, documentation of the researcher's interpretation of the reorganized data was conducted to complete this analytical approach.

Themes emerged during analysis based on similarities and differences between the data, and they were then grouped together based on interrelatedness. Some of these themes formed naturally due to the similarities and differences in responses by participants to the questions from the interview instrument, and other themes emerged less directly. In the analysis portion, the researcher included both short, sometimes one word, responses as well as long quotes. Some of the short answers provided insight interpreted by the researcher to inform much more meaning than the appearance the short answer implies at face value, and thus, the analysis clarifies. Some answers provided very useful narratives that are included at longer length in the analysis where the researcher deemed appropriate, as not to devalue the narrative or separate pieces of information from their context.

Codes

For this analysis, the codes in Table 5 below were designated to the interviews that were conducted with members of the NFFD, NFWB, and NFWA. It is useful to note that because a focus group was conducted (codes NFWB 3A, 3B, 3C, and 3D), not every member of the focus group responded individually to each and every question such as the other interviews.

Position	Code
NFFD Senior Dispatcher	NFFD 1
NFFD Chief Mechanic	NFFD 2
NFFD Fire Chief	NFFD 3
NFFD Chief of Fire Prevention	NFFD 4
NFFD Chief of Training	NFFD 5
Senior Radio Technician	COM 1
NFWB Commissioner	NFWB 1
NFWB Commissioner	NFWB 2
NFWB Executive Director	NFWB 3A
NFWB Supervisor of Outside Maintenance	NFWB 3B
NFWB Superintendent	NFWB 3C
NFWB General Counsel	NFWB 3D
NFWB Senior Engineering Technician	NFWB 3E
NFWB Chairman	NFWB 4
NFWB Commissioner	NFWB 5
NFWB Commissioner	NFWB 6
NFWA Member	NFWA 1
ISO Field Representative	ISO REP

Table 5: Interview Codes

Knowledge of PPC and ISO

The interviewer asked questions to best understand where exactly the key informants stand regarding their baseline knowledge of PPC reports and the ISO. The goal was to understand their depth of knowledge with the rating system and to provide a primer for more in-depth discussion with the key informants who were capable of providing insight into the subject in regard to the City of Niagara Falls. Relevance to this effort included discovering the general knowledge on the subjects of PPC and ISO; whether or not the actual PPC report for the City of Niagara Falls had been read by the informants; whether or not the informants knew who the main contact is between their organization and the ISO; any insight into whether or not the ISO rating is part of their organization's strategic plan; whether or not the informant was

briefed concerning the ISO rating at the beginning of their employment/appointment and if they believed such briefing would be useful; if the informants believe periodic updates regarding the ISO rating would be useful and if so by whom and through which communication medium. The level of knowledge across all of the informants interviewed varied greatly, with informants from the NFFD garnering more insight into the subject of ISO ratings. Several informants indicated in conversations before the audio recordings that they were compelled to lightly research the topic through an internet search after being contacted by the researcher. Most members of the NFFD interviewed were at least aware of the existence of the ISO rating, with the senior dispatcher and senior radio technician being those with zero knowledge. With the exception of two informants from the NFWB, none of the other NFWB respondents had any idea what the ISO rating was. The one NFWA member interviewed had no knowledge about ISO, and neither did the other sitting NFWA member, as indicated in a phone conversation, who ultimately did not participate in an interview. The following are selected responses provided by informants from the NFFD related to question #1 of Interview Instrument B:

1) What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFFD 1: Uhhh, none? [laughs]

NFFD 2: What belongs on the rig, all the maintenance procedures, and pump testing, ladder testing. What's required on all the rigs. We keep track of all the service test records.

NFFD 3: Well, I'm aware that it exists, and our insurance rates are affected by that rating.

NFFD 4: I have a little bit of knowledge.

NFFD 5: I know we've been getting a three for the past quite a few years, we used to be a two when I started on the fire department and we dropped down to a three and

I always wondered why. But now that I met with that Tom Yager when he was here doing the ISO study, and then we went over it afterwards of what his grading system was and where we got our point and not. You could see where we were downgraded because of problems with the water board and deficiencies of our own, of our own making I should say.

COM 1: Never heard of it, I have zero knowledge.

The answers to this question by the informants from the NFFD reveal that the level of knowledge regarding the PPC grade varies quite a bit. Much of the discrepancy between the levels of knowledge can be attributed to the fact that those with the most knowledge was in their current positions during the last PPC report and were part of the process. For example, the fire chief was only recently appointed this year and has yet to be a part of the rating process with ISO. The same can be said about the senior dispatcher, she was not yet, as the previous and recently retired senior dispatcher was, a part of the process. Although the senior radio technician was in his position when the last PPC report was conducted, he was not included in the process even though he has the technical expertise to assist with the reporting process. The following are selected responses by the members of the NFWB and NFWA to the same question:

NFWB 1: Well, my understanding is that it's a numerical rating that's based upon a number of factors, firefighting factors, within the scope of the firefighting area, where in this particular case is the City of Niagara Falls. Which would be piping, flushing, flowing of hydrants, equipment, distance from fire locations, firehouses, and obviously training, and I would think the type of apparatus that would be utilized in pumping capacities.

NFWB 2: Probably zero.

NFWB 3A: I'm not fully familiar with much of that myself. As I said, I'm reasonably new to the role. So, I probably would defer to council for any information regarding that.

NFWB 3B: I understand it's a rating, it's an independent company that gets paid for the rating. So, what they would do is they would come into the city and they would rate the city and then sell that information to either the city or the fire department. Now, it's my understanding that the ISO is older, and they're going to a new method.

NFWB 4: Not really sure what all that is.

NFWB 5: Minimal.

NFWB 6: It's very limited. I would say very limited. Basically, I know it's a rating and accreditation to, I think it is something to justify fire service or something to that effect.

NFWA 1: I have no knowledge of it.

The answers to this question by informants from the NFWB and NFWA also display great disparity in their levels of knowledge regarding the PPC. At least one of the commissioners was fairly knowledgeable regarding the ISO and PPC which could be due to the fact that his father was one of the longest serving NFFD fire chiefs, or because some of the preliminary work of the researcher included conversations with this commissioner regarding the purpose of this study, and may have prompted the commissioner's further research into the subject. But overall, a general lack of knowledge regarding the PPC is apparent across the board.

Have They Read PPC Report

Whether or not informants read the PPC report is important information because the PPC grade cannot be increased unless the people responsible for the portions of the PPC being graded understand what gets reported by ISO and what deficiencies exist in the most recent report. Even if respondents thoroughly understand what the PPC is, if they haven't read the actual PPC report for the City of Niagara Falls, they will not be able to make the changes necessary to gain points toward increasing the grade. The following selections are from NFFD participant answers to question #2 of Interview Instrument B:

2) Have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFFD 1: No.

NFFD 2: I've read through my section that pertains to the rigs and stuff like that.

NFFD 3: No.

NFFD 4: I've briefly skimmed over it.

NFFD 5: Yes, I did, probably when it came back to us, I want to say it was like twenty-sixteen I think he did it? | I only read the report when we got it back, I don't know, had to be two-thousand sixteen sometime.

COM 1: No, I have not.

The answers to this question by NFFD informants show there is very little involvement toward building a thorough understanding of the PPC report by the various respondents. The last two reports occurred in 2016 and 2010, so this could again be a matter of informants having not been a part of the reporting process before, having not yet been in their current roles. The other component could also be that not much thought has been given to the PPC report outside of when the ISO field representative contacts them to collect data for his report. It seems that if somehow some level of initiative can be provoked by leadership, that there could be more of an effort toward analyzing the PPC report to work toward improving the grade. The following are selected responses by the members of the NFWB and NFWA to the same question:

NFWB 1: I have not.

NFWB 2: No.

NFWB 3B: Where would it be, like, where would you get that information?

NFWB 4: No.

NFWB 5: No.

NFWB 6: I have not.

NFWA 1: No, I have not.

Every participant from the NFWB and NFWA indicated that they had never read or seen the PPC report for the City of Niagara Falls. This is not surprising given that the most recent PPC report showed a large deficiency in the realm of water supply. One NFWB employee during the focus group answered the question for the entire group by asking the interviewer where that information can be accessed, demonstrating the lack of knowledge about the ISO, PPC, and FSRS. So, it seems most likely on the NFWB and NFWA side that the PPC report has never been shared by the fire department, let alone reviewed by the NFWB for specifics.

Contact with ISO

To both learn who the actual main contact has been with the ISO during the reporting process for the PPC, the question was asked directly about who the contact is between the informant's organization and the ISO. This question also aimed to gain insight into how well the informants understood the reporting process, who they believed to be their go-to person for such information sharing, and to reveal their perception of the chain of such information sharing to the extent that their knowledge of the PPC process would allow.

The following selections are from NFFD participant answers to question #3 of Interview Instrument B:

3) Who has been the main contact at your organization for the Insurance Services Office?

NFFD 1: I don't know.

NFFD 2: Usually the fire chief, whoever's the fire chief.

NFFD 3: It would probably be fire prevention, either the fire chief or fire prevention.

Being new, I haven't had contact with them.

NFFD 4: It, it's usually the fire chief... | They kind of go through us, and then they touch on training a little bit. And then, in general, the fire prevention office is the community liaison for the fire department. In general, so. It would definitely be my department.

NFFD 5: His contact I think was with Fire Chief Colangelo at the time.

COM 1: No, I do not.

The data from this question is interesting, because it reveals a lack of clarity amongst the leaders in the NFFD regarding who the contact is with the ISO. NFFD 5, who was part of the PPC reporting process before cites the previous fire chief as the main contact, however he does not state so confidently. NFFD 2, who was part of the PPC reporting process before also says the fire chief is the contact, but states so with confidence. NFFD 3 cites fire prevention as the main contact, and NFFD 4 cites that although the fire chief is the main contact, later on he states that ISO goes through the fire prevention office to collect most data for reporting. NFFD 1 and COM 1 have no knowledge of who the main contact with the ISO is. This reveals a lack of clarity concerning who the main contact is orchestrating and gathering information during the PPC process, which could simply be the result historically of either the delegation by the fire chief to fire prevention, or functional ambiguity with regard to hegemony during the PPC process.

The following are selected responses by the members of the NFWB and NFWA to the same question:

NFWB 1: Ah, unknown.

- NFWB 2: Well, the insurance services would probably be either our financial director, Kendra Walker, our safety officer which is Gina and for a moment I'm forgetting her last name, and the executive director who's, like, brand new to the position, he's been with the water board for twenty-seven years, but he's new as executive director. So, I'm sure that there's a group of people who should be aware of it.
- NFWB 3A: I'm not sure.
- NFWB 4: It would be our human resources, it would be Jim Perry.
- NFWB 5: No.
- NFWB 6: If anyone has would be the main contact I would think it would be our corporate counsel, Sean Castello. | I would think it would be him, then also our executive director.
- NFWA 1: We've had no knowledge of the Insurance Services. It was explained to us that when we were appointed to the water authority, one that it was kind of a defunct group and the reason that they, that they needed to appoint people to the water authority was only for bonding purposes, adding debt to where they currently were. So, I'm not actually on the water board, I'm on the water authority, we have limited responsibilities compared to the water board and we're not privileged to everything that they are from my understanding, from their attorneys.

On the NFWB/NFWA side, the answers to this question showed that four participants, NFWB 1, NFWB 3A, NFWB 5, and NFWA 1, did not know who the contact is. NFWB 2 suggested three possibilities: the financial director, the safety officer, and the executive director. NFWB 4 cited the director of human resources as the main contact with ISO. NFWB 6 suggested yet another person, the corporate counsel, as the main contact with ISO. Similar to what was found in the data on the NFFD side, a lack of clarity exists with who the main contact is to orchestrate the gathering of information during the PPC process. This could also likewise indicate functional ambiguity with regard to hegemony during the PPC process.

ISO in Strategic Plan

To understand how important the PPC process is to the strategic planning of the NFFD and NFWB, respondents were asked if the ISO rating had any role in the strategic planning process of their respective organization. This question aimed to extract from the perspective of respondents whether or not the PPC process is included in the official ongoing initiatives of their organization, or exists more as an aside that is only addressed when the ISO contacts the organizations to collect information for the PPC report. The following selections are from NFFD participant answers to question #4 of Interview Instrument B:

4) Has the ISO rating been a part of the strategic planning process of your organization/unit, or more of an aside?

NFFD 1: I don't know.

NFFD 2: More or less, we keep the equipment at least up to what the minimum recommendations are. We usually have more stuff on than they call for.

NFFD 3: Yes, it has. | I believe it's something that comes up when the ISO contacts us. That's when we're made more aware of the rating and the system, rather than every day operations.

NFFD 4: It's more of an aside. We try to satisfy it, but you can't... The things that limit us are things usually out of our control.

NFFD 5: I mean, it possibly could be, I don't know. I don't want to speak for the chief, because, you know, I think its along his lines more so than mine.

COM 1: No. I don't know what you're talking about. [laughs]

Three of the responses, NFFD 1, NFFD 5, and COM 1, indicated no knowledge of any integration of the PPC process into an official strategic plan for the department. NFFD 2 said that, more or less it is, but only at the level of maintaining at least the minimum recommendations for equipment. NFFD 4 characterized the process as more of an aside that

they attempt to satisfy, but some components are not within the department's control. NFFD 3 at first said yes, but then clarified later in the interview that it mostly is of concern to the leadership when the ISO contacts them during the PPC reporting process as opposed to being part of daily operations. This data culminates to signal there is no formal strategy for the NFFD that ties in the components of the PPC. The following are selected responses by the members of the NFWB and NFWA to the same question:

NFWB 1: Well, I would say yes.

NFWB 2: No, not as far as I know.

NFWB 3D: Maybe not in a written plan, but it was part of the thought on one of the many benefits of getting all these hydrants working.

NFWB 4: Yea, at meetings, and we've been trying to do, you know, upgrades to, you know, make our, you know, ISO rating higher, you know, and our safety requirements higher and stuff like that.

NFWB 5: ...it's been brought up but it hasn't been part of the actual process... | Has it been specifically done within terms of the ISO rating, or is it done, been more in a sense that we just want to be sure that we, if somebody has a fire in their house we're gonna be able to put it out? I think it's been more emphasized on that end of the story when we discussed it.

NFWB 6: Not to my knowledge. I don't remember it ever coming up in a meeting. But, not to my knowledge.

NFWA 1: Not to my knowledge, but I also haven't attended many water board meetings. | Right, no. So, we have water authority meetings that are separate from the water board. Obviously, the public or water board members are allowed to attend those. But there's been extremely little interaction between us and the water board.

NFWB 2 and NFWB 6 indicated they did not believe that the ISO rating has been a part of a strategic plan for the organization, and NFWA 1 acknowledged that, being part of a separate entity, he did not know. NFWB 4 said yes, but the response made it seem more like

there had been conversations at meetings, but no formal integration of efforts through a strategic plan. NFWB 5 and NFWB 3D similarly indicated their perception to be that there has been a concerted effort toward improving hydrants and such, but that they did not explicitly aim to increase the ISO rating, nor are they part of any formal strategic plan. The impression of the researcher is that it seems most likely that the perceptions of NFWB 5 and NFWB 3D are most accurate.

Knowledge of Collaborative Relationship Between NFFD and NFWB

Perceptions on Collaborative Relationship Between NFFD and NFWB

Understanding what the key informants identify as the collaborative relationship between the NFFD and NFWB could help to uncover their perception of collaboration and the relationship between the two organizations. This is important to understand given that the relationship between the NFFD and NFWB is essential toward emergency management operations, specifically regarding the fire suppression capabilities of the City of Niagara Falls, which is reflected in the PPC reports. The following selections are from NFFD participant answers to question #5 of Interview Instrument B:

5) What is the collaborative relationship between your organization/unit and the fire department/water board?

NFFD 1: We're good, I mean, we work side-by-side.

NFFD 2: They're pretty good with us lately. | It's within the last two years, they've done a lot. | Yes, since the new management has taken over it's really improved, much better. | And they're pretty good to work with right now.

NFFD 3: Over the past few years, that relationship has gotten to be very strong. | ...it's gotten to be a very good and beneficial relationship. | We never called the water board. We never had the relationship with them. We've had so many hydrants

that were out of service for many years within the past three to four years, the only hydrant that's, we only have one hydrant that's not in service in the city right now. And that's actually on private property. | ...this is actually the first time in twenty years I've ever seen that. | you had two managing entities that didn't work well together. The water board went and did their own thing without much regard for the city and the city function. It's taken, how long has it been, over ten years that they've been separated and it's just recently that we've been working together. And now I see the water board's involvement in city affairs as well as the fire department.

NFFD 4: We have a good working relationship. They provide us the ammunition, we are the gun. So, without any ammunition, we can't fire our gun, so... They've been wonderful, at least in my stint as a fire prevention chief the last four years. We work closely with them to improve all the hydrants and all the underground infrastructure providing water to the citizens and to our fire department/fire service. | It's been very good. In my career as the fire prevention chief, it's only been good. | The first two years, it was kind of, not as good as the last two years. The last two years, man, they've been fantastic. | We are their customer and they treat us that way. They treat us like they want to keep us. | But, once again, I wanna reiterate, they've been fantastic the last three years.

NFFD 5: Now, it is, well, I almost want to say it's a hundred and eighty degrees better. Because in years past, we had just talked before we turned on the recording about the issues we've had with the waterboard fixing hydrants in a timely fashion, which did not happen. | it's a world of difference now, world of difference. | But this new board is fantastic, fantastic.

COM 1: Do I have any knowledge of their... no I do not. | During my job? Occasionally, yes. I've had to call them.

The takeaways from the data presented by the respondents pointed toward the participants from the NFFD having a high level of satisfaction with the collaborative relationship with the NFWB, particularly in comparison to what it was just a couple of years ago. NFFD 2, NFFD 3, NFFD 4, and NFFD 5 all indicated that the collaborative relationship between the two entities has improved drastically over the past two years. NFFD 1 shared that the relationship is good and the two organizations work side-by-side. Being the senior dispatcher, NFFD 1 most frequently communicates with NFWB employees as dispatch often contacts them regarding

broken water infrastructure, such as hydrants, and calls them to respond to fires as has been done recently. COM 1 conveyed no knowledge of the relationship between the NFFD and NFWB, but also remarked that he has had to occasionally communicate them via telephone. The following are selected responses by the members of the NFWB and NFWA to the same question:

- NFWB 1: I think there's many people who will agree that we understand the importance of public safety.
- NFWB 2: Well, I know that they work together to make sure, you know, this year we had an emphasis on getting all of the broken fire hydrants replaced, having all of them painted and color coded as to their capabilities and capacities. We have it all on computer so that the fire department can, in the case of a fire, see what kind of, what size line is attached to the fire hydrant. They can tell by the color coding, if the fire hydrant that is closest to the fire is operational, and if it has eight-inch pipe or a ten-inch pipe and what the pressure is. And I know they do communicate quite often about that, and they would let us know when there's fire hydrants that have been damaged or broken due to an accident or something. And, we would probably do the same if, you know, when that came it would probably be noted on the computer program that identifies all of the fire hydrants.
- NFWB 3B: So, instead of the water board sitting idle, we want to show our commitment to helping the fire department, so we reached out to them and told them we're gonna give you a loaner tablet. This way they're not waiting for whatever's holding up the tablets. We're giving them the information, we're giving them the tablet, we keep them informed on any of the changes.
- NFWB 3C: Very good.
- NFWB 4: Yea, I mean, we, we're trying to do some co-ventures, and with the hydrants, and the GPS of the hydrants. The flow, the pressures and everything, and to try to get them on a data so we can have them all on the computer so that between the Niagara Falls Water Board and the fire department. You know, when the fire department's out on a call on their way to the hydrant, or an event, or the fire, they would know what hydrants are in the area, what the locations are, what the flow is, the

pressure, and we've even color coded the hydrants caps so they'd be identifiable to the GPM.

NFWB 5: I'd say that... I think that we've improved it, considerably.

NFWB 6: Definitely we work together when there are fires that take place because the fire department depends upon the water board to make sure that, you know, the pressure, you know, flow is there and everything in case there is a major fire. And, like I said before, we've worked very hard to fix a lot of the broken fire hydrants. So there has been more collaboration and communication than ever before. And I think every fire hydrant, just about, is working properly now. I mean, there might be one or two in which there was a car accident or something like that. But, I think people, you know, two departments work collaboratively. The fire department will let us know, we try to get a crew out there to make repairs as necessary.

NFWA 1: No, I think that'd be more on the water board level. | ...to my knowledge we've had zero interaction with the fire department.

The insight gained through these responses by NFWB and NFWA participants revealed a commitment to working collaboratively with the NFFD. NFWB 1 pointed out that many people would agree that public safety is viewed as important by members of the NFWB. NFWB 2, NFWB 4, and NFWB 6 explain the projects that the NFWB has been involved with in repairing, replacing, and coding the fire hydrants throughout the city. NFWB 4 used the word 'co-ventures' to describe what is occurring between the organizations. NFWB 3B described a specific collaboration between the organizations where the water board approached the fire department to loan them a tablet that contains computer software mapping out the water infrastructure to be used for emergency operations. NFWB 3C characterized the collaborative relationship between the two organizations as very good. In the responses by NFWB 5 and NFWB 6, the improvement to the collaborative relationship over recent history once again emerges. NFWA 1 offers that the water authority and the fire department have had zero

interactions. Overall, with the exception of NFWA 1, every single respondent identified the relationship between the NFFD and NFWB in a positive light.

Types of Collaboration Between NFFD and NFWB

Through the identification of the types of collaboration distinguished by the key informants of the NFFD and NFWB, a better understanding can come into view of what activities are currently being performed in collaboration, as well as potential activities that could be performed with greater collaborative effort. The following are selected responses by the members of the NFFD, NFWB and NFWA regarding types of collaboration occurring between the NFFD and NFWB.

- NFFD 1: If there's hydrant damage, or if we need them to come shut off the water at the street, we call them and they come out.
- NFFD 2: They give us flow recommendations and main sizes. Hydrant locations. They've actually tested the flow out of each, out of the hydrants now, so we know what we're getting out of each hydrant. Whether it's a good one to hit, or go down to a better one. | They've put in a lot more newer hydrants, as you know.
- NFFD 3: We work together not only on hydrants and waters, but also on the daily events that affect both of us. Whether it's a road closure, repairs that they're making... | They help in identifying hydrants that are flowing better than others, where their mains, how big their mains are. Just a case in point yesterday, we called them after we had a couple bad hydrants and they came down and showed us where the good hydrant was and we stretched a line and finally got water on the fire. Good water.
- NFFD 5: I know that the water board and our fire prevention work very well together. In fact, water board member Mike Eagler, he's in charge of fixing all the outside hydrants and water lines and valves, and all that, he was just in the office today. And we were talking about what could be done a little bit better from the fire that we had yesterday, in which we were in a low flow water area.
- COM 1: They're daily needed to be contacted. There's communication between us, but work between us? No, it's just communication.

NFWB 1: And today what we have, it's similar to a shared service. We do a repair on a fire hydrant, we notify central alarm that that hydrant is back in service. We maintain a daily list that's shared with fire. They have, I think, monthly meetings with the chief or his designee to talk about issues regarding fire service and what we can do to make things a little easier for fire. We've also incorporated and identified fire loops and private fire hydrants within the city, because private fire hydrants, believe it or not, don't fall within the jurisdiction of the water board, they're privately owned. So, for the first time in I think the history of the city and the water board, now we have identified the number of private hydrants and the maintenance of the private fire hydrants and the fire loops within the city and also identified the number of fire loops. | And we have a very active program for maintenance and repairs and the flushing of hydrants. We have a dedicated hydrant truck, we never had before. We paint our hydrants; our hydrants hadn't been painted in years. Now we even paint them, to maintain them. We put markers on hydrants now for the winter so fire can identify them if there's a problem with them even being buried in the snow in high snow accumulated areas or intersections where it's gonna be high. So, no, I think efforts on both sides of the aisle are very good.

NFWB 3B: Any big fires, usually Bill or myself show up to the fire to assist in any way, if there's a hydrant issue. With Michigan Avenue, we showed up, directed it to a higher flow hydrant, which helped the situation. So, we show up to wherever they need us. | In the winter, frozen hydrants, we have a hydrant truck now. This is something Bill and I started, we never really had a hydrant maintenance truck for the last ten years. Before they did, but, for the last two years we've had a hydrant maintenance truck that their sole job is to go out and service the hydrants. If they're frozen, thaw them, then we put them on a list and at some point, remove those frozen hydrants. We don't keep going back. We're in a more proactive approach to the hydrants as to not just treating the symptom. You know, we're just gonna get rid of the hydrant, and then next year we don't have to go back because it's not gonna freeze up no more. So, there's, from what I can see, and from what I can tell you is, just been a much more focused effort on the hydrants because we have the resources now and we have the commitment from the board and the administration.

NFWB 3C: You know, we get down any issues with hydrants they have, or any low flow areas that they're not aware of. So, we have, right now we have a very good working relationship with them. | A GIS system. And at this time, the fire department does not have a tablet to view this system. So, at the end of this meeting, or tomorrow, we are dropping off a loaner

tablet to the fire department that the battalion chief will have on hand and each shift it will be passed over, and on the way to that fire the battalion chief will be able to pick up that section of the city on the tablet, know what size main is there, what size, and you know, where to grab hydrants. | So, what we've also done with the meetings with Bill and the two fire chiefs, color coding the hydrants is also big to them. | So, it's easy to keep the fire department happy, just give them water.

NFWB 3E: Yea, our GIS system.

A common subject brought up throughout the interviews, and obviously anticipated one, is collaboration between the NFFD and NFWB regarding improvements to fire hydrants. The hydrants and all underlying and connected water infrastructure are owned by the water board, so improvements simply cannot be performed without a collaborative effort with the fire department for which the hydrants exist to serve during emergency management operations. NFFD 1 identifies possibly one of the most frequent collaborations between the two organizations, and that involves the identification of damaged or compromised hydrants by NFFD personnel who report the issues via radio or telephone through dispatch who passes the information along to the NFWB. NFFD 2 discusses that the collaborative activity is specific to flow requirements, hydrant locations, main sizes, and hydrant replacement, which all helps firefighters to make decisions on which hydrants to use during structure fires. NFFD 3 shared that the organizations work together on water and hydrants, but also on events affecting both such as road closures and other repairs. Also, NFFD 3 shared that just the day before the interview, the NFFD called the NFWB after a couple of bad hydrants were revealed during the course of a structure fire and they sent an employee to the location to help identify the best hydrant in the area that ultimately led to water being put on the fire. NFFD 5 also mentioned the same fire as NFFD 3 and how the employee in charge of fixing hydrants, water lines and

valves was just in the office the day of the interview to discuss the hydrant issues experienced at that particular fire and to discuss ways to better access water in such low flow areas. COM 1 shared that on his end, communication is occurring through phone circuits, and that communication is occurring on a daily basis through dispatch. COM 1 also added that while there is communication between dispatch and the NFWB, there is not any work being performed beyond communication. NFWB 1 identified the relationship recently as almost a shared service. Both NFWB 1 and NFWB 3B discussed hydrant maintenance and communication regarding the status of hydrants, shared hydrant repair lists, meetings with fire leadership to discuss issues, the identification of private hydrants and fire loops outside of the public system, the new hydrant maintenance truck, dealing with frozen hydrants and placing markers on hydrants that can be more easily detected by firefighters in deep snow. NFWB 3C and NFWB 3E both mentioned the loaning of a tablet and software to the NFFD that will help with better identifying good hydrants during emergency operations. NFWB 3C said, "So, it's easy to keep the fire department happy, just give them water."

It seems the bulk of the collaboration is occurring in that the identification of an issue with water supply is often encountered by and communicated by the NFFD, then the NFWB initiates an intervention or repair, and communication regarding the issue before, during, and after is occurring between the organizations to best address the issue moving forward.

Collaborative Frequency

The researcher wanted to pin down some range of frequency of collaborative activity in order to better understand just how often the two organizations interact. The following are

selected responses by the members of the NFFD, NFWB and NFWA to question #6 of Interview

Instrument B:

6) How frequent is communication/collaborative activity occurring between your organization/unit and the fire department/water board?

NFFD 1: It depends, I mean, it could be a few times a week.

NFFD 2: Not so much me, but I know that the fire prevention contacts them. In fact, they're in direct contact with them all the time. If we have a problem at the fire scene they usually show up immediately.

NFFD 3: I wouldn't say on a daily basis. But, definitely at least three to four times a month that we do have meetings with them. Or some kind of contact, whether it's a road that's flooding and we reach out to each other for assistance.

NFFD 4: We usually, I touch base, depending on what's going on, at least every month. I'll touch base with either Bill Wright, or Mike Eagler. Just to go over what they need... what we need from them and what they need from us.

NFWB 1: It's almost daily. Fire gets a two-alarm fire or a big working fire, they'll call the water board, we send personnel out to the fire scene to assist with locating hydrants with the best pressure. So, it's daily in some cases.

NFWB 2: So, I honestly don't know how often they would meet with them, but it seems that they had regular communication.

NFWB 3B: And then I talk to them, being in the field, I talk to Winker, mostly Mike Winker, could be up to two times, three times a week.

NFWB 3C: We try and have monthly meetings, at least monthly meetings. Sometimes it's hectic and it's every other month, but we get together as much as we can with the chief... | Like I said, I get ahold of Chief Winker once a month.

NFWB 4: I would say monthly.

NFWB 5: I'm not sure how often it is, now, I know that during the hydrant, I'm sure that there was collaboration. Again, most of the stuff comes to the

majority of the board through reports during meetings. And most of what we've heard about is the hydrants being fixed.

NFFD 1 identified the frequency of collaboration to be a few times per week. NFFD 2 said that the collaboration is "all the time," and during incidences. NFFD 3 said that collaboration is not occurring daily, but more along the lines of three to four times per month and when issues arise. NFFD 4 identified the frequency to be at least once per month. NFWB 1 said that collaboration is occurring almost daily, and then later clarified later that it is daily contact in some cases. NFWB 2 did not have knowledge of the frequency beyond acknowledging that he perceives communication to be "regular." NFWB 3B stated that he communicates with the NFFD two to three times per week. NFWB 3C said that he communicates with the NFFD at least once a month. NFWB 4 identified communication to be occurring once a month. NFWB 5 was not sure of the frequency, and also explained that most of the information she is privy to is gathered during presentations at board meetings.

Forms of Communication

The form of communication being utilized for communication between the NFFD and NFWB may or may not yield some direction on whether or not changes can be made to increase effectiveness of communication during collaboration. The participants from the NFFD and NFWB were asked specifically what forms of communication they are using. The following are selected responses by the members of the NFFD, NFWB and NFWA to question #7 of Interview Instrument B:

NFFD 1: 90% by phone, there used to be... well there is a way we can upload a problem directly to the waterboard. But we were told now to just call the outside waterboard directly. | It's just that one [computer] program that we have that we can send any complaint to them.

- NFFD 2: ...they showed up... | I think they tied in with internet now, because we can just go onto their website, if we have a problem with hydrants, email a hydrant problem or something like that where we have an issue. | And if you need to contact, like I say, request them and they do show up, so... Email works pretty well, or a phone call.
- NFFD 3: ...they're gonna be supplying us with a tablet that lists the mains, the size of the mains throughout the city.
- NFFD 4: Usually over the telephone, no. Every six weeks or so we'll have a meeting. | We'll meet. They'll meet here or we'll meet there. Just to, and it's like a 45-minute meeting just to get on the same page. | So, we're trying to upgrade our, we're trying to put tablets on the rig. They have, all their stuff is computerized. They have software, they can just take the mapping program and overlay it on our maps. And so, we can get information on the main, the hydrants coming off of, the pressure behind that water, the volume coming through that water. And so, when we get up to running with our tablets, our computer guy will be working with their computer guy to get those overlays. | Face-to-face, telephone, texting, emergency phones in the middle of the night, I have his number, anytime I can call, anytime he needs it, he has my number.
- NFFD 5: They have face-to-face at the incident, they come over and do stuff, we go and help them. | Really, the fire chief and the chief of fire prevention, in my opinion, get invited to things concerning the water board a lot. In my aspect, in the training department, I don't, but I know some of the guys who work there, so I always I stop and talk with them and we keep abreast of the situations.
- NFWB 3B: There are emails between Mike Winker, Bill and myself. If they come across a hydrant, they usually try to reach by phone. If they can't contact us it's by an email. But there's multiple forms of communication between us and the fire department.
- NFWB 3C: ...face-to-face.
- NFWB 3E: Yea, our GIS system. It has, it will have all our outside water assets. So, all our piping, all our hydrants, it includes all the hydrant pressures on them. Those are the color-coding Mike's been talking about. And, yea, access with that is they have one current username and password to go with it that they can use. And I think we're working towards maybe something a little more. The tablet is part of that, so they have field access to it as well. But, I mean, that can be expanded as we see fit, essentially.

- NFWB 4: But I know the chief at the time was getting some emails from us and he'd come to our building a few times to talk to us and different people, and our outside maintenance and stuff like that so, yes.
- NFWB 5: The board, as an entity, the board is, you know, five members, we're not, the majority of us are not contacted on that, no. Again, we just get the reports, and my understanding is there probably is some communication between the outside maintenance and the fire department, and especially during the period in which they did have the fire hydrants replaced and make sure they were aware of what was going on. My understanding is they did, you know, at that point they did keep in touch with them and let them know what was where, and what was at fault, and what changes were made.
- NFWB 6: Yea, telephone, face to face, there've been meetings, the fire chief has come to the water board and the water board personnel have gone and met with the fire department, you know, in his office. So, there has been a lot of face-to-face meetings and telephone contact as well.

There are various forms that the participants indicated communication is occurring between the NFFD and NFWB. Those include: face-to-face in meetings, reports at NFWB meetings, telephone, text messaging, emergency telephones during the night, email, radio-to-telephone through dispatch, shared lists, and shared data on computer software. NFFD 1 mentioned a computer program that was started to streamline communication between the organizations, however, also said that they have been instructed to go back to phone communication at this point. NFFD 3, NFFD 4, and NFWB 3E discussed software on a tablet that utilizes GIS mapping to identify the water infrastructure. This software has been developed by the NFWB and until the NFFD gets their tablet program they are working on fully operational, the NFWB has lent them a tablet containing the software to be used by the NFFD.

Perceived Obstacles to Collaboration

If obstacles to collaboration exist, understanding what those obstacles are is the first step toward overcoming those obstacles. Even if there are not any obstacles, understanding

any past or potential obstacles would also be helpful by further strengthening efforts to keep those obstacles from getting in the way of the important collaboration that must exist between the NFFD and NFWB. Since the NFWA member interviewed did not know about the collaborative relationship between the NFFD and NFWB, he was rather asked about the collaborative relationship between the NFWB and the NFWA, which provides another perspective of a collaborative relationship with the NFWB separate than the NFFD. The following are selected responses by the members of the NFFD, NFWB and NFWA to question #8 of Interview Instrument B:

8) Do you perceive any obstacles to collaboration between your organization/unit and the fire department/water board?

NFFD 1: No.

NFFD 2: Not at this time, no, it's gotten a lot better. | Before, we had some issues, but... | a lot of hydrants weren't getting repaired or replaced. They wouldn't work, they'd be broken, and they wouldn't tell us. | I don't know if they didn't have the money to fix them, or didn't want to fix them. I don't know what the issue was, but... | There wasn't a whole lot of communication back then.

NFFD 3: At this time, no, not at all. | I think it was personalities. I think it was, it seemed as though the water board didn't take our needs into consideration as far as the hydrants went. It seemed like their focus was something else. Whether it was in-house, I don't know. But there just wasn't the communication that we have now.

NFFD 4: None that I can foresee, no. | I think it was inherent in the system of a quasi-public organization servicing something... | there's a layer away from the electorate that can sometimes make it tough or easier for them not to respond in a timely manner.

NFFD 5: Not right now, no. | Removing all politics from it would be wonderful... that whole 72nd Street debacle when they were tearing up 72nd Street and redoing it, when the contractor told them, listen, you need to lower those water mains, otherwise they're gonna freeze up, these people

aren't gonna have water. And the water board said no, and they had those millions of dollars in reserve for stuff just like that that they didn't want to spend. And they said go ahead and do it. And then the citizens were blaming the mayor who had absolutely nothing to do with it. And they were blaming the water board as well, but, you know, the water board certainly wasn't saying this is our problem, this is our doing. They never stepped up and said anything...It was very frustrating. | That still bothers me, the politics involved, you know. |...you know, it's a service, it shouldn't be political. You should be there to get the best person, the best suited person doing the job.

COM 1: Just the fact that we do not have a radio communication with them now. We used to. | ...they went and changed their radios to a different frequency and never told us about it. | Due to the fact that we work at the 911 facility here, upon emergencies we need to contact them and be in communication with them sometimes constantly during an emergency. And without radio communication that could present problems.

NFWB 1: Well, quite frankly, I think historically, you know, from a historical standpoint, I think there's been a huge disconnect between the Niagara Falls Water Board, which is a separate entity than the City of Niagara Falls. There's been a huge disconnect between the water board, the public officials and fire for quite some time. So, I think that, you know, the very few questions you've asked me, they haven't been approached because really up until a year and a half ago there has been very little dialogue between public safety and the water board. | I remember speaking to your former chief, Chief Colangelo. Matter of fact, as soon as I became a member of the Niagara Falls Water Board he was one of the first folks that I had contacted, you know, city department heads, talking about the relationship he had with the water board and he said there wasn't one. Quite frankly, he told me, quote: I've never even been invited to a meeting of the water board. He thought that, you know, the relationship was very caustic, so caustic that he had even requested from the former executive director, Paul Droff, former executive director of the Niagara Falls Water Board, he wanted a map of piping sizes throughout the city and he threw back at the chief saying that, you know, this is Homeland Security stuff and we're not gonna give it to ya. Which is absolute hogwash, and bullshit. But it showed the non-existent relationship between public safety and the water board which, in my opinion should have been a smooth marriage and it was far from that. And a lot of it had to do with, you know, the political atmosphere, but it shouldn't have endangered, in my opinion, public safety. | Two years ago, non-existent. [collaboration] And I mean completely non-existent. And, I think there's many people who will agree that we understand the

importance of public safety. And for some reason, I'm gonna be repetitive, there was a disconnect. There was a huge disconnect between fire and water in the City of Niagara Falls. And it existed for long stretches. And we are and continue to be of the opinion that hydrants out of service are unacceptable. | You know, obstacles are only in the way, they only become a problem when personalities become clashed. I don't see that at all. I think that it appears to be just a great working relationship that's only gonna get better as we improve our end, which is the water end. | Well, I think one of the things is, you know, when we talk about the political atmosphere of the water board, there was conflict between the elected officials and the executive staff of the water board. And how that's defined is very simple. The elected officials have the appointment powers to put people on the Niagara Falls Water Board, and quite frankly, what happened, there were political appointees that I don't think were really paying attention to what they should have been paying attention to. And that is the service of the water board and obviously it's connection with public safety was completely disconnected.

NFWB 2: No, no, not at all. | Pump station is in the fire hall on Military Road. | I, personally I don't see any, and I, nothing has ever been brought to the board that there's any communication problem. Like I said, I know we met collaboratively over the past couple of years to find out what they wanted and what our needs might be as far as being informed.

NFWB 3A: No, not at all. I think we've worked together and we continue to work together, you know, while, I stepped out, but I'm sure Mike said that anytime there is a fire, and we do go out whenever possible, so I don't see any problem at all with collaboration.

NFWB 3B: I believe there was limited amount of communication between the two departments, you know, I can see the point they'd go to a fire, they'd go to the hydrant, the hydrant didn't work. So, I can understand maybe from that point of view that they felt we weren't doing enough, but since we've all been in our positions, everybody sitting at the table now, we've made a concerted effort to make sure every hydrant in the city works, color code them, pressure test them.

NFWB 3D: It is a little bit different here than in your, than in, sort of, your stereotypical city where all the departments are under, you know, one authority.

NFWB 4: No. | Not since I've been here. | There's none.

NFWB 5: Outside of politics, there shouldn't be. [laughs] | Honestly, we're all in this together. Particularly, with, from my perspective, if, I would love to see the fire department come in, we can talk about any other issues that they have, and see where we can go. Of course, the only other obstacle too is, money, which is an issue across the city for everybody. | I hope it wouldn't be that way, but again, sometimes you're dealing with politics. You're definitely dealing with two different entities and, you know, again, the city has two appointments to the water board and the city is, you know, connected with the fire department. So, I don't see it necessarily as being so much of a problem, as just other than, you know, if you ever get somebody that wants to make it a problem, then you deal with it. But, personally, I don't think at this point there is. Again, I think we're all, have the same end goal, which is to make sure that hydrants are working, fire has adequate water pressure to put out a fire, and go from there.

NFWB 6: Not at all.

NFWA 1: [Relationship between NFWB and NFWA] It's been a little bit of everything depending on, it was, they were a little more apt to work with us when Mrs. Leffler was the president of the board. Since the turnover, I think some people look at political lines as a way to divide even, you know, municipal government and things like that. So, I think it, just with this, it's one of those things where they're only comfortable talking to certain stakeholders. And I think as far as the, you know, the board doesn't need our approval for anything, so they haven't come to us for anything because I don't think they feel like there's really been a need to. | I think with anything when something's appointed politically, typically, you know, you get people, stick their feet kind of stuck in the sand and they decide that, you know, you were appointed by a Democrat or you were appointed by a Republican and there's no reason for us to have interaction, depending on who has the majority. You know, I think, you know, most people that know me know that I'm not, I don't necessarily make decisions along staunch political lines.

Almost every single participant including NFFD 1, NFFD 2, NFFD 3, NFFD 4, NFFD 5, NFWB 1, NFWB 2, NFWB 3A, NFWB 3B, NFWB 4, NFWB 5, NFWB 6, indicated that they did not perceive any obstacles to collaboration to currently exist between the NFFD and NFWB. However, often in their responses they had to clarify that this is a recent development. There was a major lack of communication before, according to NFFD 2

and NFFD 3. An issue with personalities was identified by NFFD 3 and with the perception that the water board did not take NFFD needs into consideration, particularly regarding hydrants. NFFD 4 noted that issues before seemed inherent to quasi-public organizations like the NFWB having an extra level of distance away from the accountability of the public. NFFD 5, NFWB 1, and NFWB 5 cited politics as a past and potential future obstacle, but not a current one. NFWB 1 explained the history of the huge disconnect between the NFWB and NFFD as well as between the NFWB and the public officials who appoint commissioners. NFWB 1 also indicated that the previous fire chief was never invited to a NFWB meeting and was denied hydrant and infrastructure maps by a previous executive director for reasons he characterized as political in nature. COM 1 believes that radio communication between the NFFD and NFWB being eliminated is an obstacle.

Collaborative Relationship Has Improved

It was clear during the interviews that in the past couple of years there has been a major increase in the collaborative activity between the NFFD and NFWB. This came through often in the discussions and understanding that perspective might reveal what caused the increase in order to continue on the path of effective collaboration. The following are selections from the interviews that best characterized the belief that the collaborative relationship has improved recently:

NFFD 4: In my career, my career being twenty years, for the first ten we had a tough time getting hydrants fixed. Hydrants weren't getting fixed for the first fifteen, hydrants weren't getting fixed. There were a lot of hydrants out. Then maybe thirty to thirty-six months ago they started knocking down those hydrants. They had a list of, man, it must have been two-hundred hydrants that were known defective hydrants. Known non-

functional hydrants in the city. And they knocked them down maybe within eighteen months, and right now we have no known non-working hydrants in the city. | They didn't answer to the citizens of Niagara Falls anymore. They answered to Albany, and you know, there was a... It's like an authority, there's a tier away from answering to the electorate. So, you know, I wasn't for that. [laughs]

NFFD 5: In the past, they never wanted to give us information. Like, Chief Colangelo used to ask for, give me a list of bad hydrants that you know of. We need that, because... well, to give you a little bit of history, every... if it wasn't every week, it was every other week, the water board used to give the fire department a list of hydrants that they knew were broken or inoperative. They would be printed out on the teletype machine, and then it was the rookie's job that was at the firehouse when that came across the teletype to pull it out and go over in your territory what hydrants were bad, and you commit that to memory so when there's a fire you know not to hit that specific hydrant. We used to do that all the time. That hasn't happened I can't tell you in how long. | I called the water board, I told them I heard the water flowing, I don't know where it's going, but that the hydrant definitely won't shut off. I tried to, I even had engine eight come there, try and shut it off, they couldn't. So, when they were there, they dig that one up, fixed it right away, like within two days. And then the hydrant right next to my house, it was, it was broken and they repaired that immediately. I mean, I was like, holy cow, this never happened before. | it's a world of difference now, world of difference. | Now, it is, well, I almost want to say it's a hundred and eighty degrees better. Because in years past, we had just talked before we turned on the recording about the issues we've had with the waterboard fixing hydrants in a timely fashion, which did not happen. | When they separated, I don't know when we started getting more divergent, I guess you'd say. But, from my experience in here from October of fourteen until, oh, well into two thousand seventeen, if not... Yea, it was probably at right about two thousand seventeen, we got no information whatsoever from the water board. They held their cards tight to their chest, they wouldn't tell you nothing. I mean it was frustrating actually. Because our fire chief was asking, give us a list of hydrants, traditionally we had this all the time: yea, yea, yea, we're working on it, yea, yea, yea, we're working on it. That's all they ever told us, that, we're working on it. Never got anything. Now, we're getting everything we want and more. They're being more proactive in my opinion and not reactive. The old water board was not even reactive, I don't know if they didn't care, but they certainly didn't give us any information, I'll tell you that. | But I will say that the underlings that are there now that have such a good working relationship, such a good report with us now, will

continue that report even if the big shots say don't do it. I think they'll still find ways to get us information because they were frustrated they couldn't help us before, but they weren't in charge, they couldn't do anything.

NFWB 1: Yes, it's increased in a lot of levels. I remember speaking to your former chief, Chief Colangelo. Matter of fact, as soon as I became a member of the Niagara Falls Water Board he was one of the first folks that I had contacted, you know, city department heads, talking about the relationship he had with the water board and he said there wasn't one. Quite frankly, he told me, quote: I've never even been invited to a meeting of the water board. He thought that, you know, the relationship was very caustic, so caustic that he had even requested from the former executive director, Paul Droff, former executive director of the Niagara Falls Water Board, he wanted a map of piping sizes throughout the city and he threw back at the chief saying that, you know, this is Homeland Security stuff and we're not gonna give it to ya. Which is absolute hogwash, and bullshit. But it showed the non-existent relationship between public safety and the water board which, in my opinion should have been a smooth marriage and it was far from that. And a lot of it had to do with, you know, the political atmosphere, but it shouldn't have endangered, in my opinion, public safety. | And we are and continue to be of the opinion that hydrants out of service are unacceptable. They're so unacceptable that we won't allow more than five hydrants to be out of service within a twenty-four-hour period as I'm speaking. So, you know, when we look at, you know, dialogue it was non-existent. And today what we have, it's similar to a shared service. We do a repair on a fire hydrant, we notify central alarm that that hydrant is back in service. We maintain a daily list that's shared with fire. They have, I think, monthly meetings with the chief or his designee to talk about issues regarding fire service and what we can do to make things a little easier for fire. We've also incorporated and identified fire loops and private fire hydrants within the city, because private fire hydrants, believe it or not, don't fall within the jurisdiction of the water board, they're privately owned. So, for the first time in I think the history of the city and the water board, now we have identified the number of private hydrants and the maintenance of the private fire hydrants and the fire loops within the city and also identified the number of fire loops. So, comparable to what it was two years ago and what it is today, it's a complete turnaround. And it's one that we both enjoy and it should have existed long before two years ago. This should have been an ongoing thing. But we don't have to worry about that any longer because we maintain a great relationship. | Yea, part of the efforts are that we have GPS'd all the hydrants within the city, and that includes fire hydrants. That information along with our flow testing,

gallons per minute per hydrant, is now being shared with fire. So, the data we collect is being shared with fire on a daily basis. Keep in mind, even some maintenance programs that should have been incorporated were discontinued years ago. What would that be? That would be the flushing of hydrants. There hasn't been an active hydrant flushing program in a decade within the city limits. There hasn't been any flow testing of fire hydrants done that we can go back with any records. So, one of the things we're doing in the city now, we're flow testing, and testing, and color-coding fire hydrants based on their flow capacities. Don't forget, we're also changing out some very old hydrants. We're gonna get rid of, we're getting rid of a lot of the old Muellers, which tend to slam, alright, and we're putting new Kennedy hydrants in. We have a program where we're replacing close to two-hundred hydrants a year. We keep probably a hundred, maybe a hundred and twenty-five, hundred and fifty hydrants in stock now. They used to keep two in stock, so... | Keep in mind, it wasn't the fire department's problem, well, it was the fire department's problem that the water board didn't maintain fire hydrants. Because then they'd have to do what? Stretch longer distances and response times to get water on a dwelling, and we've diminished that somewhat.

NFWB 3B: Now more than ever, do you agree? | There's open communication now. | The last ten years since I've been here this is the best I've seen the relationship between the two departments. I can easily say within the past ten years this is the best we've gotten along, or worked together, however you want to word it. | I can't speak for who was here before me as to why or what happened or if there was anything. It would be wrong for me to speak for somebody else. To try to explain why there was a distance between the two. | So, we can't forget that the union, and the guys, have made a commitment of coming together instead of having two separate departments going out there and doing jobs. And that's what's really, probably put us over the top, was getting these two departments together. Whereas, we could work together. So, we can't forget the union or the men who've made it happen.

NFWB 3C: Yea. Oh, yea. The last year it's been amazing. | What I can tell you is in the past year we have made strides to get along with the fire department. And they've made strides to get along with us. | We've taken it, we've been given the opportunity by the board to create a very good relationship with the fire department, and it was very easy. Just by replacing about a hundred hydrants and getting another fifty working, all the sudden the fire department was our good friend.

NFWB 5: I'd say that... I think that we've improved it, considerably.

NFWB 6: A lot better than it used to be, when we, when the new board took over. And, the new board reached out to the fire department in order to deal with the fire hydrants, because you know, that we were behind in terms of broken fire hydrants, so, and also to monitor the water flow. So as of late, and I would say within the last year, maybe year and a half, the coordination has been fairly good with the fire department. | There used to be, when we had the... prior administration [laughs] and, because, like, this is the second one. It seems as though, like I said, the fire hydrants were broken and there was a lack of communication. But, we've worked to resolve that since the new board took over. And I think things are working a lot better than what they used to.

NFFD 4 explained that for the majority of his twenty-year career, there was difficulty getting hydrants fixed. But recently this has changed, and repairs are occurring on a massive scale and right now there are no known non-working hydrants in the city. NFFD 4 also said that when the NFWB was established that they did not answer to the citizens of Niagara Falls anymore, they answered to Albany. NFFD 5 characterized the recent change in collaboration to be 180 degrees better. NFFD 5 also pointed out that until recently, the NFWB was not reactive, did not seem to care, and withheld information. NFFD 5 defined that this was an issue with the leadership and not the employees of the NFWB, and that the employees were frustrated along with the NFFD. NFWB 1 provided much insight into the belief by current commissioners that hydrants out of service are unacceptable, that dialogue before was non-existent, and today it is more like a shared service. NFWB 3B relayed that collaboration is occurring now more than ever through open communication, but stopped short of explaining why it was bad under old leadership. NFWB 3 also gave credit to the union for bringing NFWB internal departments together. NFWB 3C, NFWB 5, and NFWB 6 further supported that things have gotten much better between the NFFD and NFWB.

Funding for Improvements

One thing that emerged frequently during the interviews involved funding as a concern toward making improvements that might contribute to an increased ISO rating. Water supply has been a major focus of this research, and the cost to improve the water infrastructure may end up becoming a factor that affects improving the ISO rating. The following are selections from the participant answers to question #10 of Interview Instrument B:

10) If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents/ratepayers, do you perceive there would be support for using funds toward such an improvement? What would be obstacles to the allocation of such funds? Solutions?

NFFD 2: Water board, or state fund, or grant. Somewhere in that area, I would guess. | Yea, it's kind of split there, so.

NFFD 3: If it's a benefit to the residents, I would advocate for that, yes. You know, let's see what the funding is, and if we have the money.

NFFD 4: I think so. I think there would be.

NFFD 5: I mean, and our city is so old, the infrastructure's so old, it's gonna be millions and millions of dollars to rebuild stuff. And it's, it's gonna happen, maybe not in my lifetime, but certainly it's gonna have to happen, because I know there's water mains out there they're saying that are roughly almost a hundred years old. That's a long time. | But everything comes down to money, dollars and cents, what can we afford, what can we get? What can we get by grant? And that's what I would love to see, is some grant money coming our way, because we've been... we've received a few grants, like we got a grant for the training tower, which will be great, and that, to me, getting the training tower is gonna help our ISO rating improve because we can do more multi-company drills in the city.

NFWB 1: I do. And I don't think it's just residential, it's commercial as well, so, yes, I do. | You know, I don't think within, you know, everyone has budgetary constraints, I think that anything that's within reason or within reach, I don't.

- NFWB 2: Well, obviously, yea, oh sure, there'd be support for it. I think we'd have to, you know, I mean, there's a lot of needs in this city. | You know, replacing lines, we're under two consent orders, one for the dark water incident that happened on, in August of seventeen, and one that was, like, twenty years ago with the LaSalle sanitary sewers. So, we've done a lot of work going on and a lot of work that needs to be done. The wastewater treatment plant has outlived its current usefulness and it's like a billion-dollar project to replace it. | So, you know, I would think within reason, if it meets our current, we have a capital plan, you know, there's only so much money and there's only so much we can bond for based on our ability to pay and pay back bonds. I would think we'd be more than willing to collaborate on grants with the city and the fire department and/or the fire department and the water board. If there was money available either federally or from the state for improvement of lines and things like that.
- NFWB 3A: I'm sure the board would like to hear about anything that might help us decrease ratepayers' rates. Any study that comes out I'm sure they'd be really interested in seeing. I can't speak for the board, but they're always open to any information they can have. So, I'm sure they'd be more than happy to see it. | I would have to see what type of funding, where it would come from, you know, from the capital funds or where before I see any... I have to see the information before I can speak on where funding may come from. | You know, if there might possibly be grant funding available, we do have grant writers that work for us. So, you know, if something like that, I'm not sure.
- NFWB 3C: I mean, we've got a pretty big plan going forward with capital improvements and hopefully all the monies get approved and we can start doing some of these things.
- NFWB 4: Oh, I would think so. I mean, there's, we're always upgrading our systems and looking for grants and, you know, do co-ventures with the City of Niagara Falls. So, I'd say yes. | But it's something that should someday be addressed, but it's an astronomical figure to do that.
- NFWB 5: Of course, the only other obstacle too is, money, which is an issue across the city for everybody. | I mean, that's, you know, they're expensive. Replacing the hydrants is expensive, and it was definitely worth the investment, I don't disagree with that. But, in terms of, if there's something major like, say, pipes. You know, not having the right pipes, that's a major expenditure. That's something that's gonna have to come along with capital improvements and investment. Which is, you know, not just for the fire department, but also the terms of having, people get

good running water to their homes. I mean, there's pipes that're due to break throughout the city, but the cost of replacing a main, for a water main, is like four hundred thousand dollars. It's staggering.

NFWB 6: I don't know if we can contribute to that. So, I would have to have corporate council check into the legality of it. But, if it's something that we can legally do I would not be opposed to it. | Yes, yes, we are in the process of trying to improve infrastructure. As a matter of fact, we're trying to get funding wherever we can. Be it from our elected officials, grant funding, foundations, whatever.

NFWA 1: We don't even have input on the year to year budget, we only have, so let's say the water board has to, for example, two years ago there was an issue where their bond was coming to an end and they wanted to be able to borrow more money, you know, to provide infrastructure upgrades and things that, you know, needed to be done to the exit sewage plant part of the process for the waterboard. So, they had to be able to borrow money, they had to come to us, we sat we listened to presentations from several different entities that we could bond and borrow money from. You know, we weighed the cost, you know, draw backs of each one. Length of loan, length of the terms, what the, obviously, the interest rates would be, the benefits, how soon, how long we were locked into it, if we could renegotiate at any certain points. You know, we looked at those things, and you know, we chose the best of what was available to us. To be able to do that. And you know, it made sense at the time, it saved us about four and a half million dollars because the interest rates changed so much it would be foolish for us not to re-bond at that point. | Yea, absolutely, as long as they're within reason. I think there's always a cost benefit, you know, you weigh a cost benefit to everything you do. Some things, you know, it's easy to say you're going to lower insurance premiums, but sometimes at what cost to the taxpayers? How comfortable are taxpayers gonna be with the rates that they pay at this point? I know the water board is a separate entity than the City of Niagara Falls at this point, but in reality, it's another service that's mandated and paid for by the taxpayers. As rates increase its more like a subsidized tax increase that normally would be passed on to them by the city if the city were running it. So, yea, I think, I mean, anytime there's the possibility to improve anything or pass on savings to taxpayers and ratepayers, I think that's absolutely something that I would highly encourage.

In the response by NFFD 2, the question about funding was more pointed toward the water board or a state grant as sources instead of the city budget, and the respondent

acknowledged that there is a split in responsibility for funding improvements to the components that contribute to the PPC grade. The possibility of finding grants was mentioned by NFFD 2, NFFD 4, NFWB 2, NFWB 3A, NFWB 4, and NFWB 6 This highlights the strong desire by both organizations to work toward securing grant funding for projects that could positively impact the PPC grade, possibly a collaborative opportunity. NFFD 3, NFFD 4, NFWB 1, NFWB 2, NFWB 3A, NFWB 3C, and NFWB 4 all indicated that it is possible for there to be support for funding projects that could increase the ISO rating. A major issue that arose in the interviews was the enormous cost to repair water infrastructure, and also the fact that there are many other projects already needing to be funded by the city and NFWB separate from anything regarding the ISO rating.

ISO Briefings

Not a single one of the respondents reported being briefed on the ISO rating in any way at the beginning of their appointment or when they assumed their current positions. They all reported either learning about it when the ISO field representative reached out to them, at some point informally in their roles, or during these interviews. But it could be useful to discover if the participants believed that being briefed would have been useful. The following are selections from the interviews that emerged from the researcher asking if they thought it would have been useful to have been briefed at the beginning of their appointment or current positions:

NFFD 1: Perhaps... I mean, I don't know what's in it that I would have used.

NFFD 2: Yea, it'd be a good idea to know, yea. If you know where you stand, if you have problems with your fleet, or something like that. You could upgrade, replace, or...

- NFFD 3: I would welcome that, sure. You know, especially being new in this job, you know, I don't know all the ins and outs of the ISO and how we get to where we have to be.
- NFFD 5: Yes. Anything we can do... | But, if we know... if we get to be better familiarized with the parameters of what the ISO is looking for we can do things to try and improve our numbers.
- COM 1: It would've helped me, but I do not know the degree of my supervisor's involvement.
- NFWB 1: Of course, it would be. You know, I know just a little bit obviously because my father was a smoke eater. So, I know a little bit about, I don't know the whole concept of it, but I know a little bit of it. I probably know a lot more than the other board members because I was part of that family. But, no, it would certainly be helpful.
- NFWB 3A: Related to this particular interview, yes. | I have the people I can rely on to give the information or get the information to me. And I don't expect that any decision I make I will have to make alone. So, I believe that I have at my fingertips the ability to get any information anyone needs.
- NFWB 4: Yes. [laughs]
- NFWB 5: Oh yea. [laughs] | I mean, again, there's no real training, it's like, you show up and you go to the meetings and you kind of learn as you go.
- NFWB 6: Oh, definitely. It would have been nice. [laughs]
- NFWA 1: I do, I do.

Close to every single participant indicated that they thought it would have been useful to be briefed in some way on the ISO and PPC grading at the beginning of their appointment or current position. NFFD 1 was the outlier, in that the participant indicated there isn't enough context or knowledge on the subject to decide on whether or not it would be useful, also conveying that perhaps it would have been useful. However, NFFD 1 does not have much knowledge on the subject being new to the role, even though the ISO field representative will be collecting information during the PPC grading process from this participant, and this

supports the indication by most other participants that a briefing at the start would indeed be useful. The other participant, NFWB 3A, joked that it would have been useful before participating in this interview, and revealed that even if he were not briefed he has a team to rely on for such information. This would probably transpire to one of his staff briefing him on the subject. So, at the root of the response by NFWB 3A, the interviewer interpreted support for being briefed at the beginning of the participant's appointment. Coincidentally, given that NFWB 3A had only been in his role for two days at the time the interview was conducted, the interview actually served to brief him on the topic of ISO and PPC in such manner.

Interview with ISO Field Representative

The Insurance Service Office employs field representatives that are assigned to locations across the nation. It is their job to observe and to report on both commercial and residential properties, to assess the fire protection capability of municipalities, and to evaluate municipal building code enforcement effectiveness. Specifically, they are the main contact for the ISO with the organizations who oversee the components evaluated in the development of PPC grading that make up the ISO rating. This involves making personal contact with fire chiefs and other officials to collect documentation for the development of such data into the PPC reports. The ISO field representative who is assigned the City of Niagara Falls is Thomas Yager, and the researcher was given permission by the chief of the NFFD to reach out to ask him to voluntarily participate in this research. Mr. Yager had to seek approval from ISO management to be audio recorded and that was taking more time than was conducive to the timeframe of this research. After three weeks, the researcher offered the option to conduct the interview in written form

via email, and quickly, such approval was granted for the written interview. The following are answers to the questions from Interview Instrument A:

- 1) How would you recommend the City of Niagara Falls begin to approach increasing its PPC grade?

ISO REP: The best way is to work directly with ISO's PPC Staff, in this case myself. I would come in, go through the previous grading and discuss the options that may be available to gain additional points.

The first action toward increasing the ISO rating is to schedule a meeting with the ISO representative. Although the researcher hoped to delve a little deeper into the technical data with this question, it is clear that the ISO representative is more apt to do so in a face to face meeting with officials from the NFFD and NFWB. To best prepare for this meeting, each person in charge of the components of the PPC should be well read on their section of the most recent PPC report for the City of Niagara Falls, as well as the FSRS.

- 2) Which areas of the PPC report would you say are the most critical to focus on?

ISO REP: This will vary on how a community is able to support resources necessary to make changes. During a meeting with myself and community stakeholders, I would help to identify areas of improvement as well as items that could be obtained on a short-term time line versus a long-term time line.

Planning for both short-term and long-term timeframes toward increasing the PPC grade is a useful service to engage with the ISO representative. Such planning could certainly inform short-term and long-term strategic planning for the NFFD and NFWB. Each stakeholder should be identified before the meeting with the ISO representative to assure that the organizations are getting the most out of the process.

- 3) Is there potential for the city to be losing points by a failure to properly document information submitted for PPC grading?

ISO REP: As with most parts of our schedule, anytime something is not documented, and verified during the survey, points may not be credited in that specific area.

It was clear in conversations with the interview participants from the NFFD and NFWB that there is a great potential to be improperly documenting and reporting activities and data that should be garnering points in the PPC grade. For example, the senior radio technician thinks that there may have been some missed points in that area due to a lack of technical knowledge by those who were tasked with reporting backup circuits. Another example is that the NFFD chief of training indicated that multi-company drills are being conducted by battalion chiefs, but are not being properly documented and reported to the ISO. These perspectives may or may not be true, and the best way to most effectively document data is to include those most knowledgeable in each area, especially those who are capable of making changes to meet the specific requirements that will garner more points in the PPC.

- 4) Credit for inspection and flow testing of hydrants showed the largest deficiency in the PPC report, how would you recommend approaching this area for improvement?

ISO REP: During the survey no records were available documenting any type program for the inspection and flow testing of hydrants. If a program is in place, documentation would need to be provided. If no program is in place, then a program would need to be developed and documented.

The ISO field representative further confirms what is in the PPC report, that there is no documentation at all available toward credits for inspection and flow testing of hydrants. One of the highlights of the interview that was consistent throughout the participants was that there have been major initiatives to inspect and flow test hydrants. So, it seems there is a new program in place since the last PPC report, and this must be documented and reported appropriately.

- 5) Credit for dispatch circuits showed the second largest deficiency in the PPC report, how would you recommend approaching this area for improvement?

ISO REP: The main issue here was the lack of monitoring for integrity. There were no systems in place to monitor normal power, emergency power or transmitter signal as described by standards.

The ISO field representative pointed to the main issue with points lost in the communications section. No system was reported for the dispatch circuits that monitor for integrity, for normal power, emergency power, or transmitter signal. Relying on a collaboration between the senior dispatcher and the senior radio technician will best address this deficit.

- 6) Credit for training showed the largest deficiency in the PPC report, how would you recommend approaching this area for improvement?

ISO REP: 35% of training points comes from training at a recognized facility. At the time of the survey, there were no hours of training conducted at a facility. There are 3.15 points available for facility training of which 0 were obtained. In almost all other areas of training, the city of Niagara Falls received credit.

The major issue in this portion of the PPC identified by the ISO field representative is that there is no training being documented at a recognized facility. The old training tower for the NFFD was condemned and demolished, and since, there has not been a major effort by the training department to provide training at another location. With a huge boost from grants, the NFFD currently has a brand-new training tower in the pipeline that will greatly contribute toward increasing the points for this portion of the training section of the PPC, which accounts for 35% of the points in that section according to the ISO field representative.

- 7) How often have you found that municipal water infrastructure is controlled by an external entity?

ISO REP: It is not uncommon to come across water authorities who control large areas, sometimes multiple counties for water supply.

The ISO field representative confirms that the City of Niagara Falls is not unique in that its water supply is under the control of a water authority. This supports that research into the collaborative relationship between fire departments and external entities that control water supply could be found useful to an audience greater than stakeholders in the Niagara Falls community.

- 8) Do you have any suggestions for increasing collaboration between the fire department and water board?

ISO REP: I can only speak to the terms of items within the FSRS and the PPC. That being said, one of the best ways to help with this would be for myself to meet with the water board to give them an understanding of what we are looking for. In my experience, this helps to open the lines of communication and give a better understanding to all involved.

This turned out to be a more interesting response than the researcher anticipated. Although the ISO field representative contained his suggestion regarding greater collaboration between fire departments and water boards within the scope of the FSRS and PPC, the researcher interpreted this more broadly. The actual act of the NFFD and NFWB meeting with the ISO field representative in and of itself builds toward increasing collaboration on a scale that could be extended beyond the scope of the FSRS and PPC, translating into a more long-term collaboration that grows from any initiatives commenced during the meeting with the ISO field representative. The PPC grading process provides a common ground and shared focus for the NFFD and NFWB that may serve as a powerful benchmark toward stronger collaboration moving forward.

- 9) How difficult do you anticipate it will be to increase the ISO rating from its current 3 to a 2? How about from a 3 to a 1?

ISO REP: The question can really only be answered after sitting down with community stakeholders to understand what resources they will be able

to provide to gain additional points within our schedule. For example, I could make a statement that says if you did 'x' then you will move to a new classification. However, if funding isn't available for that or other items have changed, then it may not be possible.

The ISO field representative specifically cites funding challenges as an obstacle to increasing the PPC. Although he is reluctant to engage in more detailed suggestions in the context of this question, it seems to align with many of his other answers that propose the most effective way to review details in during face to face communication between stakeholders and the ISO field representative.

10) If the city constructed a fire training tower, how would that contribute toward an increase from its current 3 to a 2 or 1? Are funding obstacles often problematic toward increasing PPC grades?

ISO REP: The main item here is using a training facility. You could have a great facility, but if you are not using it then no credit can be applied. That being said, the facility does not have to be owned by the city. If you have a facility that you can use, then hours spent there would be credited. For example, if you were to use the County facility, those would be credited hours.

This is useful direction, as actually owning a training tower will not directly contribute to an increase in points for training. The goal is to be engaged in training at a facility, even if that facility is owned by another entity outside of the City of Niagara Falls. The NFFD chief of training did mention an obstacle to this solution in that the department has been reluctant to send rigs outside of the borders of the city as they need to remain within their territory to assure the most effective response time for emergencies.

11) Where can the FSRS be accessed by chiefs, do you recommend they use it, and how often should it be reviewed?

ISO REP: The FSRS is a document that Chiefs can request from me by email at tyager@iso.com. The FSRS has not changed since 2012 but it is a great guide to obtaining points for a better score.

Every stakeholder involved with the areas listed in the FSRS should have access to a copy of the FSRS. It is the golden ticket to increasing the PPC grade as it contains every piece of technical data that the ISO field representative uses to evaluate the City of Niagara Falls. This document should be used as a checklist for each stakeholder that represents a component of the FSRS.

12) How often do you issue new reports for a municipality and when is the next one planned for Niagara Falls?

ISO REP: Typically, ISO likes to re-visit communities every 4-5 years. A community can request a grading at any time. When they do, it must be completed within 45 days of the request.

This confirms that the ISO is routinely evaluating communities every 4-5 years, and also confirms that officials from the City of Niagara Falls can request a grading at any time, as discussed in several interviews. This can guide initiative timeframes for projects that work to gain points in the next PPC grading.

13) Does improving the PPC grade actually reduce insurance premiums and to what degree or calculation?

ISO REP: The general rule of a better PPC score is lower insurance premiums. Here are some general guidelines to help you understand the benefits of improved PPC ratings for residents and businesses:

- PPC may affect the underwriting and pricing for a variety of personal and commercial insurance coverages, including homeowners, mobile home, fine arts floaters, and commercial property (including business interruption).
- Assuming all other factors are equal, the price of property insurance in a community with a good PPC is lower than in a community with a poor PPC.

The ISO field representative confirmed in this answer that generally, the better the PPC score, the lower the insurance premiums. However, the answer provided

stopped well short of guaranteeing that increases to the PPC grade will result directly to a reduction of homeowner insurance premiums. But an increased score could affect underwriting and pricing for personal and commercial insurance coverage, and in general, property insurance in a community with a low PPC grade will have higher property insurance than a community with a high PPC grade.

Limitations

Two major limitations exist in this study including sample size and the limitations of time. Time constraints prevented the researcher from conducting more follow-up interviews and interviews with other informants identified during the interviews that did take place. Although the sample size was sufficient, with 17 informants participating, the researcher initially hoped to conduct interviews beyond that number. As touched on in the methods chapter, the researcher encountered saturation after about ten interviews and it seemed that the data being added was redundant, providing little further insight or value to the data set. But with more time there may have been further unique insight added with the addition of more data, and at least a further strengthened support of the themes identified through participant perspectives.

Chapter 5. Key Findings

Ineffective PPC Improvement Process

The current process for evaluating fire suppression capabilities through the ISO PPC grading is not nearly as robust as it could be. The NFWB is not at all involved in the process, which is reflected in the low number of points being awarded in the PPC report for components related to water supply. On the other hand, the NFFD is only involved in the process at the point that the ISO field representative contacts the NFFD to begin the collection of data for the PPC reporting process. Not much is being done strategically to increase the PPC grade between report years, as evidenced by the fact that the last three PPC reports for the City of Niagara Falls maintained an ISO rating of 3. In Figure 6 below, the PPC grading cycle is modeled as it is being approached currently. Basically, as stated before, the NFFD is not concerned with the process until the ISO field representative reaches out. The ISO field representative works from the last PPC report created and shares highlighted areas of deficiency with the NFFD broadly. The NFFD from that point, as indicated by key informants, assigns each component of the PPC report to its relevant employee who oversees that portion of operations. That employee then gathers the appropriate documents and information to be reported back to the ISO field representative.

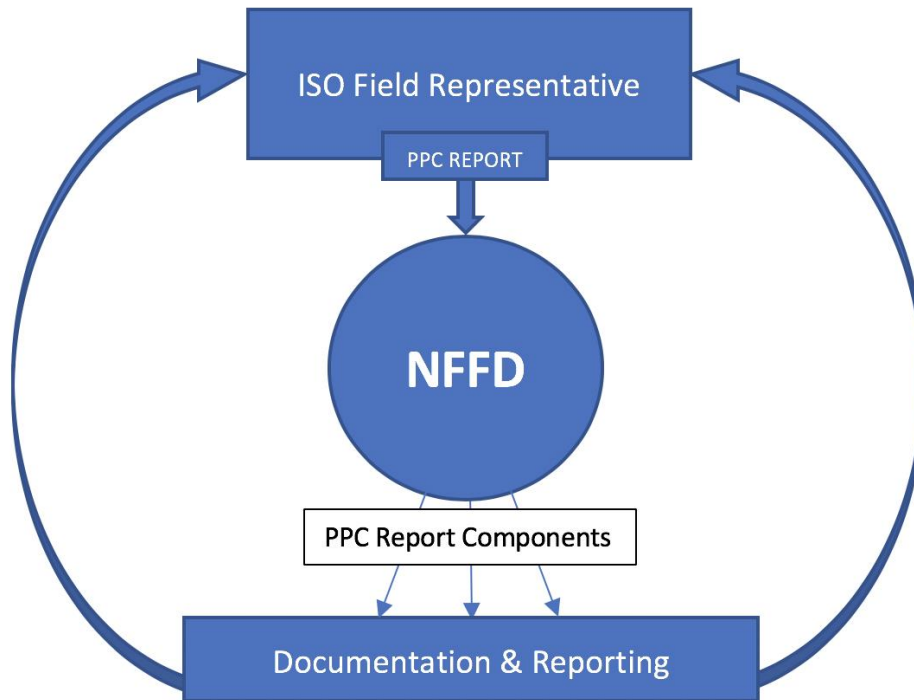


Figure 6 – NFFD’s Current PPC Grading Cycle

Lack of Organizational Knowledge of the ISO, PPC, and FSRS

The level of knowledge regarding the PPC grade with NFFD participants varies quite a bit. Much of the discrepancy between the levels of knowledge can be attributed to the fact that those with the most knowledge was in their current positions during the last PPC report and were part of the process. Participants from the NFWB and NFWA display great disparity in their levels of knowledge regarding the PPC as well. Overall, a general lack of knowledge regarding the PPC is apparent across the board throughout the organizations. According to the ISO field representative, ISO routinely evaluates communities every 4-5 years, and officials from the City of Niagara Falls can request a grading at any time. This can guide initiative timeframes for projects that work to gain points in the next PPC grading.

Have Not Read PPC Report

There is very little involvement toward building a thorough understanding of the PPC report by the various respondents. The last two reports occurred in 2016 and 2010, so this could again be a matter of informants having not been a part of the reporting process before, not yet having been in their current roles. The other component could also be that not much thought is being given to the PPC report outside of when the ISO field representative contacts them to collect data for the PPC report. It seems that if somehow some level of initiative can be provoked by leadership, there could be more of an effort toward analyzing the PPC report to work toward improving the grade. Every participant from the NFWB and NFWA indicated they had never read or heard of the PPC report for the City of Niagara Falls. This is not surprising given that the most recent PPC report showed a large deficiency in the realm of water supply. There is a lack of knowledge about the ISO, PPC, and FSRS, and how to access related documents.

Not Utilizing FSRS

Every stakeholder involved with the areas listed in the FSRS should have access to a copy of the FSRS, and currently most participants have no knowledge that it exists. It is the golden ticket to increasing the PPC grade as it contains every piece of technical data that the ISO field representative uses to evaluate the City of Niagara Falls. This document should be used as a checklist for each stakeholder that manages a component of the FSRS.

Unclear of Contact with ISO

There is a lack of clarity amongst the leaders of the organizations regarding who the contact is with the ISO. Most, especially on the water supply side, have no knowledge of who

the main contact with the ISO is. In order to orchestrate the gathering of information during the PPC process, there cannot be any ambiguity about who is the lead during the PPC process.

Mistakes with reporting to the ISO should be avoided as it was clear in conversations with the interview participants from the NFFD and NFWB that there is a great potential to improperly document and report activities and data that should be garnering points in the PPC grade.

PPC Improvements Not Part of Strategic Planning

There is little knowledge of any integration of the PPC process into an official strategic plan by leadership. It seems from the data that strategy in this regard only exists in the NFFD at the level of maintaining at least the minimum ISO recommendations for equipment. Officials attempt to satisfy the requirements when called upon by the ISO field representative, but some components are not within the fire department's control. It seems there is no formal strategic planning for the NFFD that ties in the components of the PPC and FSRS. NFWB participants similarly indicated their perception to be there has been a concerted effort toward initiative, such as improving hydrants, but that there is no aim to increase the ISO rating, nor is it any part of a formal strategic plan.

Need for ISO Briefings

Almost every participant indicated they thought it would have been useful to be briefed in some way on the ISO and PPC grading at the beginning of their appointment or current position and it seems that a briefing of some sort at the start would indeed be useful.

Need for Collaboration Across Organizational Structures

The participants from both the NFFD and NFWB currently have a high level of satisfaction with the collaborative relationship, particularly in comparison to what it was just a

couple of years ago. It seems the collaborative relationship between the two entities has improved drastically over the past two years with activity toward improving broken water infrastructure, such as hydrants, and NFWB sending personell to respond to fires. The hydrants and all underlying and connected water infrastructure are owned by the water board, so improvements simply cannot be performed without a collaborative effort with the fire department for which the hydrants exist to serve during emergency management operations. NFWB and NFWA participants revealed a commitment to working collaboratively with the NFFD. It is clear that public safety is viewed as important by NFWB and NFWA members. There is a major effort toward repairing, replacing, and coding the fire hydrants throughout the city. The water board approached the fire department to loan a tablet containing computer software that maps the water infrastructure used during emergency operations. The NFWA and the fire department on the other hand have had zero interactions, and it is not clear whether or not it would be useful as the NFWA's main function is bonding debt. Every single respondent, with the exception of the NFWA member who has no knowledge of such, identified the recent relationship between the NFFD and NFWB in a positive light.

Types of Collaboration Between NFFD and NFWB

Collaborative activity is occurring regarding flow requirements, hydrant locations, main sizes, and hydrant replacement, which all help firefighters make decisions on hydrants to use during structure fires and other emergencies. The NFFD and NFWB also collaborate during events affecting both, such as road closures for infrastructure repairs. Communication is occurring through phone circuits, and that communication is occurring on a daily basis through dispatch. The relationship recently has existed as almost a shared service in some ways.

Communication is occurring regarding the status of hydrants, shared hydrant repair lists, meetings with fire leadership to discuss issues, the identification of private hydrants and fire loops outside of the public system, the new hydrant maintenance truck, dealing with frozen hydrants and placing markers on hydrants that can be more easily detected by firefighters in deep snow. It seems the bulk of the collaboration is occurring in that the identification of an issue with water supply is often encountered by and communicated by the NFFD, then the NFWB initiates an intervention or repair, and communication regarding the issue before, during, and after is occurring between the organizations to best address the issue moving forward.

The actual act of the NFFD and NFWB meeting with the ISO field representative in and of itself builds toward increasing collaboration on a scale that could be extended beyond the scope of the FSRS and PPC, translating into a more long-term collaboration that grows from any initiatives commenced during the meeting with the ISO field representative. The PPC grading process provides a common ground and shared focus for the NFFD and NFWB that may serve as a powerful benchmark toward stronger collaboration moving forward.

Collaborative Frequency

Collaborative activity recently seems to be occurring as frequently as daily to as infrequently as once per month depending on the issues that arise.

Forms of Communication between NFFD and NFWB

There are various forms of communication that can be occurring between the NFFD and NFWB, some of which have increased recently, including face-to-face meetings, reports to commissioners at NFWB meetings, telephone calls, text messages, emergency telephone calls

during the night, email, radio-to-telephone contact through dispatch, shared lists, and shared data on computer software. A computer program was implemented recently to streamline communication between the organizations, however, dispatchers have been instructed to go back to phone communication at this point while kinks are worked out.

The ISO field representative pointed to the main issue with points lost in the communications section. No system was reported for the dispatch circuits that monitor for integrity, for normal power, emergency power, or transmitter signal. Relying on a collaboration between the senior dispatcher and the senior radio technician will best address this deficit.

Perceived Obstacles to Collaboration

Almost every single participant indicated they did not perceive current obstacles to collaboration between the NFFD and NFWB. However, it seems this is a recent development. There was a major lack of communication before, with personalities on the NFWB side that did not take NFFD needs into consideration, particularly regarding hydrants. With the NFWB being a public benefit corporation, there is added distance away from accountability to the public. Politics is a past and potential future obstacle by virtue of the public officials who appoint commissioners. For years the previous fire chief was not extended an invite to NFWB meetings and was denied infrastructure data, possibly for political reasons, or otherwise reasons unknown. Radio communication between the NFFD and NFWB was eliminated without notice when the water department became the NFWB, and this sort of activity certainly occurred on other levels without communication between the entities.

Collaborative Relationship Has Improved

Recently, hydrant repairs are occurring on a massive scale and right now there are no known non-working hydrants in the city. Issues inherent to quasi-governmental organizations include a lack of accountability, which may have been the case before. Some believe that when the NFWB was established they did not answer to the citizens of Niagara Falls anymore, they answered to Albany. The issues seem mostly to have been with the leadership and not the actual employees of the NFWB. Current commissioners however, seem to take seriously that out of service hydrants are unacceptable, that dialogue is important between the organizations, and that the two could operate in some way as a shared service. Collaboration is occurring now more than ever through open communication.

The ISO field representative confirmed what is in the PPC report, that there is no documentation at all available toward credits for inspection and flow testing of hydrants. One of the highlights of the interview that was consistent throughout the participants was that there have been major initiatives to inspect and flow test hydrants. So, it seems there is a new program in place since the last PPC report, and this must be documented and reported appropriately.

Funding Improvements

The ISO field representative specifically cites in his interview that funding challenges are an obstacle to increasing the PPC. Funding toward improvements is complicated, as the NFFD and NFWB have separate budgets and sources of revenue. Revenue from taxpayers and rate-payers ultimately derives from the same population. Federal and state grants are potential sources of funding, and some of these could be worked on collaboratively, especially since

participants indicated a desire in both organizations to work toward securing grant funding for projects that could positively impact the PPC grade. A major issue is the enormous cost to repair water infrastructure, and also the fact that there are many other projects already needing to be funded by the City of Niagara Falls and NFWB outside of anything regarding the ISO rating.

The old training tower for the NFFD was condemned and demolished, and since, there has not been a major effort by the training department to provide multi-company fire suppression training at another location. The ISO field representative explained that simply owning a training tower will not directly contribute to an increase in points for training, it is all about documenting training at a facility even it is owned by an entity outside of the City of Niagara Falls. The NFFD chief of training did mention an obstacle to such solution in that the department is reluctant to send rigs outside of the borders of the city so they can remain within their territory, assuring the most effective response time for emergencies. With a huge boost from grants, the NFFD currently has a brand-new training tower in the pipeline that will greatly contribute toward increasing the points for this portion of the training section of the PPC, which accounts for 35% of the points in that section according to the ISO field representative, as long as the facility is utilized and such training is documented and reported.

[Unclear Reduction in Homeowner Insurance Premiums](#)

The better the PPC score, the lower the insurance premiums. However, the interview with the ISO field representative stopped well short of guaranteeing that increases to the PPC grade will result directly to a reduction of homeowner insurance premiums. But an increased score could affect underwriting and pricing for personal and commercial insurance coverage,

and in general, property insurance in a community with a low PPC grade will have higher property insurance than a community with a high PPC grade.

Chapter 6. Recommendations

Enhance the PPC Improvement Process Toward Collaboration

“[C]oordination is most likely to occur when organizations go out of their way to work with others” (McEntire, 2015, p. 313).

To move toward a more robust process, a redesign of the NFFD’s current PPC grade cycle (see Figure 6) is redesigned in Figure 7 below.

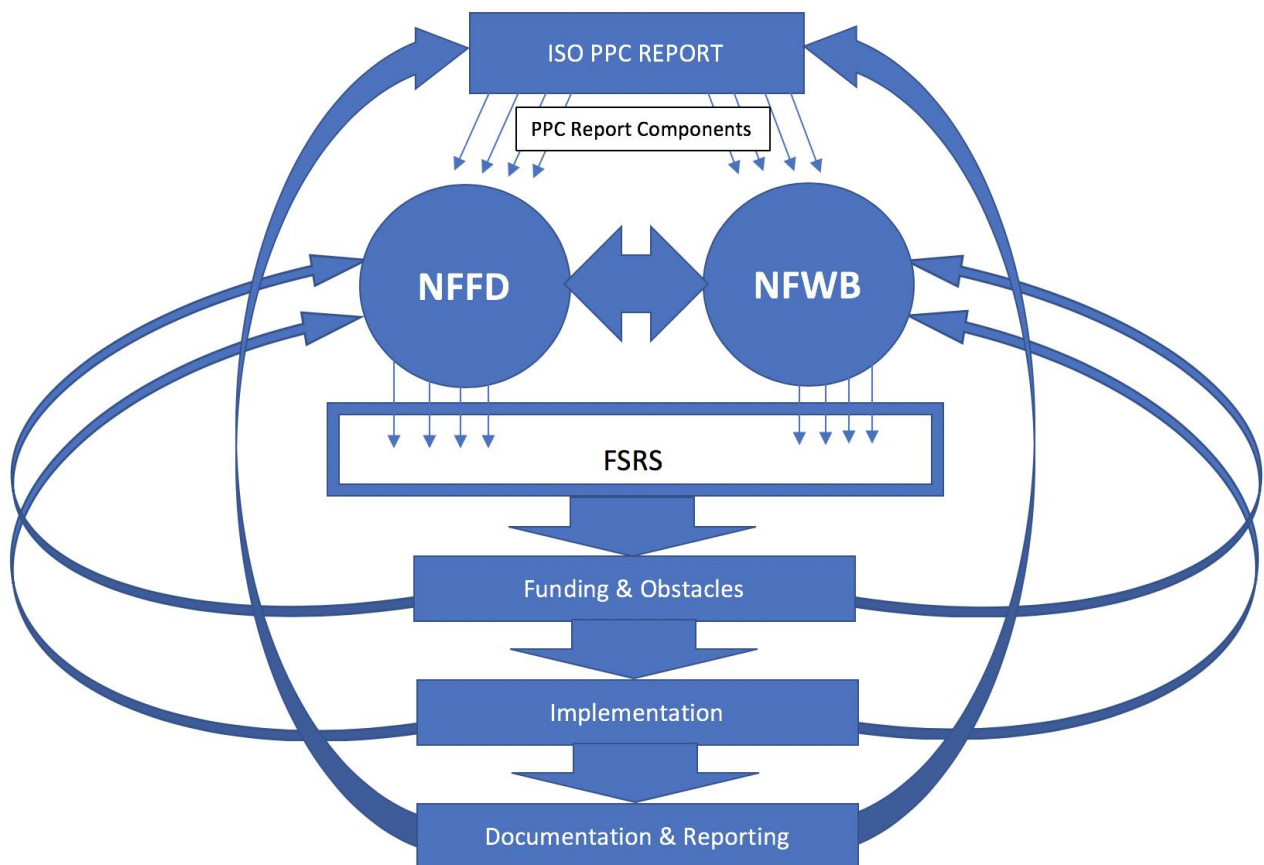


Figure 7 – Recommended PPC Grade Improvement Cycle

It starts by removing the ISO field representative as the starting point of the process. The PPC reports for the City of Niagara Falls are available to the NFFD and should be used to inform improvements to each component of the PPC, especially those with opportunities to

increase points, without relying on the ISO representative to kick start the process. Another major improvement would be to include the NFWB in the process in close collaboration with the NFFD. This relationship between the two entities is important to increasing the PPC grade, but much more importantly, such a collaborative relationship increases the ability to protect the community during emergency incidences that rely on the water supply. Therefore, the PPC report should be analyzed by the leadership of both the NFFD and NFWB, preferably in concert with each other, at which point the relevant employees are assigned to oversee component areas in both the NFFD and NFWB. From there, the component areas of the PPC report should be analyzed by each employee to identify deficiencies, and then thoroughly checked against the FSRS, which contains specific technical data that will instruct the employee what improvements will add points. Moving forward, funding concerns and obstacles should be identified for any initiatives that would reconcile the PPC report deficiencies against the requirements of the FSRS to increase PPC points. At that point, the respective NFFD and NFWB employee should take those concerns back to their leadership, where the leaders of the NFFD and NFWB can come up with solutions to overcome those funding concerns or other obstacles and move any initiatives into the implementation phase. Opportunities or limitations to implementation can cycle back to the NFFD and/or NFWB to once again rely on the collaborative relationship toward successful implementation of the initiatives. Once changes are implemented that reconcile the PPC report deficiencies with the FSRS guidance, such changes must be properly documented and reported to the ISO representative to build a new PPC report for the city, and the cycle can continue.

It is important to reiterate that the municipality can request a new PPC grading at any time, and efforts to increase the PPC grade do not have to wait until the process is initiated by the ISO field representative. Central to this process is the collaborative relationship between the NFFD and NFWB as resources of monetary and institutional value can be leveraged to overcome funding concerns and or obstacles interfering with implementations that work toward garnering PPC credits. For example, although one entity might not be able to contribute monetarily toward an initiative of the other, there may be opportunity that one might be willing to provide services or organizational assets in the form of shared services such as grant writing staff, equipment, or manpower to the other, etc.

Increase Knowledge of ISO, PPC, and FSRS

The data from the interviews revealed a lack of clarity amongst the leaders and employees of both the NFFD and NFWB regarding who the contact for their respective organization is with the ISO field representative. This contact is the point person for orchestrating the gathering of information during the PPC process and maintains hegemony during the PPC process. Each organization should designate who this person should be, which would most likely be the NFFD fire chief and NFWB executive director or their designees for this role.

Every participant from the NFWB and NFWA indicated they had never read or heard of the PPC report for the City of Niagara Falls. On the NFFD side, there were a few participants who had some level of knowledge, but there is very little involvement toward building a thorough understanding of the PPC report, let alone the FSRS. As discussed in the analysis, this could be a matter of informants not having been a part of the reporting process when it was

last conducted in 2016 and prior years. The other component could also be that, according to the interview data, not much thought has been given to the PPC report outside of when the ISO field representative makes contact to collect data for the report. All of the participants from the NFFD, NFWB, and NFWA indicated they had never been briefed at any point about the ISO, PPC, or FSRS. A suggestion to solve this problem is to require that the PPC, FSRS, the designated contact for their organization with the ISO field representative, and any other strategic planning or initiatives related to increasing the PPC be shared with employees and leaders in positions relevant to the PPC report components at the point they enter into such positions/appointments. The development of a briefing document or training materials created by the NFFD and NFWB to such end could be effective. The FSRS is the golden ticket to increasing the PPC grade, and should be made available by the fire chief in digital or print form to relevant staff in both organizations. Each stakeholder should be identified before the meeting with the ISO representative to assure that the organizations are involved in and getting the most out of the process.

[Integrate Efforts to Increase PPC Grade into Strategic Plan](#)

Planning for both short-term and long-term timeframes toward increasing the PPC grade is a useful service to engage with the ISO representative. The ISO field representative is available to the fire chief to aid in such efforts. But that planning could certainly translate into and inform short-term and long-term formal strategic plans of the NFFD and NFWB. If major capital improvements or operational interruptions are on the horizon it would be useful to anticipate their impact to the PPC grade.

Build Toward a Shared Culture

“The fire department and the water department are not, as some may suppose, distant cousins, but full blood brothers” (Stevens, 1940).

“They provide us the ammunition, we are the gun. So, without any ammunition, we can’t fire our gun...” -NFFD Chief of Fire Prevention Michael Winker, 2019

The two quotes above well embody the importance of a shared culture between the NFFD and NFWB. The first quote was made in 1940 by Jay W. Stevens, Chief of the Bureau of Fire Prevention for the National Board of Fire Underwriters in San Francisco. Chief Stevens began a paper he wrote using those words to stress the importance of the relationship between the fire and water departments. The second quote was made in 2019 by NFFD Chief of Fire Prevention Michael Winker while stressing the importance of the relationship between the NFFD and NFWB during his interview for this research. Two chiefs of fire prevention from different eras and from opposite sides of the country, and the sentiment is the same; that a fire department is useless without adequate water supply. To best amalgamate efforts by the NFFD and NFWB regarding water supply in the context of emergency management, this importance must be ingrained through a shared culture between the two organizations toward such end.

One participant indicated that the NFWB unions coming together was essential to the positive changes occurring operationally at the NFWB. This lends insight into the culture of the workforce at the NFWB and the value placed on the union by NFWB employees, a sentiment shared by employees of the NFFD toward their own union. This shared respect for unions by the employees of both organizations could be leveraged to contribute to overlapping that piece of shared culture between the two organizations as well. Even the smallest of gestures, such as one union writing a letter to the other to be read at a union meeting, conveys the appreciation

the employees in one organization have for the other. Being an employee of the NFFD, I know the recent efforts by NFWB employees to improve the fire hydrants to be genuinely appreciated by the members of the NFFD. The administrations of both the NFFD and NFWB could reach out to their respective union leaders to inspire the conveyance of mutual appreciation between the NFFD and NFWB employee unions in any way small or large, to energize a shared culture through the appreciation of the collaborative efforts of each organization's contributions toward serving and protecting the residents of the Niagara Falls community. Other creative efforts could be explored to build toward a shared culture by promoting a collaborative professional relationship, for example: co-hosting charity events, partnering on press releases, and co-authoring internal communication publications.

Newsletter

The NFWB newsletter "With the Flow" could include a column themed to convey the collaborative relationship between the NFFD and NFWB authored by members of both the NFFD and NFWB. The newsletter could be distributed to firehouses and members of the water authority in addition to its current circulation internally to NFWB employees. Cooperative press releases could translate easily from such a column. There is much collaboration occurring between the NFFD and NFWB recently, publicize this both internally and externally to maintain and cultivate a piece of overlapping shared culture between the organizations.

Maintain Effective Communication

Create a collaborative report to brief elected officials and key members of the NFFD and NFWB on collaborative efforts and initiatives between the NFFD and NFWB. Such a report could contain essential information regarding the integration of water supply into emergency

operations, including PPC considerations, and be updated periodically to be shared at the beginning of elected and appointed terms, and at least once per year thereafter. This will build networks by leveraging the horizontal relationship between the NFFD and NFWB into vertical relationships with elected and appointed officials beneficial toward securing future grants through legislative member items, public budgets, and other sources by keeping those officials informed of projects and initiatives that impact the PPC grade.

Establish NFFD & NFWB Joint Committee

Create a joint committee made up with all essential personnel managing each component of the PPC report. The committee could meet biannually and as-needed to address major issues, such as the critique of issues that arise from emergency incidents involving water supply, or major infrastructure projects that could utilize collaborative activity or that require collaborative strategy and planning. Review of the PPC report, discussion of opportunities and limitations regarding components of the PPC report and FSRS, shared resources, and construction of action plans/reports could be advanced. Such a committee would keep the organizations fully prepared to convene with the ISO field representative during the PPC grading process.

Continue Face-to-Face at Emergency Incidences

The current effort by the NFWB to send the supervisor of outside maintenance to active structure fires and emergency incidences involving water supply is superb and well complements emergency operations having such expertise on hand at emergency scenes while allowing fire personnel to remain focused on their emergency response activities. However, given the political nature of the NFWB commissioner appointments, changes to NFWB

operations and leadership that could change this arrangement should be avoided. One suggestion is to implement this practice into an official automatic response policy and include the duty in the job description of the NFWB employee reporting to the scene of emergency incidences, with the discretion of the NFFD battalion chief on-duty and NFWB executive director in mind.

Integrate Radio Communication

The NFFD/NFPD senior radio technician indicated in his interview that the City of Niagara Falls used to have radio communication set up with the water department when they were still a municipal department. At some point since the NFWB formed, their radios were changed to a different frequency without collaboration with the city. According to the senior radio technician, having radio communication with key NFWB employees would be useful during emergencies to maintain constant communication with the on-scene NFWB representative. The senior radio technician suggests the NFWB provide the information for their portable radio system so that the proper radio can be installed into the city dispatch facilities. With such an arrangement a NFWB representative responding to an emergency scene could monitor emergency communications on-scene for water supply issues, and respond to requests for action or information by the NFFD battalion chief or incident commander while on-scene. Data from the interviews conveyed that communication can be required as frequently as multiple times a day, and therefore the communication mechanism between the organizations should be structured to officially handle such periods of communication frequency. Especially considering preparedness in the case of catastrophic disaster or terrorism events that might

compromise water supply, it would be useful to have such radio capabilities in place well in advance of such response scenarios.

Integrate Technology

The collaborative initiative to combine the NFFD Red Alert and NFWB GIS programs, and possibly enhance with real-time reporting and alerts through tablets on apparatuses, will be an asset if brought to fruition. A collaborative effort should continue to advance that pools technical resources for planning this system in a unified manner, assuring consistency and competency of the chosen technology. Projecting costs into the future including upgrades over time and potential funding sources such as grants should be considered while planning for implementation. There has been a somewhat disjointed effort between the organizations in this regard that will miss the opportunity toward a streamlined integration into a shared system that continues into the future.

Future Research

Qualitative research is valuable in that it maintains a focus in particularity to relevance with the specific research topic. In this case it was the collaborative relationship between the NFFD and NFWB. The ISO field representative confirmed that the City of Niagara Falls is not unique in that its water supply is under the control of a separate entity. This supports that research into the collaborative relationship between fire departments and external entities controlling water supply could be found useful to an audience greater than Niagara Falls community stakeholders. Future research could bring together multiple cases, including this one, involving the relationship between fire departments and water supply entities that are

separate from municipalities, to build toward qualitative generalizability (Creswell, 2014). This could further contribute new theories in the realm of collaboration regarding routine emergency operations through a broader scope.

Further exploration into cultivating a shared culture between these two organizations could be the focus of future research by utilizing “The Five Windows” approach (Levin, 2000) to assess the framework and approach of culture shared across organizations and best discover the current culture between the NFFD and NFWB, and/or other water supply entities and fire departments. This can inspire more effective movement toward a shared culture between fire department and water supply entities. Since it is clear that water supply entities and fire departments should foster a strong collaborative relationship, and given so many fire departments operate with water supply controlled by external entities, it could prove broadly useful to explore the focus of organizational culture through this lens.

A major overarching issue that the researcher found is one that should be of concern to fire administrators nationwide: should fire departments be relying on private sector organizations that serve the insurance industry to rate fire suppression capabilities? This is not a new question, as discussed in chapter 1 of this research. However, it seems that the opportunities and obstacles to implementing government policy on the state or national level has not been thoroughly explored. To provide fire departments with a government mechanism to rate fire suppression capabilities would be a sensible transition, one with clear difficulties in overcoming the institution currently in place since the 1800s. Future research could utilize John Kingdon’s Multiple Streams Approach (2011) to breakdown the opportunities, limitations, and interest toward a path to successful implementation of policy at the federal or state

government levels for evaluating fire suppression capabilities of communities nationwide in place of the private sector mechanism that has become the standard.

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Appendix

Appendix A

Interview Instrument A for ISO Field Representative

- 1) How would you recommend the City of Niagara Falls begin to approach increasing its PPC grade?
- 2) Which areas of the PPC report would you say are the most critical to focus on?
- 3) Is there potential for the city to be losing points by a failure to properly document information submitted for PPC grading?
- 4) Credit for inspection and flow testing of hydrants showed the largest deficiency in the PPC report, how would you recommend approaching this area for improvement?
- 5) Credit for dispatch circuits showed the second largest deficiency in the PPC report, how would you recommend approaching this area for improvement?
- 6) Credit for training showed the largest deficiency in the PPC report, how would you recommend approaching this area for improvement?
- 7) How often have you found that municipal water infrastructure is controlled by an external entity?
- 8) Do you have any suggestions for increasing collaboration between the fire department and water board?
- 9) How difficult do you anticipate it will be to increase the ISO rating from its current 3 to a 2? How about from a 3 to a 1?
- 10) If the city constructed a fire training tower, how would that contribute toward an increase from its current 3 to a 2 or 1? Are funding obstacles often problematic toward increasing PPC grades?
- 11) Where can the FSRS be accessed by chiefs, do you recommend they use it, and how often should it be reviewed?
- 12) How often do you issue new reports for a municipality and when is the next one planned for Niagara Falls?

13) Does improving the PPC grade actually reduce insurance premiums and to what degree or calculation?

Appendix B

Interview Instrument for Participants Other Than ISO Representative

- 1) What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?
- 2) Have you ever read the Public Protection Classification Report for the City of Niagara Falls?
- 3) Who has been the main contact at your organization for the Insurance Services Office?
- 4) Has the ISO rating been a part of the strategic planning process of your organization/unit, or more of an aside?
- 5) What is the collaborative relationship between your organization/unit and the fire department/water board?
- 6) How frequent is communication/collaborative activity occurring between your organization/unit and the fire department/water board?
- 7) Specifically, what forms of communication/collaborative activity are occurring? Is it routine or on an as-needed basis?
- 8) Do you perceive any obstacles to collaboration between your organization/unit and the fire department/water board?
- 9) Can you suggest any solutions to overcome the obstacles you identified?
- 10) If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents/ratepayers, do you perceive there would be support for using funds toward such an improvement? What would be obstacles to the allocation of such funds? Solutions?
- 11) Do you think it would have been useful if you were briefed on ISO ratings at the beginning of your appointment/employment?
- 12) Do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your term of appointment/employment?
- 13) How often, from whom, and in what way, would you suggest to be best for ISO information to be communicated between the water board and fire department?

Appendix C

Transcript of NFFD Senior Dispatcher (NFFD 1) Interview

Date: 03/26/2019
Duration: 5 minutes, 07 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFFD 1: Uhhh, none? [laughs]

GORDON: OK, so you've never heard anybody talk about Insurance Services Office, or the Public Protection Classification, with the fire department or anything like that?

NFFD 1: I used to do homeowner, I used to do insurance, and, I mean, ISO does sound familiar, but it's been years. I don't remember.

GORDON: OK. Have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFFD 1: No.

GORDON: OK. Any idea who the main contact at the fire department is for the Insurance Services Office?

NFFD 1: No.

GORDON: OK. Has the ISO rating been a part of the strategic planning process of your organization/unit? Or has it been more of an aside? Or it hasn't been a part of it at all?

NFFD 1: I don't know.

GORDON: OK. What would you say, from your perspective, has been the collaborative relationship between dispatch and the water board?

NFFD 1: We're good, I mean, we work side-by-side.

GORDON: OK, so, in what ways would you say you guys collaborate?

NFFD 1: If we need... If there's hydrant damage, or if we need them to come shut off the water at the street, we call them and they come out.

GORDON: OK, so it's more of an as-needed basis, right?

NFFD 1: Yes.

GORDON: How frequent is communication activity between dispatch and the water board would you say?

NFFD 1: How frequent? It depends, I mean, it could be a few times a week.

GORDON: OK. And it's usually related to [emergency] incidences, right?

NFFD 1: Yes.

GORDON: OK. Specifically, what forms of communication are occurring? It's usually phone conversations, or is there... do you guys have documents that you transfer between? Or...

NFFD 1: 90% by phone, there used to be... well there is a way we can upload a problem directly to the waterboard. But we were told now to just call the outside waterboard directly.

GORDON: OK. I remember at some point there was some conversation about the computer system linking into the water board. Is that something that's being worked on, or something that's been in place, or that you know of?

NFFD 1: It's just that one program that we have that we can send any complaint to them.

GORDON: OK. Do you perceive any obstacles to collaboration between dispatch and the water board?

NFFD 1: No.

GORDON: Ok. And, would you make any suggestions at all, umm, regarding collaboration? Or does everything seem fine, or do you see any improvements that could be made?

NFFD 1: Everything seems fine so far.

GORDON: OK. If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowner insurance rates for residents, do you perceive there would be support for using resources of dispatch toward such improvement?

NFFD 1: Like what?

GORDON: Like, would you see any obstacles if the fire chief wanted there to be some sort of increased collaboration, or increased communication between dispatch and the water board?

NFFD 1: No, no problem.

GORDON: OK. And, I just have three more questions here. Do you think it would have been useful if you were briefed on ISO ratings at the beginning of you becoming senior dispatcher?

NFFD 1: Perhaps... I mean, I don't know what's in it that I would have used. You know?

GORDON: Right. Because at some point, when the rating comes up for re-classification, they're going to be contacting you, I think as Jimmy Majka (retired) used to as senior dispatcher. So, ya know... I think it might have been useful if you were briefed on what's to come, because eventually they're gonna drop it on your lap, I'm assuming.

NFFD 1: Yea.

GORDON: So, do you think updates concerning efforts to maintain or increase ISO rating should occur periodically throughout your employment with the department?

NFFD 1: I mean, I don't know what they would tell us or ask us to do that would change the way we do things in order to change that rating.

GORDON: So, the rating is every 3-5 years. So, how often given that information would you suggest that you might want to be reviewing what dispatch and communications from the department... what your interaction should be with the ISO information?

NFFD 1: Could it be every 2-4 years? To offset that...

GORDON: OK, every 2-4 years to offset the 3-5 years?

NFFD 1: I guess, yea.

GORDON: OK, thank you very much, Drew, for participating. I really appreciate it.

NFFD 1: OK, you're welcome.

END OF INTERVIEW

Appendix D

Transcript of NFFD Chief Mechanic (NFFD 2) Interview

Date: 03/27/2019
Duration: 9 minutes, 21 seconds
Interviewer: Gordon Stewart III
Location: NFFD Firehouse 9, 1124 N. Military Road, Niagara Falls, NY, 14304

GORDON: What's your knowledge of the Public Protection Classification grade issued by the Insurance Services Office? Just in general.

NFFD 2: In general? What belongs on the rig, all the maintenance procedures, and pump testing, ladder testing. What's required on all the rigs. We keep track of all the service test records.

GORDON: OK. Have you ever read the actual document, the Public Protection Classification Report for the City of Niagara Falls?

NFFD 2: I've read through my section that pertains to the rigs and stuff like that. As far as the water board and stuff like that, you know, we're sectioned off. [Chief] McGovern takes care of a lot of the central alarm stuff, radios, portables, run sheets, stuff like that. And [Chief] Winker, they're involved there...

GORDON: So, you're just involved in just the mechanic side.

NFFD 2: My involvement is just the mechanic side with the firefighting apparatus and the equipment on it.

GORDON: Ok. And you think you've been involved about three times now?

NFFD 2: I think so, over the last twenty years.

GORDON: Ok. Who has been the main contact, to your knowledge, at the fire department, between the department and the Insurance Services Office?

NFFD 2: Usually the fire chief, whoever's the fire chief.

GORDON: Fire chief? Ok. Has the ISO rating been a part of the strategic planning process of the fire department to your knowledge?

NFFD 2: More or less, we keep the equipment at least up to what the minimum recommendations are. We usually have more stuff on than they call for.

GORDON: They usually call you back after initial contact and then you just follow up?

NFFD 2: Yea. They've actually inspected our rigs before. The older guy came around and they had to take him to every rig. The last guy just looked at all our records, he was happy. But, the first guy, wanted to see every rig we had in the city.

GORDON: Wow.

NFFD 2: So...

GORDON: Ok.

NFFD 2: All depends on who they send in, I guess.

GORDON: Ok. What is the collaborative relationship between the fire department and the water board, to your knowledge?

NFFD 2: They're pretty good with us lately. They give us flow recommendations and main sizes. Hydrant locations. They've actually tested the flow out of each, out of the hydrants now, so we know what we're getting out of each hydrant. Whether it's a good one to hit, or go down to a better one.

GORDON: And that's all been recent?

NFFD 2: It's within the last two years, they've done a lot. They've even colored the caps on a lot of them. So, blue is fifteen hundred gallons, I think green is a thousand, and we work our way down.

GORDON: So, the collaborative relationship before two years ago was different?

NFFD 2: Yes, since the new management has taken over it's really improved, much better. They've put in a lot more newer hydrants, as you know. And they're pretty good to work with right now.

GORDON: Ok. How frequent would you say is communication, or collaborative activity, occurring between your unit of the fire department and the water board?

NFFD 2: Not so much me, but I know that the fire prevention contacts them. In fact, they're in direct contact with them all the time. If we have a problem at the fire scene they usually show up immediately.

GORDON: So, right away at emergency incidences?

NFFD 2: Yea, this last winter they showed up before I even get there some nights. Frozen hydrants, and recommend which one to go to, show us where the flaw is.

GORDON: Ok. And specifically, what forms of communication or collaborative activity are occurring? You said during emergency incidences it's face-to-face, the guy shows up at the fire scene?

NFFD 2: Yea.

GORDON: Other than that, is there any documents, or is there telephone, is there internet, a computer system?

NFFD 2: I think they tied in with internet now, because we can just go onto their website, if we have a problem with hydrants, email a hydrant problem or something like that where we have an issue.

GORDON: Ok. Do you perceive any obstacles to collaboration between the fire department and the water board?

NFFD 2: Not at this time, no, it's gotten a lot better.

GORDON: Before, there was maybe?

NFFD 2: Before, we had some issues, but...

GORDON: Would you be able to identify any obstacles that you think existed before?

NFFD 2: Well, a lot of hydrants weren't getting repaired or replaced. They wouldn't work, they'd be broken, and they wouldn't tell us. And run into some issues like that.

GORDON: So, when they're not telling you about this, why weren't they telling you would you say?

NFFD 2: I don't know if they didn't have the money to fix them, or didn't want to fix them. I don't know what the issue was, but...

GORDON: Ok.

NFFD 2: There wasn't a whole lot of communication back then.

GORDON: Ok. Would you suggest any solutions to overcome such obstacles in the future? Like, what do you think they should be doing moving forward?

NFFD 2: They've done a really good job, they've really picked up their game plan over there. As far as communicating with us and stuff like that, or like I said, if we report one broken they're usually on it pretty quick.

GORDON: Ok. So if there were specific solutions that we find to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such an improvement?

NFFD 2: Probably the big issue would be the water main repair, upgrades to the water mains, I know they're old, some are kind of plugged up. As you know downtown, we don't get a whole lot of flow down there, but... We usually have a game plan backup, just to lay out some more hose and go to a better hydrant, usually. We work around, we know if we have a problem we work around it right now until they can... It's a big project to replace a water main [laughs].

GORDON: So, to replace a water main the big obstacle would be funding?

NFFD 2: Probably funding, yea.

GORDON: And the funding would come from the water board, right?

NFFD 2: Water board, or state fund, or grant. Somewhere in that area, I would guess.

GORDON: Ok.

NFFD 2: That would be a big project.

GORDON: And our hands are pretty much tied when it comes to water infrastructure, right?

NFFD 2: No, we know our issues and we work around it, and...

GORDON: Ok. Do you think it would have been useful if you were, I mean, you've been around a long time and this is your third one. But, do you think it's useful for somebody in your position to be briefed on the ISO rating at the beginning of your employment?

NFFD 2: Yea, it'd be a good idea to know, yea. If you know where you stand, if you have problems with your fleet, or something like that. You could upgrade, replace, or...

GORDON: And that briefing would most likely come from the fire chief, right?

NFFD 2: Probably fire chief, yea. He's on board, he has a copy of all the records that are there.

GORDON: Ok. And do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your time in your position?

NFFD 2: It should be an ongoing thing, really. Upgrades, you can only go so far in what we have as far as manpower and equipment, but we've upgraded portable radios, we've upgraded Scotts [SCBA], we've done a lot of stuff like that, and rescue equipment and stuff like that.

GORDON: So, typically, looking into all that sort of data you're talking about there with the specific technical stuff with the rigs and all that, that's occurring just during or before the ISO contacts you?

NFFD 2: No, we constantly upgrade after they come in.

GORDON: Ok.

NFFD 2: We try to stay a step ahead of them [laughs].

GORDON: Ok. And how often, from whom, and in what way would you suggest to be best for ISO information to be communicated between the water board and the fire department? You know, who should be communicating it, and..

NFFD 2: Probably through the fire prevention chief or the fire chief, pass it along that way. Decipher where it's gonna go, if it's a central alarm issue, communications, or something on my end with the rigs, or, you know, fittings on the hydrants or something like that.

GORDON: Ok. And face-to-face, or electronic, or telephone?

NFFD 2: Electronic seems to work quicker than face-to-face.

GORDON: Ok.

NFFD 2: And if you need to contact, like I say, request them and they do show up, so... Email works pretty well, or a phone call.

GORDON: Having done this a few times, what would you say would be the biggest assistance to getting you to where you'd like everything to be for the ISO rating? Anything in particular? Or...

NFFD 2: Well, we could use some funding for newer equipment. You know, as far as, not rigs, but equipment on the rigs. Like, replacement hose programs and stuff like that. Replacing nozzles and stuff like that, they do get old. Some of our stuff is pretty old, functions, but still old.

GORDON: So, it's weird, right? Because the water infrastructure, any repairs need to be funded by the water board. But then any improvements to equipment needs to come from the city, right?

NFFD 2: Yea, the city. Yea, it's kind of split there, so.

GORDON: Yea.

NFFD 2: Funding stuff on both sides [laughs].

GORDON: So, if there's an issue with water supply that negatively affects our equipment, then the city is responsible for that. And then on the opposite of that, if there's something that we're doing on our side, in interacting with the water infrastructure, and we break something with the water infrastructure, then the water board is responsible.

NFFD 2: Then they're responsible for that, yea.

GORDON: Ok.

NFFD 2: Hopefully we don't do too much damage to their... [laughs]

GORDON: [laughs]. Anything else that you might have that you think might be useful to contributing to this research?

NFFD 2: Not too much on my end.

GORDON: Ok.

NFFD 2: We're getting the computers in the rigs, so that will be a big update too, that will help out.

GORDON: Oh, and the computers in the rigs, that's connected to the system that is accessed by the water board as well?

NFFD 2: Should be able to contact through there [rig tablets], I believe. At least, car 80 will for sure, I don't know about the rigs. Don't want to get into that. But, I know car 80 and fire prevention will be able to.

GORDON: Ok. And do you have any questions for me?

NFFD 2: No, not really.

GORDON: Alright. And I'm going to be interviewing the ISO field rep, fire chief gave me permission...

NFFD 2: Yea, he's a real nice guy, younger guy that showed up last time.

GORDON: Tom Yager? Same guy?

NFFD 2: I think so, yea.

GORDON: Ok.

NFFD 2: He's a real nice guy.

GORDON: Ok.

NFFD 2: He was new in the area. But he replaced the older gentleman that was here.

GORDON: So, after I talk with him, if there's anything I might need to touch base with you, that's ok?

NFFD 2: Yea, sure. You know where to find me.

GORDON: Awesome. Thanks Chief, I appreciate it.

NFFD 2: No problem, buddy.

END OF INTERVIEW

Appendix E

Transcript of NFFD Fire Chief (NFFD 3) Interview

Date: 03/28/2019

Duration: 7 minutes, 15 seconds

Interviewer: Gordon Stewart III

Location: NFFD Headquarters, 3115 Walnut Avenue, Niagara Falls, NY, 14301

GORDON: What's your knowledge of the Public Protection Classification grade issued by the Insurance Services Office? Just in general.

NFFD 3: Well, I'm aware that it exists, and our insurance rates are affected by that rating.

GORDON: And, have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFFD 3: No.

GORDON: Who has been the main contact between the fire department and the Insurance Services Office, typically.

NFFD 3: It would probably be fire prevention, either the fire chief or fire prevention. Being new, I haven't had contact with them.

GORDON: Right, because the last one was 2016.

NFFD 3: Yea, I would assume the fire prevention chief would probably have all of the data they would need for it.

GORDON: Great. Has the ISO rating been a part of the strategic planning process of the fire department, to your knowledge?

NFFD 3: Yes, it has.

GORDON: OK. In what ways? Is it something ongoing, would you say, or something that just comes up when the ISO contacts us? Or...

NFFD 3: I believe it's something that comes up when the ISO contacts us. That's when we're made more aware of the rating and the system, rather than every day operations.

GORDON: Gotcha. And, what is the collaborative relationship between the fire department and the water board?

NFFD 3: Over the past few years, that relationship has gotten to be very strong. We work together not only on hydrants and waters, but also on the daily events that affect both of us. Whether it's a road closure, repairs that they're making, it's gotten to be a very good and beneficial relationship.

GORDON: And you say that as it's happened recently, so before it wasn't?

NFFD 3: Yea, to the point of now when we're having any type of major fire we're calling in the water board for assistance. They help in identifying hydrants that are flowing

better than others, where their mains, how big their mains are. Just a case in point yesterday, we called them after we had a couple bad hydrants and they came down and showed us where the good hydrant was and we stretched a line and finally got water on the fire. Good water.

GORDON: And that wasn't routine before?

NFFD 3: No, no. We never called the water board. We never had the relationship with them. We've had so many hydrants that were out of service for many years within the past three to four years, the only hydrant that's, we only have one hydrant that's not in service in the city right now. And that's actually on private property.

GORDON: Wow.

NFFD 3: So, this is actually the first time in twenty years I've ever seen that.

GORDON: And would you say that when the water board separated from the city, that created a bigger obstacle?

NFFD 3: Absolutely. Sure, you had two managing entities that didn't work well together. The water board went and did their own thing without much regard for the city and the city function. It's taken, how long has it been, over ten years that they've been separated and it's just recently that we've been working together. And now I see the water board's involvement in city affairs as well as the fire department.

GORDON: And how frequent is communication or collaborative activity occurring between the fire department and water board, would you say?

NFFD 3: I wouldn't say on a daily basis. But, definitely at least three to four times a month that we do have meetings with them. Or some kind of contact, whether it's a road that's flooding and we reach out to each other for assistance. One of the last issues they had, they reached out to us and we supplied some pumps, as well as they did. We do work together on projects more than we ever have.

GORDON: And, specifically, what forms of communication or collaborative activity are occurring? Is it face-to-face? Is it telephonic? Is it, ya know...

NFFD 3: It's face-to-face, it's telephone, and it's radio transmission through our central alarm.

GORDON: And, something about some computer system that's being worked on?

NFFD 3: Yea, they have a... they're gonna be supplying us with a tablet that lists the mains, the size of the mains throughout the city. We have that capability on our tablets as well, our system isn't up and running fully into all of our fire equipment. Whereas, they're going to give us one now to use in our command vehicle that will help us until all of ours come up online.

GORDON: Great. Do you perceive any obstacles to collaboration between the fire department and the water board?

NFFD 3: At this time, no, not at all.

GORDON: What about before? What would you say was the obstacles before?

NFFD 3: I think it was personalities. I think it was, it seemed as though the water board didn't take our needs into consideration as far as the hydrants went. It seemed like their focus was something else. Whether it was in house, I don't know. But there just wasn't the communication that we have now.

GORDON: OK. Would you suggest any solutions to such obstacles that might come up again in the future?

NFFD 3: We'll have to deal with that when it comes. I don't know what obstacles, because everything is going so well, I don't foresee an obstacle in the future with us. But, if the communication stays the way it is now, any obstacle that we have is gonna be worked out.

GORDON: If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFFD 3: Funds from where?

GORDON: Well, I guess that's where it gets a little dicey, right? Because some of the funding comes from the city and some of it comes from the water board.

NFFD 3: I mean, are you asking funds on the fire department or city side? Or...

GORDON: Correct.

NFFD 3: If it's a benefit to the residents, I would advocate for that, yes. You know, let's see what the funding is, and if we have the money.

GORDON: Yea.

NFFD 3: You know, anything that can benefit the residents in a reduction, whether it's taxes or insurance, it's a reduction. And if there's something we can play a part in that, then yes, we're all for it.

GORDON: So, when you were appointed fire chief, were you briefed on ISO ratings at all at the beginning of your appointment?

NFFD 3: No. You know, not at all. This is something that I just picked up over the years knowing that it had an impact on insurance premiums, and just in the back of my mind knowing that if we went from a three to a two, it would help.

GORDON: Do you think updates concerning efforts to maintain or increase the ISO rating should occur periodically throughout your appointment? And where would they come from?

NFFD 3: Would they come from the ISO themselves? As far as what we need to do to get to where we have to be? I would welcome that, sure. You know, especially being new in this job, you know, I don't know all the ins and outs of the ISO and how we get to where we have to be.

GORDON: And, in what way would you suggest to be the best for the ISO information to be communicated between all of your different pieces? Because you have so many different pieces within the fire department that contribute to it.

NFFD 3: Email seems to be working the best for us now.

GORDON: Email? Awesome. Anything else you'd like to add? Anything concerning ISO whatsoever, or any questions you have or anything like that?

NFFD 3: No, but just, like, how do we address the needs and how do we make it better? And I'm open to any suggestion.

GORDON: Awesome. Thanks a lot, Chief, I appreciate it.

NFFD 3: You're welcome.

END OF INTERVIEW

Appendix F

Transcript of NFFD Chief of Fire Prevention (NFFD 4) Interview

Date: 03/28/2019

Duration: 10 minutes, 39 seconds

Interviewer: Gordon Stewart III

Location: NFFD Headquarters, 3115 Walnut Avenue, Niagara Falls, NY, 14301

GORDON: So, what is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFFD 4: I have a little bit of knowledge. As I understand, Insurance Services Office provides the raw data for different ins-, all insurance companies in the United States. And, they take that data and the insurance companies make decisions based upon that data.

GORDON: Correct. Have you ever read the actual document, the Public Protection Classification Report for the City of Niagara Falls?

NFFD 4: I've briefly skimmed over it.

GORDON: OK. And, who has been the main contact, to your knowledge, at the fire department between the fire department and the Insurance Services Office.

NFFD 4: It, it's usually the fire chief, so, in my career, when I've been dealing with it, it's usually been Tom Colangelo, we have a new fire chief, so it'll be a new, it'll probably be Joe Pedulla.

GORDON: OK. Has the ISO rating been a part of the strategic planning process of the fire department, to your knowledge?

NFFD 4: It's more of an aside. We try to satisfy it, but you can't... The things that limit us are things usually out of our control. For budgetary reasons we can't have four guys on a rig. A lot of the water district, a lot of the water issue were beyond our control. Those have been improved recently in the last couple years. The things we can control, we try to. But, most of our gigs have been things beyond our control.

GORDON: OK. And when you say...

NFFD 4: Gigs, like, so, they'll be, when they add up all the pluses and the minuses in different municipalities, there's certain thresholds that we can't clear because we can't put four men on a rig, we can't put enough trucks in the square footage. So...

GORDON: So, it mostly comes down to funding?

NFFD 4: A lot of it comes down to funding. A lot of it does.

GORDON: OK. And, what is the collaborative relationship between the fire department and the water board?

NFFD 4: We have a good working relationship. They provide us the ammunition, we are the gun. So, without any ammunition, we can't fire our gun, so... They've been wonderful, at least in my stint as a fire prevention chief the last four years. We work closely with them to improve all the hydrants and all the underground infrastructure providing water to the citizens and to our fire department/fire service.

GORDON: And you say that relationship has been better the last couple years?

NFFD 4: It's been very good. In my career as the fire prevention chief, it's only been good.

GORDON: OK.

NFFD 4: The first two years, it was kind of, not as good as the last two years. The last two years, man, they've been fantastic.

GORDON: Great, OK. And how frequent is communication or collaborative activity occurring between the fire department and water board, would you say?

NFFD 4: We usually, I touch base, depending on what's going on, at least every month. I'll touch base with either Bill Wright, or Mike Eagler. Just to go over what they need... what we need from them and what they need from us.

GORDON: Usually over the telephone?

NFFD 4: Usually over the telephone, no. Every six weeks or so we'll have a meeting.

GORDON: Oh, OK.

NFFD 4: We'll meet. They'll meet here or we'll meet there. Just to, and it's like a 45-minute meeting just to get on the same page. That's all.

GORDON: Awesome. And, every emergency incident there's usually a guy that's been showing up to structure fires?

NFFD 4: Yea, Mike Eagler is their man on the scene. And, for any fire of any significance, he shows up. And that's been going on for at least a year.

GORDON: Nice.

NFFD 4: Yea, it is nice.

GORDON: And, then there's something about a computer system that...

NFFD 4: So, we're trying to upgrade our, we're trying to put tablets on the rig. They have, all their stuff is computerized. They have software, they can just take the mapping program and overlay it on our maps. And so, we can get information on the main, the hydrants coming off of, the pressure behind that water, the volume coming through that water. And so, when we get up to running with our tablets, our computer guy will be working with their computer guy to get those overlays.

GORDON: Integrate everything together?

NFFD 4: Yes. Yea, it'll be, when our system points out where the call is, it'll show all the mains and hydrants near that building.

GORDON: Nice.

NFFD 4: Yea, will be nice.

GORDON: That's awesome.

NFFD 4: Especially in the winter.

GORDON: Yea, right!

NFFD 4: Yea. You know where to look for it.

GORDON: So, specifically what forms of communication or collaborative activity are occurring? You said you have face-to-face...

NFFD 4: Face-to-face, telephone, texting, emergency phones in the middle of the night, I have his number, anytime I can call, anytime he needs it, he has my number.

GORDON: So, routine, and as-needed?

NFFD 4: Yes.

GORDON: Do you perceive any obstacles to collaboration between the fire department and the water board?

NFFD 4: None that I can foresee, no.

GORDON: And when you say it has gotten better, in what way has it gotten better?

NFFD 4: In my career, my career being twenty years, for the first ten we had a tough time getting hydrants fixed. Hydrants weren't getting fixed for the first fifteen, hydrants weren't getting fixed. There were a lot of hydrants out. The maybe thirty to thirty-six months ago they started knocking down those hydrants. They had a list of, man, it must have been two-hundred hydrants that were known defective hydrants. Known non-functional hydrants in the city. And they knocked them down maybe within eighteen months, and right now we have no known non-working hydrants in the city.

GORDON: Do you think that when the water board separated from the city, do you think that was a big part of why there was an obstacle to collaboration?

NFFD 4: You know, I don't know that. I wasn't in this office. I don't know that. I wouldn't characterize it as that. I don't know that. Could be an answer. They didn't answer to the citizens of Niagara Falls anymore. They answered to Albany, and you know, there was a... It's like an authority, there's a tier away from answering to the electorate. So, you know, I wasn't for that. [laughs]

GORDON: [laughs] OK. That's been something that's come up is the politics that come involving political appointees.

NFFD 4: Let me tell ya, they have been nothing but awesome in the last... Mike Eagler, Bill Wright, everyone I deal with is fantastic.

GORDON: Awesome.

NFFD 4: We are their customer and they treat us that way. They treat us like they want to keep us.

GORDON: So, would you suggest any solutions to overcome obstacles? As far as when you said the disconnect that...

NFFD 4: You know what, that's... when there was a disconnect, if there was, I think it was inherent in the system of a quasi-public organization servicing something... the public, it's a quasi-public, it's not a private public partnership, but it's a... it's not exactly public service, it's a, like I said there's a-

GORDON: Public benefit corporation, right?

NFFD 4: Is that the term?

GORDON: Yep, that's what it is.

NFFD 4: There it is, so, there's a layer away from the electorate that can sometimes make it tough or easier for them not to respond in a timely manner. But, once again, I wanna reiterate, they've been fantastic the last three years.

GORDON: Awesome. If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFFD 4: I think so. I think there would be. If people could see that their insurance went from eight hundred dollars a year to six hundred dollars a year, if we got four guys minimum manning on a rig, that's a number the ISO is looking for. That's fire protection number. If we got that, they would see a reduction in their bill. Maybe not that year, maybe not next year, but eventually when the ISO rated that... We can always request an ISO rating, so if we got minimum manning of four men on each rig, we would call for it and then they would, as I understand it, they would improve our rating.

GORDON: OK.

NFFD 4: And that would affect all insurances. Eventually.

GORDON: Right. Were you briefed on ISO ratings at the beginning of your time as chief of fire prevention?

NFFD 4: No, I became familiar with it when the ISO rating was coming up. So, I was in my spot maybe a year. And then I was informed the ISO rating was coming up, we have to produce all the documents that they need to go over and just interviewed the ISO rater.

GORDON: So, it pretty much came up in your position because the rating was happening?

NFFD 4: Yes. And as I understand they happen every six to eight years.

GORDON: OK.

NFFD 4: As I understand it. But we can call for it anytime.

GORDON: Do you think updates concerning efforts to maintain or increase the ISO rating should occur periodically throughout each year? Or...

NFFD 4: I think that might be a little too much, because nothing changes. It doesn't change that... The statistics, the information they're gathering, not a lot of it changes over the course of any particular year, or even two- or three-year span, so... Probably six to eight-year span is probably a good time, or seems like a good span of time to recheck it. To recheck the information. And again, municipalities can call for it anytime they want, so if we did have good news where we thought it would affect our rating in a positive way, we could call for it.

GORDON: Awesome. And how often, from whom, I know you just kind of answered how often, but from whom and in what way would you suggest that ISO information be communicated to the pieces of the fire department that contribute to the ISO rating?

NFFD 4: Say that one more time...

GORDON: So, who should be checking in periodically, like, let's say, who should be the lead on checking in...

NFFD 4: Oh, that's my office. That's fire prevention office. That's fire prevention, deals with most of the criteria that they check on. A lot of the criteria, the lion's share, they check on.

GORDON: So, the ISO's kinda going through you and you are piecing it all together?

NFFD 4: They kind of go through us, and then they touch on training a little bit. And then, in general, the fire prevention office is the community liaison for the fire department. In general, so. It would definitely be my department.

GORDON: Awesome.

NFFD 4: My bureau.

GORDON: Is there anything else you might want to add, in general? Anything about the ISO rating? Or...

NFFD 4: No.

GORDON: I really appreciate it, Chief, thanks a lot.

NFFD 4: Anytime, Gordy.

GORDON: Thank you.

NFFD 4: You're welcome.

END OF INTERVIEW

Appendix G

Transcript of NFFD Chief of Training (NFFD 5) Interview

Date: 03/28/2019
Duration: 23 minutes, 20 seconds
Interviewer: Gordon Stewart III
Location: NFFD Headquarters, 3115 Walnut Ave, Niagara Falls, NY, 14301

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFFD 5: What is my knowledge of it? I know we've been getting a three for the past quite a few years, we used to be a two when I started on the fire department and we dropped down to a three and I always wondered why. But now that I met with that Tom Yager when he was here doing the ISO study, and then we went over it afterwards of what his grading system was and where we got our point and not. You could see where we were downgraded because of problems with the water board and deficiencies of our own, of our own making I should say.

GORDON: Have you ever read the actual document, the Public Protection Classification Report for the City of Niagara Falls?

NFFD 5: Yes, I did, probably when it came back to us, I want to say it was like 2016 I think he did it?

GORDON: That was it, yea.

NFFD 5: I got a good memory.

GORDON: Yea [laughs]. So, who has been the main contact for the fire department with the Insurance Services Office?

NFFD 5: Well that Tom Yager is who came and did the audit, so I would say it would be him, if anybody.

GORDON: And his contact with the department was...

NFFD 5: His contact I think was with Fire Chief Colangelo at the time.

GORDON: OK. Has the ISO rating been a part of the strategic planning process of the fire department?

NFFD 5: That's beyond my pay grade, because I'm just strictly dealing with just the training aspect of it and the fire chief, that's more along his lines of what they have to do. I mean, it possibly could be, I don't know. I don't want to speak for the chief, because, ya know, I think its along his lines more so than mine.

GORDON: OK. And what is the collaborative relationship between the fire department and the water board to your knowledge?

NFFD 5: Now, it is, well, I almost want to say it's a hundred and eighty degrees better. Because in years past, we had just talked before we turned on the recording about the issues we've had with the waterboard fixing hydrants in a timely fashion, which did not happen. We had, I know, I know of a fact of at least, I

know it was over three hundred broken hydrants, over the course of my time here. I came here in 19-, in two thousand fifteen, no fourteen, sorry.

GORDON: Into the training chief position?

NFFD 5: Into the training chief position in October of fourteen. Then fifteen, sixteen, seventeen the new waterboard took over, I want to say in, I think it was eighteen or seventeen, it was either late seventeen or eighteen for sure. But, it's a world of difference now, world of difference. They fixed... if a hydrant is listed as broken they get to go fix it right away. I know I had two hydrants broken on my block on the twenty-nine hundred block of Michigan. The one I reported, as it was flowing water and I didn't want to see the city wasting water because I did find out, my nephew says that, what is it, five million gallons of water is wasted every... he told me the amount of water that they produce and what actually they get back billed for, he said, is such a big difference because there's just water flowing everywhere under the city because the infrastructure is so old. And I was just doing my citizen duty, I guess I'd say, I called the water board, I told them I heard the water flowing, I don't know where it's going, but that the hydrant definitely won't shut off. I tried to, I even had engine eight come there, try and shut it off, they couldn't. So, when they were there, they dig that one up, fixed it right away, like within two days. And then the hydrant right next to my house, it was, it was broken and they repaired that immediately. I mean, I was like, holy cow, this never happened before. Cause I've called on that hydrant that was in front of my house, it was broke for over two years under the old board, and I kept calling on it and they never did anything. You couldn't open it. The stem on the top was broken off, so you couldn't get water out of it, and that was two properties away from me. It was ridiculous. But this new board is fantastic, fantastic.

GORDON: Good. How frequent is communication, or collaborative activity occurring between the fire department and water board, would you say?

NFFD 5: To my knowledge, and, the one that I think you should speak with is Chief Mike Winker, because he's with fire prevention, and fire prevention is always the one that's interviewed during and after a fire, and they always bring up the water issues we have in the city, so, I know that the water board and our fire prevention work very well together. In fact, water board member Mike Eagler, he's in charge of fixing all the outside hydrants and water lines and valves, and all that, he was just in the office today. And we were talking about what could be done a little bit better from the fire that we had yesterday, in which we were in a low flow water area. And people were saying, oh, hydrants don't work, hydrants don't work, hydrants don't work. No, the hydrants work fine. When you have a four-inch main or a six inch main, that can't support the engines pumping water into a fire. It just can't handle the system. And that's what we were talking about, because when I started on the job, that low water district was there when I started in January of ninety. And we knew that if there was ever a fire in that area, the thirteen hundred block of Michigan, whether it be from Pierce all the way over to, I want to say South area, they knew any fire in that area, you take your water main off of eleventh street or fifteenth street and you lay a line in. They said, don't even try to use the hydrants anywhere in the middle of the block. Anywhere in the eleven hundred block or the thirteen hundred block. He says, you just won't get water out of em. I mean, it's not, the system's so old, a four-inch main, I mean let's face it. We use a three-inch lines for supply sometimes, you know how much water comes out of there. I mean, it's insane.

GORDON: Yea, right.

NFFD 5: I mean, and he had some woman bothering him. Cause he showed up at the fire scene, to help us out, which was wonderful. And they're on eleventh street, and he's looking at the hydrants and he's talking to Angel Gebauer, Captain, she was called in that day, she was on engine eight, and this woman just starts coming up: you should be ashamed of yourself, you should be ashamed of yourself, these hydrants don't work, this is terrible, you should be ashamed of yourself. And he's like, he's like, lady! Ya know, it's insane.

GORDON: Ay-ay-ay.

NFFD 5: Yea, yea.

GORDON: So, specifically, what forms of communication or collaborative activity are occurring? Like you just mentioned, they have face-to-face at the emergency incidences?

NFFD 5: They have face-to-face at the incident, they come over and do stuff, we go and help them. Like I'll give you an example, we had a major coordination effort for, at the Rainbow Bridge they had to check one of their, I forget what it's called. It's basically an old water tunnel that used to flow out right to the Niagara River, it's where the storm sewers go and every once in a while, they got to check that. So, we actually had to get with the Niagara Falls Bridge Commission. It was the water board and it was us, because we were providing the confined space, cause they had to go down the tunnel ninety feet and they had to bring down three men in a three-man basket. They were dropping down two teams and they were down there working and we were there in case something happened to get them out in an emergency, but, we had to coordinate with that. Gina Senia I know is the safety coordinator for the water board. She works with us all the time. And she just sent me an email about something upcoming now, and... Really, the fire chief and the chief of fire prevention, in my opinion, get invited to things concerning the water board a lot. In my aspect, in the training department, I don't, but I know some of the guys who work there, so I always I stop and talk with them and we keep abreast of the situations.

GORDON: Do you perceive any obstacles to collaboration between the fire department and the water board?

NFFD 5: Not right now, no.

GORDON: So, in the past there was?

NFFD 5: In the past, they never wanted to give us information. Like, Chief Colangelo used to ask for, give me a list of bad hydrants that you know of. We need that, because... well, to give you a little bit of history, every... if it wasn't every week, it was every other week, the water board used to give the fire department a list of hydrants that they knew were broken or inoperative. They would be printed out on the teletype machine, and then it was the rookie's job that was at the firehouse when that came across the teletype to pull it out and go over in your territory what hydrants were bad, and you commit that to memory so when there's a fire you know not to hit that specific hydrant. We used to do that all the time. That hasn't happened I can't tell you in how long.

GORDON: Was that back before the water board separated from the city?

NFFD 5: Yes. Yes, that was when the water board was still a part of the city. When they separated, I don't know when we started getting more divergent, I guess you'd

say. But, from my experience in here from October of fourteen until, oh, well into two thousand seventeen, if not... Yea, it was probably at right about two thousand seventeen, we got no information whatsoever from the water board. They held their cards tight to their chest, they wouldn't tell you nothing. I mean it was frustrating actually. Because our fire chief was asking, give us a list of hydrants, traditionally we had this all the time: yea, yea, yea, we're working on it, yea, yea, yea, we're working on it. That's all they ever told us, that, we're working on it. Never got anything. Now, we're getting everything we want and more. They're being more proactive in my opinion and not reactive. The old water board was not even reactive, I don't know if they didn't care, but they certainly didn't give us any information, I'll tell you that.

GORDON: And then the concern is that if you get a new board of appointees on there, it could revert back to that, right?

NFFD 5: Anything's possible in this city, I will say that. But I will say that the underlings that are there now that have such a good working relationship, such a good report with us now, will continue that report even if the big shots say don't do it. I think they'll still find ways to get us information because they were frustrated they couldn't help us before, but they weren't in charge, they couldn't do anything.

GORDON: So, would you suggest any solutions to overcome such obstacles that we were just talking about?

NFFD 5: Removing all politics from it would be wonderful. Because, like I'd said before, and I'm glad this gonna go on tape because this is my opinion. When the water board was controlled by the Republican party in Niagara County, they had all their people there, the problems that the water board in Niagara Falls faced wasn't a big issue. And, I know we had talked about this right before we turned on the tape recorder, that that whole 72nd Street debacle when they were tearing up 72nd Street and redoing it, when the contractor told them, listen, you need to lower those water mains, otherwise they're gonna freeze up, these people aren't gonna have water. And the water board said no, and they had those millions of dollars in reserve for stuff just like that that they didn't want to spend. And they said go ahead and do it. And then the citizens were blaming the mayor who had absolutely nothing to do with it. And they were blaming the water board as well, but, ya know, the water board certainly wasn't saying this is our problem, this is our doing. They never stepped up and said anything. The Niagara County Legislature never stepped up and did anything about it. Until the change happened. Now the Democrats are in control of the water board, and now as soon as a problem creeped up, now all the Republican Legislators just want to go and rip out, ya know, the throats of all the people in the water board, and how the city's bad, blah, blah, blah. It was very frustrating. And I always thought, and I even told the Mayor this, because he's still our mayor, we know it's not your fault. And shame on the water board for letting this happen and letting you take the heat. That still bothers me, the politics involved, you know.

GORDON: It's tough to do, right? To keep politics out of it when they're political appointments, right?

NFFD 5: Oh, absolutely! I mean, it's... you know, it's a service, it shouldn't be political. You should be there to get the best person, the best suited person doing the job. Whether they're white, black, male, female, who cares? Put the best suited person that's gonna do the best job there and let them do their job. I mean, water is a very valuable service, so is sewer system. I mean, and our city is so old, the infrastructure's so old, it's gonna be millions and millions of dollars to rebuild

stuff. And it's, it's gonna happen, maybe not in my lifetime, but certainly it's gonna have to happen, because I know there's water mains out there they're saying that are roughly almost a hundred years old. That's a long time.

GORDON: Sure is.

NFFD 5: Yea.

GORDON: So, this might touch on what you just said a little bit as well. If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFFD 5: I would hope so. But, is there a lowering of homeowners' insurance with the ISO rating? That's what I want to know. I've never seen, I don't know, like, any evidence of that. That says your homeowner's is gonna be this because of your ISO rating. I'd like to know the correlation between that. I mean, if it's a couple cents that's one thing. If it's quite a few dollars that's another. But, I mean, it'd be interesting to see, you know.

GORDON: Yea, because, you know, the Insurance Service Office serves the insurance industry, they're a private company.

NFFD 5: Right!

GORDON: And, you know, that brings up a point that I'm interested to hear your opinion on. Do you think that this metric that we're using that serves the insurance industry is the best way that we should be rating fire suppression capabilities?

NFFD 5: Well, here's the deal...

GORDON: Because it's not a public sector initiative, it's private.

NFFD 5: It's not, and it's also, it's based on, from what I remember, from what I remember him saying... I think it was Tom, Tom Yager, right?

GORDON: Yea, Tom Yager, ISO field rep.

NFFD 5: Yea, OK. He said that it takes into factor your building load, that is one of the things, like what kind of buildings you have, how old is the building stock, whatever. Then specifically for the ISO stuff it was your, the number of pieces of apparatus you have, the people manning them, your water supply, and your training were the big three things he said that they really look at. And, I remember communications was one of them, and we were giggered on communications a little bit because our systems are so old and even now, F2 in this city is pretty good, but there's some dead spots. F1 is spotty at best, it's terrible, we gotta get that fixed. The age of our radio equipment, I mean, the frontline portables we have now are, I don't wanna say they're obsolete, but they're old. And they can't believe we're still using them, like when I go to the county and stuff like that they're like, wow, he goes, you guys are doing pretty good. But everything comes down to money, dollars and cents, what can we afford, what can we get? What can we get by grant? And that's what I would love to see, is some grant money coming our way, because we've been... we've received a few grants, like we got a grant for the training tower, which will be great, and that, to me, getting the training tower is gonna help our ISO rating improve because we can do more multi-company drills in the city. Before, having

to go out to the Wheatfield tower outside the city, I as a training Chief had a hard time justifying taking our rigs out of their territory to go train so far out of their territory, because if someone has a heart attack in the territory of the guy while they're at training I'd feel terrible about their increased response time. Ya know? Because we have a duty to get there as fast as possible and normally, for single engine calls, we're usually there within three minutes, which is fantastic.

GORDON: When you became the training chief, were you briefed at the beginning of your term as training chief, were you briefed on ISO ratings?

NFFD 5: Nope! [laughs] It's all on the job training, learn as you go. I mean, because...

GORDON: So, it was pretty much when the rating came about the ISO guy contacted you?

NFFD 5: Yes, when he came out, when he did our interview, I pulled up all the training records we had for the prior year. I showed him everything that we did, and he was like, oh wow, this is good, this is good, this is good. But where he did say we were deficient training wise was in our multi-company drills. And I know battalion chiefs run them, do them, they need to write them up and get them into me so I can put them in the box for the training for the year so when these ratings come up we say, oh yes, we did this drill, this drill, this drill, this drill.

GORDON: So, you think there might be an issue with the way that we're reporting the multi-company drills? As if-

NFFD 5: We're underreporting it.

GORDON: There's multi-company drills occurring that aren't being reported?

NFFD 5: Yes, correct. Yes, absolutely. And that's the big thing. And having a training tower here in the city will certainly help because then the battalion chiefs will use it more often and we'll be making sure that that paperwork gets reported. [laughs]

GORDON: [Laughs] Do you think updates concerning efforts to maintain or increase ISO rating should occur periodically?

NFFD 5: Yes. Anything we can do to-

GORDON: Would you make a recommendation for how often?

NFFD 5: Well, the next time we go, they do what, every five years?

GORDON: It's every three to five, but you can request it.

NFFD 5: Yea, well, it's been... sixteen, seventeen, eighteen, nineteen... we're in our year three right now and what I'd like to see happen is, ya know, test some more hose like we used to. Cause we used to take all of Maryland Avenue, because that's where the mechanic would go. We'd lay every piece of line we had out, hook it up to the rig, cap it off with either nozzles or caps, and we'd flow, we'd just test all the hose, bring it up to the pressure it's supposed to be at and let it hold there and that was it. You did that, it'd last you most of the morning, and it was a lot of fun because we were just out there goofing around and stuff, and then once the test is over you get to play with the hoses a little bit, get each other wet, but then you gotta put everything back. And, I know that was one of the things they giggered us on, they giggered us on not as many multi-company drills that they wanted, and I'm not exactly sure what they were exactly looking for. But, he said, oh no, we

want multi-company like, if you can like have a burn practice, or rescues, or this, or that. And I'm like, listen, we're not allowed to burn anything now. Everyone and their grandmother's environmentally friendly, you can't have fires anymore. Our new training tower is gonna be a smoke tower only, you can't have fires there. Which I think stinks, but what are you gonna do? It is what it is.

GORDON: So, how often... I just asked you that... from whom, and in what way do you think is best for ISO information to be communicated in such an ongoing effort? Because, so the ISO, we're usually only looking at it when ISO contacts with us. So...

NFFD 5: But, if we know... if we get to be better familiarized with the parameters of what the ISO is looking for we can do things to try and improve our numbers. And I do remember, because I only read the report when we got it back, I don't know, had to be two-thousand sixteen sometime. I remember they gigged us on, it was communications, it was water, and it was basically related to all the information the water board wasn't giving us, and then we were lax on hose testing and multi-company drills. Those were our four main points where we lost, cause we just missed out on getting a two. And I think if we had improved on any one of those areas, we may have been able to get a two. And I'm hoping that next time this rating comes in we'll be a two. Because, I think, you know, for the fire stations that we have, the amount of equipment we have, the amount of people we have working, we should be a two. It's just, things were out of our control. And the communications was one of them, because we're working with an old system that they have to update and it's gonna cost a lot of money. We were supposed to get a three-hundred-foot tower right next to our headquarters here. That fell through. And that would have boosted our communication abilities tremendously throughout this entire city, so we wouldn't have dead spots like we do. But, you know, like I say, it'd be nice to get a two, because when I started on the job we were a two, so.

GORDON: Right. Anything else you'd like to add, or any questions you have for me or anything?

NFFD 5: No. That's pretty good, Gord, I guess.

GORDON: I really appreciate it Chief, a lot of really good information.

NFFD 5: No, thank you. You're welcome.

END OF INTERVIEW

Appendix H

Transcript of NFFD Senior Radio Technician (COM 1) Interview

Date: 03/28/2019
Duration: 13 minutes, 36 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

COM 1: Never heard of it, I have zero knowledge.

GORDON: OK. Have you ever read the Public Protection Classification Report for the City of Niagara Falls?

COM 1: No, I have not.

GORDON: OK. And, to your knowledge who's been the main contact for the city with the Insurance Services Office? Do you have any knowledge of that?

COM 1: No, I do not.

GORDON: OK. Has the ISO rating been a part of the strategic planning process for the city to your knowledge?

COM 1: No. I don't know what you're talking about. [laughs]

GORDON: [laughs] That's fine, that's actually useful just to know who knows what amongst the key informants. So, what is the collaborative relationship between the city and the water board to your knowledge? Do you have any knowledge of that whatsoever?

COM 1: Do I have any knowledge of their... no I do not.

GORDON: So, you wouldn't... you don't know how frequent communication or collaborative activity is occurring between the fire department and the water board?

COM 1: No.

GORDON: And, is there any collaboration between your unit and the fire department or the water board? What is that collaborative activity like?

COM 1: Between my unit, the communication division and the fire department? Yes, daily.

GORDON: OK. So, between your unit and the fire department, you're communicating daily.

COM 1: Correct.

GORDON: And, do you have any interaction with the water board at all?

COM 1: During my job? Occasionally, yes. I've had to call them.

GORDON: And what are you usually, what kind of communication are you engaged in with the water board?

COM 1: Currently, just through phone circuits, telephone calls.

GORDON: OK. So, telephone calls, you're helping them out with their telephone circuits, or you're just connecting? Or...

COM 1: I will assist in repairs of their circuits if needed, if they call me.

GORDON: OK.

COM 1: But, communication in our both departments is on a daily basis through the fact that we work in the communications in the 911.

GORDON: OK.

COM 1: They're daily needed to be contacted. There's communication between us, but work between us? No, it's just communication.

GORDON: OK. And specifically, what forms of communication are occurring? It's usually telephone conversations, email, face-to-face?

COM 1: Just phone conversations.

GORDON: And that's between you and the fire department?

COM 1: Yes. Well, no, between us and the water board.

GORDON: And the water board, OK.

COM 1: Right.

GORDON: And is it routine, or on an as-needed basis?

COM 1: As-needed.

GORDON: OK. Do you per-

COM 1: Emergencies, we contact them. [laughs]

GORDON: Right, OK. Do you perceive any obstacles to collaboration between communications and the fire department, or communications and the water board?

COM 1: Obstacles between us?

GORDON: Yea.

COM 1: Just the fact that we do not have a radio communication with them now. We used to.

GORDON: Oh, you used to have radio communication between the-

COM 1: Yes. But they went and changed their radios to a different frequency and never told us about it.

GORDON Oh, I see. So now, when communication is occurring it's usually just telephone?

COM 1: Just by telephone, or maybe fax, but that's also a version of telephone.

GORDON: OK. And do you think that's a problem? Is there, is it-

COM 1: Yes, I do.

GORDON: OK, why would you say it's a problem?

COM 1: Due to the fact that we work at the 911 facility here, upon emergencies we need to contact them and be in communication with them sometimes constantly during an emergency. And without radio communication that could present problems.

GORDON: OK. Would you suggest any solutions to overcome that obstacle?

COM 1: Yes. I suggest that they provide the information for their type of radio system that they now have entered into and share that with me so I can purchase a proper radio to install in the facilities here so we can communicate with them. With their permission.

GORDON: OK.

COM 1: To talk on their channel.

GORDON: OK. So, the ISO rating gives a grade, a PPC grade, that affects home owner insurance rates for residents and ratepayers. So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance residents and ratepayers, do you perceive there would be support for using funds toward such improvement from the city?

COM 1: Yes, to improve the communication between our two facilities, the communications here at five te-, nineteen twenty-five... I said five twenty [laughs], the old building...

GORDON: [laughs]

COM 1: ...and the water board. Yes, that could improve.

GORDON: OK. So, do you think it would have been useful if you were briefed on ISO ratings at the beginning of your employment with the communications department given that communications is a part of the score given for the ISO rating?

COM 1: It would've helped me, but I do not know the degree of my supervisor's involvement. I cannot speak for him...

GORDON: OK.

COM 1: ...but if he is involved, he might be, so, he never shared with me that he was.

GORDON: OK, and who's your supervisor?

COM 1: Lieutenant Drake.

GORDON: And he's in charge of the dispatch center, right?

COM 1: All of communications and I.T. throughout the whole city.

GORDON: OK. And, do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically, if your input would affect the grade?

COM 1: Yes.

GORDON: OK. And, how often and from whom would you suggest would be best for ISO information to be communicated with you?

COM 1: Well, I would like to obey the chain of command and come through my lieutenant, my supervisor, then hand it down to me if needed.

GORDON: OK. Now I'm just gonna touch on some more technical stuff regarding the PPC grade. I'm looking at the Public Protection Classification Report for the City of Niagara Falls that was issued in twenty sixteen. And, item 432 is titled credit for dispatch circuits. So, the first item under that is dispatch circuits provided, and we received a 25 out of 40 available credits. And it says the points are determined by prorating the value of the type of dispatch circuit using the percentage of members dependent upon each circuit. So, that seems like it's mostly regarding manning. The next one is monitoring for integrity of circuit. And it says, for maximum credit the dispatch circuit must have an automatic system that will detect faults and failures and send visual and audio indications to appropriate personnel. We received a zero out of thirty. Do you know anything about that? Do we, do you have any knowledge of, does our dispatch circuit have an automatic system that detects faults and failures and sends visual and audio indications to appropriate personnel?

COM 1: Now, is this the communication circuit from here at the 911 center to the water board?

GORDON: No, this is just from here to the fire department. So it's just internally. Not involving the water board.

COM 1: Internally.

GORDON: Right.

COM 1: So, this is just from the communication center-

GORDON: Yea, it's for, specifically for fire suppression activities.

COM 1: Fire suppression activities...

GORDON: Yea, and again, it says dispatch circuit should have an automatic system that detects faults and failures and sends visual and audio indications to appropriate personnel.

COM 1: Now, when you talk about, that's for fire systems, correct?

GORDON: Correct.

COM 1: OK. So, communication circuits between city facilities to here at the dispatch center.

GORDON: Right.

COM 1: For fire suppression. We do have circuits in every building that when the circuit is down, we are alerted.

GORDON: OK. And visual and audio indication, so there's some kind of alarm...

COM 1: Right.

GORDON: ...that goes off when the system is down?

COM 1: Yes. We have a, a Demco alarm receiver here.

GORDON: OK.

COM 1: And fire headquarters here, right at the 911 center here, that monitors all fire circuits throughout the city, and when there is a problem we're indicated.

GORDON: OK. Because I'm wondering if it is possible that there is more an issue with reporting when it comes to some of these items. So that's why I'm trying to find out. Maybe this just wasn't-

COM 1: I think maybe they must not have understood that fire suppression...

GORDON: Right...

COM 1: Possibly, if this is to do with the fire alarm panel, we're constantly monitoring all fire alarms in all buildings for the city, throughout the city, constantly. So...

GORDON: OK.

COM 1: So, we are alerted by visually and audibly.

GORDON: Ok, and if dispatch goes down, like if the whole 911 dispatch center goes down is there an automatic system that detects faults and failures in that circuit?

COM 1: Yes, there are.

GORDON: Good to know. Another item is the emergency power supply. For maximum credit, emergency power supplies need to be provided and regularly tested. Is that something that's integrated in our dispatch circuit?

COM 1: Yes. Every device, right nowadays it's computers, have UPSs on them, and the whole building has a backup generator.

GORDON: OK. Because we received ten points out of an available twenty for that item as well, so again, I'm wondering if there's a reporting issue there.

COM 1: No, we have battery backups, we use UPSs along with a onsite generator.

GORDON: OK. And the following item in this category is titled when no circuit is needed. And it says, if all responding firefighters are in the same building as the communication center and are alerted, no dispatch circuit is needed and the maximum points are credited. However, the community does not operate in this fashion. So...

COM 1: That is correct.

GORDON: OK. So, and that's a hundred points and we got zero for those points.

COM 1: Now that is probably something to do with your administration, on what your, if all the firemen are in one facility? I don't under-

GORDON: Yea, I'm thinking it might be something along the lines of if there's a call that comes in and the communications center is in the same building as the firefighters are, then no dispatch circuit is needed because there is a dispatch unit in the firehouse and they can just walk over and tell them to respond to something. That's the way I'm reading it, but... Let me read it one more time...

COM 1: Yea, you need to-

GORDON: If all responding firefighters are in the same building as the communication center and are alerted, no dispatch circuit is needed and the maximum points are credited. However, this community does not operate in this fashion. Yea. That's a little odd and it's a lot of points to lose out on something that seems-

COM 1: Yea, we do not operate in this type of fashion. That's because we have our firefighters throughout the city.

GORDON: Right.

COM 1: [laughs] They're not in one facility, so.

GORDON: Yea. It seems like maybe that's more regarding volunteer fire halls where dispatch might be located in the same facility. You know.

COM 1: Never... Well...

GORDON: And even still, that goes through county, right? The volunteers, so...

COM 1: Maybe there's someone you can call to further explain that. Of why are we only getting a zero...

GORDON: There is, yea, there's a guy named Tom Yager, he's an ISO field representative and I'm supposed to be interviewing him this week, so. Again, if there's any more specific technical data that he provides, if you don't mind I might call you back and touch base with you on that.

COM 1: Yea, that one we could improve, but, you know...

GORDON: Yea, there's only so much you can do, right?

COM 1: I don't totally understand what they're getting at. We don't operate in that type of fashion. Why? [laughs]

GORDON: Right. Well that's about it, John, that's all I have. Is there any question you have, or anything else you might want to add?

COM 1: No, I think that's about it.

GORDON: John, I really appreciate you getting it back to me. Thanks for your time.

COM 1: No, you're welcome, and if I can help you with that other further explanation of that last one, I'd be glad to help you, OK?

GORDON: Great, thank you very much, John.

COM 1: Alright, you have a good day.

GORDON: You too, bye.

COM 1: Bye.

END OF INTERVIEW

Appendix I

Transcript of NFWB Commissioner (NFWB 1) Interview

Date: 03/27/2019
Duration: 23 minutes, 19 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWB 1: My understanding of it?

GORDON: Yes sir.

NFWB 1: Well, my understanding is that it's a numerical rating that's based upon a number of factors, firefighting factors, within the scope of the firefighting area, where in this particular case is the City of Niagara Falls. Which would be piping, flushing, flowing of hydrants, equipment, distance from fire locations, firehouses, and obviously training, and I would think the type of apparatus that would be utilized in pumping capacities.

GORDON: Have you ever read the actual Public Protection Classification Report for the City of Niagara Falls?

NFWB 1: I have not.

GORDON: OK. And who would have access to that, who would have that in their possession at the water board?

NFWB 1: The capabilities of the hydrants?

GORDON: The actual Public Protection Classification Report, the actual document. Do you have any idea who might have possession of that document at the water board?

NFWB 1: I do not.

GORDON: OK. Who has been the main contact for your organization with the Insurance Services Office?

NFWB 1: Ah, unknown.

GORDON: OK.

NFWB 1: Well, quite frankly, I think historically, you know, from a historical standpoint, I think there's been a huge disconnect between the Niagara Falls Water Board, which is a separate entity than the City of Niagara Falls, uh, there's been a huge disconnect between the water board, the public officials and fire for quite some time. So, I think that, you know, the very few questions you've asked me, they haven't been approached because really up until a year and a half ago there has been very little dialogue between public safety and the water board.

GORDON: And in recent years that communication has increased?

NFWB 1: Yes, it's increased in a lot of levels. I remember speaking to your former chief, Chief Colangelo. Matter of fact, as soon as I became a member of the Niagara Falls Water Board he was one of the first folks that I had contacted, you know, city department heads, talking about the relationship he had with the water board and he said there wasn't one. Quite frankly, he told me, quote: I've never even been invited to a meeting of the water board. He thought that, you know, the relationship was very caustic, so caustic that he had even requested from the former executive director, Paul Droff, former executive director of the Niagara Falls Water Board, he wanted a map of piping sizes throughout the city and he threw back at the chief saying that, you know, this is Homeland Security stuff and we're not gonna give it to ya. Which is absolute hogwash, and bullshit. But it showed the non-existent relationship between public safety and the water board which, in my opinion should have been a smooth marriage and it was far from that. And a lot of it had to do with, you know, the political atmosphere, but it shouldn't have endangered, in my opinion, public safety.

GORDON: So, has the ISO rating been a part of the strategic planning process of the water board, would you say?

NFWB 1: Well, I would say yes. And part of the reason for that is because our discovery of not only the number of internal water main breaks that we inherited, and when I'm saying we, there was a majority change in members of the water board which really changed the direction of the Niagara Falls Water Board when it came to public safety and a lot of other things. But, because we're talking about public safety, I'll stay on that avenue at this point. But we discovered there were a lot of water main breaks that had been just been, blew up, broken, in some cases for two years. So, [laughs], upon understanding that we had numerous water main breaks throughout the city, obviously it effects pressure throughout the city, and we also understand that, unfortunately we uncovered that there were up to, we identified, you know, up to about one-hundred sixty-five fire hydrants out of roughly twenty-five hundred that were inoperable. In addition to that, we also discovered that one of two of our water towers, one in particular on Hyde Park and Beech Avenue was out of service. And it was out of service for twenty-two years, and when I say out of service I mean it was full of air and not water. So, for redundancy as far as water main breaks and pressure, the City of Niagara Falls currently doesn't have any redundancy. We can suck water from Niagara County through a loop we have, but other than that, maintaining pressures from an overhead water tower, we're even as of today, unable to do that. So, through a number of findings of our own, talking to fire, talking with our folks that were in charge of the maintenance on the infrastructure and maintaining water mains, we had a huge dilemma on our hands, and in our opinion was a huge public safety risk with hydrants and water mains in disrepair.

GORDON: So, you kind of touched on this a little, but once again, could you define the collaborative relationship that you think exists between the water board and the fire department.

NFWB 1: Today, or two years ago?

GORDON: Both.

NFWB 1: Two years ago, non-existent. And I mean completely non-existent. And, I think there's many people who will agree that we understand the importance of public safety. And for some reason, I'm gonna be repetitive, there was a disconnect. There was a huge disconnect between fire and water in the City of Niagara Falls.

And it existed for long stretches. And we are and continue to be of the opinion that hydrants out of service are unacceptable. They're so unacceptable that we won't allow more than five hydrants to be out of service within a twenty-four-hour period as I'm speaking. So, you know, when we look at, you know, dialogue it was non-existent. And today what we have, it's similar to a shared service. We do a repair on a fire hydrant, we notify central alarm that that hydrant is back in service. We maintain a daily list that's shared with fire. They have, I think, monthly meetings with the chief or his designee to talk about issues regarding fire service and what we can do to make things a little easier for fire. We've also incorporated and identified fire loops and private fire hydrants within the city, because private fire hydrants, believe it or not, don't fall within the jurisdiction of the water board, they're privately owned. So, for the first time in I think the history of the city and the water board, now we have identified the number of private hydrants and the maintenance of the private fire hydrants and the fire loops within the city and also identified the number of fire loops. So, comparable to what it was two years ago and what it is today, it's a complete turnaround. And it's one that we both enjoy and it should have existed long before two years ago. This should have been an ongoing thing. But we don't have to worry about that any longer because we maintain a great relationship.

- GORDON: So, you touched on this a little bit as well, but just to reiterate, how frequent would you say communication or collaborative activity is occurring between the water board and the fire department?
- NFWB 1: It's almost daily. Fire gets a two-alarm fire or a big working fire, they'll call the water board, we send personnel out to the fire scene to assist with locating hydrants with the best pressure. So, it's daily in some cases.
- GORDON: OK. So, in what form would you say? It's face-to-face during emergency incidences, right? Is there any other form? I know there is some sort of computer system being introduced now...
- NFWB 1: Yea, part of the efforts are that we have GPS'd all the hydrants within the city, and that includes fire hydrants. That information along with our flow testing, gallons per minute per hydrant, is now being shared with fire. So, the data we collect is being shared with fire on a daily basis. Keep in mind, even some maintenance programs that should have been incorporated were discontinued years ago. What would that be? That would be the flushing of hydrants. There hasn't been an active hydrant flushing program in a decade within the city limits. There hasn't been any flow testing of fire hydrants done that we can go back with any records. So, one of the things we're doing in the city now, we're flow testing, and testing, and color-coding fire hydrants based on their flow capacities. Don't forget, we're also changing out some very old hydrants. We're gonna get rid of, we're getting rid of a lot of the old Muellers, which tend to slam, alright, and we're putting new Kennedy hydrants in. We have a program where we're replacing close to two-hundred hydrants a year. We keep probably a hundred, maybe a hundred and twenty-five, hundred and fifty hydrants in stock now. They used to keep two in stock, so...
- GORDON: Do you perceive any obstacles to collaboration between the water board and the fire department? Any specific obstacles that you see?
- NFWB 1: Obstacles? You know, obstacles are only in the w-, they only become a problem when personalities become clashed. I don't see that at all. I think that it appears to be just a great working relationship that's only gonna get better as we improve our end, which is the water end. Keep in mind, it wasn't the fire department's

problem, well, it was the fire department's problem that the water board didn't maintain fire hydrants. Because then they'd have to do what? Stretch longer distances and response times to get water on a dwelling, and we've diminished that somewhat. And we have a very active program for maintenance and repairs and the flushing of hydrants. We have a dedicated hydrant truck, we never had before. We paint our hydrants; our hydrants hadn't been painted in years. Now we even paint them, to maintain them. We put markers on hydrants now for the winter so fire can identify them if there's a problem with them even being buried in the snow in high snow accumulated areas or intersections where it's gonna be high. So, no, I think efforts on both sides of the aisle are very good.

GORDON: Earlier you mentioned, you said personalities and then you also said earlier politics had gotten in the way in the past. How would you suggest overcoming that in the future?

NFWB 1: Well, I think one of the things is, you know, when we talk about the politic atmosphere of the water board, there was conflict between the elected officials and the executive staff of the water board. And how that's defined is very simple. The elected officials have the appointment powers to put people on the Niagara Falls Water Board, and quite frankly, what happened, there were political appointees that I don't think were really paying attention to what they should have been paying attention to. And that is the service of the water board and obviously it's connection with public safety was completely disconnected.

GORDON: So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance premiums for residents and ratepayer, would you perceive there would be support for using funds toward such improvements?

NFWB 1: I do. And I don't think it's just residential, it's commercial as well, so, yes, I do.

GORDON: Do you see any specific obstacles that might get in the way of such funding?

NFWB 1: You know, I don't think within, you know, everyone has budgetary constraints, I think that anything that's within reason or within reach, I don't.

GORDON: I have three more questions for you, sir.

NFWB 1: Yes sir.

GORDON: Would it have been useful if you were briefed on ISO ratings at the beginning of your appointment?

NFWB 1: Of course, it would be. You know, I know just a little bit obviously because my father was a smoke eater. So, I know a little bit about, I don't know the whole concept of it, but I know a little bit of it. I probably know a lot more than the other board members because I was part of that family. But, no, it would certainly be helpful. It was something we talked about, matter of fact, me and a couple other board members talked about the fire ratings, and insurance ratings, and the reduction of insurance, but there's a lot of things that have to come together in order for a system to be put into place to say, you know, this is what your rating was and this is what it can be. But obviously with our infrastructure and our problems with fire hydrants and water main breaks and the lack of communication with our own fire department wasn't gonna allow us to get to any type of ISO rating that was gonna be a positive outcome for residents or commercial holders of fire insurance within Niagara Falls.

GORDON: Do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your term of appointment?

NFWB 1: I do. I do. And one of the things that also drives it, it's not just the water board. I think our elected officials need to be brought in so they understand what it is, so when we're talking about acronyms, everybody understands what it is.

GORDON: And how often, from whom, and in what way would you suggest to be the best for ISO information to be communicated between the water board and the fire department, and officials?

NFWB 1: Well, you know, I think that periodic updates of what goes into the rating and how the ratings are improved, or raised one way or the other. You know, what is the barometer that's used that reflects the grading of it. I think that information needs to be shared. I think it just needs to be shared information. I think there should be a periodic update on where we are, are we a 2, or are we a 2A, are we a 3? If we see an increase in the rating, or a decrease in the rating, what were the contributory factors, or what can we do to decrease it? I think all those things collectively make us a smarter bunch.

GORDON: You mentioned you think elected officials could take a little more ownership, do you think that's who should be leading this periodic communication. Like, should it be coming directly from them, should they be directing it? Or...

NFWB 1: No, I think it should come right from fire. I think it should come from fire in a way of, this is where we are, this is where we should be, this is where we'd like to be. But because there are so many hands in the pot, we need, you know, we need the water board to do this, we need fire to do this, we need the elected officials to buy us some better equipment and give us some better training. And all those numbers come together and this is what we end up, this is the batch that we cooked, right? Now we can all sit down and understand the numbers. I think it should be driven by fire in cooperation with elected officials being on board and having them have an understanding of what it means. Because we understand what it means, it means a couple of things. It means that the fire service is adequate or better than- or it could, I mean, it could go the other way, the fire service is very bad, the water is insufficient, the equipment's bad, the training sucks, right? The communication's poor... I mean, you could come up with a lot of scenarios on what the rating is gonna be, based on all the factors that come into it, right?

GORDON: Right.

NFWB 1: So, I mean, let me ask you this, what's the rating now?

GORDON: We're at a three, and it's on a scale that's one to ten, one being the best.

NFWB 1: Right.

GORDON: There's about three-thousand some-odd departments nationwide that have a three, a thousand some-odd that have a two, and there's only 132 that have a rating of one, and only seven of those are in New York State.

NFWB 1: And it should be a priority of fire. It should be a priority of our community. It should be a priority of our elected officials, to get that rating lower. Alright. Because we understand the end result. The end result is monetary for everybody

who has fire insurance, for residential policy holders as well as commercial, because the rates go down.

GORDON: Not to mention the fire safety, right?

NFWB 1: Not to mention that the public is better served.

GORDON: Right. Any questions you have for me?

NFWB 1: No, you know, I think the only question I have for you... I understand this is part of your, what, undergrad?...

GORDON: Graduate.

NFWB 1: Oh, graduate. And it's commendable that this is being looked at and that this information will hopefully be shared. But what we would like to see, and you as a smoke-eater, would like to see the numbers go down. The rating go down. And we're committed to working with fire, and whoever else needs to be a partner in this to reduce the numbers, so...

GORDON: I really appreciate your participation, I mean, there's some really great information here, so thank you very much.

NFWB 1: Oh, you're welcome!

END OF INTERVIEW

Appendix J

Transcript of NFWB Commissioner (NFWB 2) Interview

Date: 03/28/2019
Duration: 11 minutes, 35 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWB 2: Probably zero.

GORDON: OK.

GORDON: And, have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFWB 2: No.

GORDON: OK. And, to your knowledge, who's been the main contact at your organization between for the Insurance Services Office?

NFWB 2: Well, the insurance services would probably be either our financial director, Kendra Walker, our safety officer which is Gina and for a moment I'm forgetting her last name, and the executive director who's, like, brand new to the position, he's been with the water board for twenty-seven years, but he's new as executive director. So, I'm sure that there's a group of people who should be aware of it.

GORDON: OK. And has the ISO rating been a part of the strategic planning process of your organization, to your knowledge?

NFWB 2: No, not as far as I know.

GORDON: OK. And, what is the collaborative relationship between your organization and the fire department?

NFWB 2: Well, I know that they work together to make sure, you know, this year year we had an emphasis on getting all of the broken fire hydrants replaced, having all of them painted and color coded as to their capabilities and capacities. We have it all on computer so that the fire department can, in the case of a fire, see what kind of, what size line is attached to the fire hydrant. They can tell by the color coding, if the fire hydrant that is closest to the fire is operational, and if it has eight inch pipe or a ten inch pipe and what the pressure is. And I know they do communicate quite often about that, and they would let us know when there's fire hydrants that have been damaged or broken due to an accident or something. And, we would probably do the same if, you know, when that came it would probably be noted on the computer program that identifies all of the fire hydrants. I think there's like two thousand some fire hydrants in the city.

GORDON: Wow, yea... Yea, I know you guys have done a gr-, even yesterday we had a fire and you had a water board employee right there on the fire scene, which has been great.

NFWB 2: Yea, they do. They'll usually go just to, you know, make sure that the water's, you know, working, and if not, where there's closer ones. And then, the firemen should be aware of all of that. When they have, if they look on that computer program, it's probably on an iPad or something that you have, and certainly that we have so they can tell. And I did read that they were, not complaining about the hydrant in the paper, but that the line was a smaller line, so the pressure wasn't that strong. And certainly that's gonna happen in a city like ours, Buffalo, any city that's old and has a very old infrastructure.

GORDON: Yea, sure, I was even working with our most senior firefighter yesterday and he was saying we've known about, you know, as soon as the call came in he said, before anyone even made it to the scene, he said that's a terrible area for water supply. So we, you know...

NFWB 2: There you go. Right in the heart of the old city.

GORDON: Right, yea. So, how frequent would you say is communication or collaborative activity occurring between the water board and fire department?

NFWB 2: I would think over the past year as they worked on this color coding on the fire hydrants and that, that they were meeting regularly. Of course, that's an employee responsibility and the board would only be reported if there were really any major changes or adjustments, or if they needed money to do something. So, I honestly don't know how often they would meet with them, but it seems that they had regular communication.

GORDON: OK. And, specifically what forms of communication or collaborative activity are occurring, to your knowledge? Is it routine, is it as-needed, is it, you know...

NFWB 2: You know, I honestly don't know. I was chairman of the board for like six months and during that time I met with the mayor and the executive director at that time, and the fire chief at that time, just to talk about what we can do that would be, you know, more beneficial to both of us, and since there was a change, there was a political coup at the water board and a whole group of different people came in and took over, so they would probably know better, but I would think it's now on an as-needed basis. But, I'm sure that they worked with the fire department early on to find out what they needed from us and inform them of what we were doing to meet those needs.

GORDON: Great, OK. And, do you perceive any obstacles to collaboration between the fire department and the water board?

NFWB 2: No, no, not at all. I know even one of our LaSalle, oh, what do you call em?

GORDON: Legislators?

NFWB 2: Pump stations...

GORDON: Oh, pump stations, OK. [laughs]

NFWB 2: Pump station is in the fire hall on Military Road.

GORDON: Oh, right, that's right. Yup.

NFWB 2: So we stopped, and I know the water board employees stop there often to check on the pump station and make sure everything's OK. I'm sure they have a good relationship, I can't imagine that there would be no, there would be no reason not to have a good relationship with you.

GORDON: OK, great. And, let's see... The next question was if you would suggest any solutions to overcome the obstacles, but you said you don't really see any. Do you-

NFWB 2: I, personally I don't see any, and I, nothing has ever been brought to the board that there's any communication problem. Like I said, I know we met collaboratively over the past couple of years to find out what they wanted and what our needs might be as far as being informed. I mean, if they go to a fire hydrant and it doesn't work for whatever reason, we need to know about that. So, we have to, I would believe, communicate back and forth.

GORDON: Right. So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements to the water infrastructure?

NFWB 2: Funds from the water board? Or...

GORDON: Well, I guess the water board is, is, owns the water infrastructure, right? So, it would either be funds from the water board or some kind of grants, or, I mean... would you think there'd be support for-

NFWB 2: Well, obviously, yea, oh sure, there'd be support for it. I think we'd have to, you know, I mean, there's a lot of needs in this city.

GORDON: Sure.

NFWB 2: You know, replacing lines, we're under two consent orders, one for the dark water incident that happened on, in August of seventeen, and one that was, like, twenty years ago with the LaSalle sanitary sewers. So, we've done a lot of work going on and a lot of work that needs to be done. The wastewater treatment plant has outlived its current usefulness and it's like a billion-dollar project to replace it.

GORDON: Wow.

NFWB 2: So, you know, I would think within reason, if it meets our current, we have a capital plan, you know, there's only so much money and there's only so much we can bond for based on our ability to pay and pay back bonds. I would think we'd be more than willing to collaborate on grants with the city and the fire department and/or the fire department and the water board. If there was money available either federally or from the state for improvement of lines and things like that.

NFWB 2: Great. Do you think it would have been useful if you were briefed about the ISO ratings at the beginning of your appointment?

NFWB 2: You know, there was, there's so much going on that unfortunately they're always going from crisis to crisis. And, you know, this ISO could have been mentioned in one of our meetings, I don't think I'm really recalling it. I don't know what the current rating is for the city, or for us if we have a separate rating, I don't know. But, you know, I'm sure once you tell me how bad our rating is I will want to bring it to the board's attention.

GORDON: It's not terrible, so. [laughs]

NFWB 2: Oh, it's not terrible? [laughs] and you might want to talk to our safety officer, Gina, and I can give you her number if you want to talk to her because she really, she's been there for several years and she would have all the inside scoop on more of what you're talking about.

GORDON: Yea, that would be great, I'd appreciate that.

NFWB 2: OK.

GORDON: And I have have just two more quick questions for you.

NFWB 2: Yea.

GORDON: Do you think updates concerning efforts to update or maintain or increase an ISO rating should occur periodically throughout your term of appointment? Do you think you should be updated by somebody? You know, or do you think there's another mechanism in place to be concerned with the ISO.

NFWB 2: You know, I guess I need to understand more dully the importance of the ISO rating and the agency that does it and, you know, why it affects Niagara Falls and how it might affect other communities differently. So, I just need to be more informed about it and I'm sure at that point that all of the board members would be interested in, in finding, of how, because we're all, most of us I would assume are homeowners and pay insurance and we certainly pay a lot of insurance at the water board. And if it would improve their rates that would be helpful.

GORDON: Absolutely.

NFWB 2: So, yea. I'm sure other people would be more than willing to hear about it.

GORDON: OK. And how often, from whom, or in what way would you suggest to be best for ISO information be communicated between the water board and fire department? I know you mentioned the safe-, Gina from safety, right?

NFWB 2: Yea, and Pat Fama who's the new executive director, I'm sure that would be something that he would be interested in. Annually, we renew all of our insurance policies and, you know, again, if we can work with people to get those rates reduced on some level for some pieces of our insurance, that would be great.

GORDON: It would be, yea.

NFWB 2: Yea.

GORDON: Well, thank you very much Ms. Leffler, I really appreciate you doing this.

NFWB 2: Oh, you're welcome.

END OF INTERVIEW

Appendix K

Transcript of NFWB Focus Group with the Executive Director (NFWB 3A), Supervisor of Outside Maintenance (NFWB 3B), Superintendent (NFWB 3C), General Counsel (NFWB 3D), and Senior Engineering Technician (NFWB 3E).

Date: 04/02/2019
Duration: 31 minutes, 47 seconds
Interviewer: Gordon Stewart III
Location: Michael C. O'Laughlin Water Treatment Plant , 5815 Buffalo Avenue, Niagara Falls, NY, 14304

GORDON: OK. We're now recording, so just to make sure I can keep everything together when it's being transcribed, before you speak, if you're going to speak on any of the questions, just state your name. Everyone have different first names? Then first name would just be OK then, perfect. So, I'll start with you Mr. Fama. What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office? And you can defer to someone else at any time, just make sure they state their name.

NFWB 3A: I'm not fully familiar with much of that myself. As I said, I'm reasonably new to the role. So, I probably would defer to council for any information regarding that.

GORDON: OK. Does anybody else have any knowledge of the Public Protection Classification grade at all?

NFWB 3B: You're referring to the...

GORDON: The ISO rating.

NFWB 3B: Oh, you're referring to the ISO. I understand it's a rating, it's an independent company that gets paid for the rating. So, what they would do is they would come into the city and they would rate the city and then sell that information to either the city or the fire department. Now, it's my understanding that the ISO is older, and they're going to a new method. So, my question would be, is Niagara Falls still using the ISO method or is it going to the new method like Texas is using?

GORDON: Yea, the Insurance Services Office is a private company, like you said, out of New Jersey and they serve the insurance industry. So, as of now and until we hear any differently the ISO will continue rating the City of Niagara Falls. And it's become a standard nationwide. There has been some iteration of it since the 1800s that serves the insurance industry. And they set a rating regarding fire suppression capabilities for the municipality and then insurance companies set homeowners insurance rates based off of that rating. So that's what it is. Has anyone ever read the Public Protection Classification Report for the City of Niagara Falls?... No?

NFWB 3B: Where would it be, like, where would you get that information?

GORDON: Well, the Insurance Services Office provides it. I believe the fire chief has a copy, and beyond that I'm not sure who else might have and that's why I'm trying to find out if you guys have ever read it. It's not abnormal for you not to have had access to it, but, we're just trying to build recommendations moving forward to

make sure that we can continue keeping all the pieces together to keep that rating up. That's all.

- GORDON: And, who has been your main contact at the water board for the Insurance Services Office? So, I know last time there was a rating was twenty sixteen. Do you have any knowledge of who might have been in contact with the Insurance Services Office at that point?
- NFWB 3A: I'm not sure.
- GORDON: OK.
- NFWB 3A: Let me... hold on for one second. [leaves room to retrieve council]
- GORDON: OK.
- NFWB 3B: Would it be engineering?
- NFWB 3C: Maybe engineering, probably Rick Roll.
- GORDON: OK. And I'm not sure how the process went down, it might have even been that fire called somebody over here and just got some information sent over, you know, I'm not sure.
- NFWB 3B: It would probably have been Rick Roll.
- GORDON: OK.
- NFWB 3B: Engineering. But I believe Patrick can go find... you wouldn't know do you, Rob?
- NFWB 3E: I do not know.
- NFWB 3C: It wasn't you, was it? [laughs]
- NFWB 3E: Wasn't me. [laughs]
- NFWB 3B: You want to wait for Pat, or you want to...
- GORDON: I'll move on to a different question just to keep it moving here. So, [#5], what is the collaborative relationship between your organization and the fire department?
- NFWB 3C: Very good. We try and have monthly meetings, at least monthly meetings. Sometimes it's hectic and it's every other month, but we get together as much as we can with the chief, and it's now Chief...
- GORDON: Pedulla.
- NFWB 3C: Thank you. Chief Pedulla, and Chief Winker. We get together with those guys. You know, we get down any issues with hydrants they have, or any low flow areas that they're not aware of. So, we have, right now we have a very good working relationship with them.
- GORDON: OK.

NFWB 3B: Well, what we're doing right now, especially with the help of Adam, and Bill and Pat's blessing, is we have a bunch of information on a computer program. Correct? Am I wording it right? Please interrupt me.

NFWB 3E: GIS, yea.

NFWB 3B: A GIS system. And at this time, the fire department does not have a tablet to view this system. So, at the end of this meeting, or tomorrow, we are dropping off a loaner tablet to the fire department that the battalion chief will have on hand and each shift it will be passed over, and on the way to that fire the battalion chief will be able to pick up that section of the city on the tablet, know what size main is there, what size, and you know, where to grab hydrants. So, you're not trying to grab a six-inch hydrant off a low pressure main. So, he'll have that information, get there, and whatever engine company shows up first, he can say nope, let's go to this one. There's no more guessing. So, what we've also done with the meetings with Bill and the two fire chiefs, color coding the hydrants is also big to them. So now, we started in LaSalle, and at this point most of LaSalle is done. So, as you drive up there you'll see the color of the hydrant, and you'll coincide the color of that hydrant with how much pressure is coming out of that hydrant. So that's what we've been doing with the fire department.

GORDON: Awesome.

NFWB 3B: Now more than ever, do you agree?

NFWB 3C: Yea. Oh, yea. The last year it's been amazing.

GORDON: The last year?

NFWB 3C: Yea.

NFWB 3B: [inaudible]

NFWB 3C: Year, year and a half, it's been really...

NFWB 3B: There's open communication now.

GORDON: And before there wasn't?

NFWB 3B: I don't want to speak on the past, but, I would say limited.

GORDON: OK.

NFWB 3B: How's that?

GORDON: OK. And, how frequent, specifically would you say that the communication and collaborative activity is occurring between the water board and the fire department?

NFWB 3C: Like I said, I get ahold of Chief Winker once a month.

NFWB 3B: And then I talk to them, being in the field, I talk to Winker, mostly Mike Winker, could be up to two times, three times a week.

GORDON: OK.

NFWB 3B: And any big fires... oh boy.
[Mr. Fama returns to room with council]

NFWB 3D: [Greets the room] Gentlemen.

NFWB 3B: Any big fires, usually Bill or myself show up to the fire to assist in any way, if there's a hydrant issue. With Michigan Avenue, we showed up, directed it to a higher flow hydrant, which helped the situation. So, we show up to wherever they need us.

GORDON: Awesome.

NFWB 3A: Sean Costello, our general council, I thought if you have any questions...

GORDON: Hi, how are you?

NFWB 3D: I'm well, how are you?

GORDON: Thank you, great thanks. So, let's see, my question was, that I asked before when he came and tapped you... the Public Protection Classification Report for the City of Niagara Falls. Do you know if the water board has custody of that document?

NFWB 3D: I don't think we have custody of that, I would imagine that'd be in fire department or code enforcement. As the fire safety official and I forget the exact term, but they share, my understanding is, in the City of Niagara Falls those two entities sort of share responsibility for fire code. So, one of the two I would anticipate.

GORDON: Great, OK. And, Mr. Fama, has the ISO rating been a part of the strategic planning process of the water board to your knowledge?

NFWB 3A: [speaking to Mr. Castello] Were you in on the strategic planning? I remember seeing that.

NFWB 3D: I think that that was part of, all the work that went into hydrants, there was some talk in the two thousand seventeen, two thousand eighteen timeframe, about, you know. So, they did a hydrant study in two thousand ten, thereabouts. They subsequently put a heck of a lot of money into restoring hydrant service. And one of the factors that was there, the thought was when all the hydrants were back up and working, which my understanding is that they are now, that then there would be, that would be the time to have some dialogue with the fire department about revisiting the ISO rating.

GORDON: Awesome.

NFWB 3D: So, yes, it was...

GORDON: Part of the conversation?

NFWB 3D: Maybe not in a written plan, but it was part of the thought on one of the many benefits of getting all these hydrants working.

GORDON: Great. And, specifically, when you guys are saying that you're communicating with the fire department, specifically what forms of communication? You said face-to-face during emergency incidences, and then the once a month. Is it usually a telephone call? Or is it...

NFWB 3C: Nope, face-to-face.

GORDON: It's all face-to-face? OK. And are there any emails, or telephone calls that do happen in addition?

NFWB 3B: There are emails between Mike Winker, Bill and myself. If they come across a hydrant, they usually try to reach by phone. If they can't contact us it's by an email. But there's multiple forms of communication between us and the fire department.

GORDON: Great. And, I remember hearing something about a computer system you guys were working on?

NFWB 3E: Yea, our GIS system. It has, it will have all our outside water assets. So, all our piping, all our hydrants, it includes all the hydrant pressures on them. Those are the color-coding Mike's been talking about. And, yea, access with that is they have one current username and password to go with it that they can use. And I think we're working towards maybe something a little more. The tablet is part of that, so they have field access to it as well. But, I mean, that can be expanded as we see fit, essentially.

GORDON: Awesome. Do you perceive any obstacles to collaboration between the fire department and the water board?

NFWB 3A: No, not at all. I think we've worked together and we continue to work together, you know, while, I stepped out, but I'm sure Mike said that anytime there is a fire, and we do go out whenever possible, so I don't see any problem at all with collaboration.

GORDON: Great. And, has that always been? It seems when we were talking, when you stepped out, that before there might not have been as much communication. Can you speak on, maybe, before? Or what might have ramped up that communication at all?

NFWB 3C: I will say, I've been in this position just over a year. So, I really can't comment, and you know, you just heard Pat say that he's only been here for a couple months in this position. So, really can't say anything what was in the past. What I can tell you is in the past year we have made strides to get along with the fire department. And they've made strides to get along with us. It's really... We've always had to deal with firemen, I've been in the streets for, you know, twenty-eight years and they've always had to deal with us and we've always had to deal with them. But, I can't say, you know, whether we loved each other or hated each other because I've only been in this position for a year. And, we're all pretty much new to the positions we have, so.

GORDON: OK.

NFWB 3C: We've taken it, we've been given the opportunity by the board to create a very good relationship with the fire department, and it was very easy. Just by replacing about a hundred hydrants and getting another fifty working, all the sudden the fire department was our good friend. So, it's easy to keep the fire department happy, just give them water.

NFWB 3B: The last ten years since I've been here this is the best I've seen the relationship between the two departments. I can easily say within the past ten years this is the best we've gotten along, or worked together, however you want to word it.

GORDON: And do you have any suggestion of why maybe it wasn't as good before?

NFWB 3B: I can't... I wouldn't be able to, like Bill said perfectly, I can't speak for who was here before me as to why or what happened or if there was anything. It would be wrong for me to speak for somebody else. To try to explain why there was a distance between the two.

GORDON: Great. I'm only asking that because my next question was, you know, if there were any obstacles what would be solutions, do you think. So, maybe you can't speak on that, but maybe just looking at the bigger picture, the broader picture, what was the solution? Can you maybe comment on what was the solution was to increasing communication and collaboration?

NFWB 3B: Communication.

GORDON: Just more communication.

NFWB 3B: I believe there was limited amount of communication between the two departments, you know, I can see the point they'd go to a fire, they'd go to the hydrant, the hydrant didn't work. So, I can understand maybe from that point of view that they felt we weren't doing enough, but since we've all been in our positions, everybody sitting at the table now, we've made a concerted effort to make sure every hydrant in the city works, color code them, pressure test them. In the winter, frozen hydrants, we have a hydrant truck now. This is something Bill and I started, we never really had a hydrant maintenance truck for the last ten years. Before they did, but, for the last two years we've had a hydrant maintenance truck that their sole job is to go out and service the hydrants. If they're frozen, thaw them, then we put them on a list and at some point remove those frozen hydrants. We don't keep going back. We're in a more proactive approach to the hydrants as to not just treating the symptom. You know, we're just gonna get rid of the hydrant, and then next year we don't have to go back because it's not gonna freeze up no more. So there's, from what I can see, and from what I can tell you is, just been a much more focused effort on the hydrants because we have the resources now and we have the commitment from the board and the administration.

GORDON: Awesome. So, Mr. Fama, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support from the board for using funds toward such improvements?

NFWB 3A: I'm sure the board would like to hear about anything that might help us decrease ratepayers' rates. Any study that comes out I'm sure they'd be really interested in seeing. I can't speak for the board, but they're always open to any information they can have. So, I'm sure they'd be more than happy to see it.

GORDON: Awesome. Are there any major obstacles for using funding for such improvements that you might perceive?

NFWB 3A: I would have to see what type of funding, where it would come from, you know, from the capital funds or where before I see any... I have to see the information before I can speak on where funding may come from.

GORDON: OK.

NFWB 3A: You know, if there might possibly be grant funding available, we do have grant writers that work for us. So, you know, if something like that, I'm not sure.

GORDON: Great. When you were appointed executive director, were you briefed on ISO ratings at all?

NFWB 3A: I was not. I have been in the position permanent for...

NFWB 3D: Two days.

GORDON: Two days? Wow.

NFWB 3A: Today is the second day.

GORDON: Congratulations.

NFWB 3A: So, you know, I'm in the process and I did, I read the email you sent and sort of have a brief overview. But I apologize, I didn't receive a briefing on each and every item related to water slash wastewater, so.

GORDON: And do you think it would have been useful if you were briefed on ISO ratings?

NFWB 3A: Related to this particular interview, yes.

GORDON: [laughs]

NFWB 3A: But related to the overall, I have a great team around that I work with and I think that if I'm ever questioned on anything as this, like I said, I have the people I can rely on to give the information or get the information to me. And I don't expect that any decision I make I will have to make alone. So, I believe that I have at my fingertips the ability to get any information anyone needs.

GORDON: Great. And was anybody in the room briefed on ISO rating when you came into your positions?

ENTIRE GROUP: No. [shaking head no]

GORDON: It's not uncommon, so, you know. No? OK. Do you think updates concerning efforts to maintain or increase the ISO rating should occur periodically? And that would probably come from fire.

NFWB 3A: Probably not a bad idea, I don't know. Again, I'd have to see as you were talking, the rating might change, they've been as you guys were talking about the different rating systems and so, if there is a quarterly review of that and knowing the different types of ratings and if they're changing, yea, the information would be useful.

GORDON: And my next question is who, from whom, do you think that briefing should come from, but I, you know, I think it's gotta come from fire pretty much, right? Because that's the main contact with the ISO, is with the fire. And the Insurance Services Office, they have some schedule they use. And it's just like anything else, what is it every three years the insurance industry is redoing rates and premiums. So, I think it's somewhere between three to eight years the ISO... But, the municipality

can request a new rating. So, if there's some big change, like you guys have had since the last rating, because I'll tell you, looking at the report there was a zero out of seven points for hydrants. There was zero points, and I mean, there's been such a big change now, I wouldn't be surprised if you guys get a seven at this point.

NFWB 3D: I think that, to get that seven you have to have, you have to be flowing them twice a year or something.

GORDON: Yea, the specific technical data I'm gonna be speaking with the ISO field rep by the end of this week and I'll get more specific data, but...

NFWB 3D: That'd be great, I mean, I know, what are thirty points your public water supply out of a hundred, or something like that?

GORDON: Correct, yea.

NFWB 3D: It is a little bit different here than in your, than in, sort of, your stereotypical city where all the departments are under, you know, one authority.

GORDON: Right.

NFWB 3D: They're all working out of city hall.

GORDON: Exactly.

NFWB 3D: I think you put out a lot of water, so.

GORDON: Yea, absolutely.

NFWB 3D: We should be doing our part, I think.

GORDON: Yea. And, I mean, everyone I spoke with at the fire department is absolutely delighted with the relationship you guys have built the past couple years. I mean, they were telling me before that they had issues even with just getting standard information. You know, they were being told when they were asking for maps of hydrants they were told it was a homeland security issue. [laughs] The fire department wasn't allowed to have a map of the hydrants, and, you know, so.

NFWB 3B: The one point I want to make, Gordy, is that we approached the fire department to give them the loaner tablet and the information that we've all collected together and Adam's put together. So, it was the water board's effort to reach out to the fire department and give them this information because we understand they've been having a problem getting the tablets. So, instead of the water board sitting idle, we want to show our commitment to helping the fire department, so we reached out to them and told them we're gonna give you a loaner tablet. This way they're not waiting for whatever's holding up the tablets. We're giving them the information, we're giving them the tablet, we keep them informed on any of the changes.

GORDON: That's great. Now, does anyone have anything they'd like to mention about the relationship between the fire department and the water board, or the ISO ratings, or anything regarding what we talked about?

NFWB 3B: What is our rating?

GORDON: We're a three out of ten, one being the best.

NFWB 3B: Oh.

GORDON: It's not terrible. But it's been a three over the past, I think it was three rating cycles. And before that we were a two.

NFWB 3C: Well, Chief Colangelo came in here when most of the new board had taken over. And me and Mike were in different positions. And he sat in a board meeting and he was concerned about the rating taking a hit because of the amount of hydrants that were out of service at that point. So, it's kind of really the only conversation that was had to my knowledge of the ISO. You know, he brought that up, and it's kind of what prompted us to put a push on getting, it was roughly a hundred and fifty hydrants that were out of service. I fixed, I believe we fixed eighty or, I believe we replaced eighty or ninety, and we were able to get some other ones working. Some of those other ones we got working had been replaced since, because obviously they were problematic hydrants. But, once we got everything going, you know, it's been able to change your course a little bit and we've been able to change the ones that crop up to be problematic going forward. Got a stockpile of, the board recommended, I ordered forty at the end of last year. The board recommended I order sixty more, so I ordered actually a hundred hydrants. We have several hydrants in our inventory right now that we can change out, you know, as needed. We've got different equipment over the last year and a half to two years where we can change hydrants with the combination truck we have. We can do hydro excavating, which changes the whole spectrum of the job in some cases. We have hydrants that are intertwined with all kinds of utilities, and having a hydro excavator is, when you have a hydro excavator you don't even have to call into dig safe. That's how harmless it can technically be. So, we've been able to change our routine a lot to get a lot of the hydrants repaired or replaced. And, that was from what Chief Colangelo said at the time was kind of the biggest thing that was gonna affect our rating. Pretty simple. That you can get the fire department water and that helps our rating. So...

NFWB 3B: To add on to what Bill is saying, because of the equipment and that, our response time to hydrants being hit, or a hydrant being called in out of service, if it's out of service it's within the next day or two that it's replaced. When a hydrant is hit, it's probably within hours that it's replaced. So, our response time to out of service hydrants is down to a day or two as opposed to a long time before. I mean, the seventh street hydrant, you know, was hit, by the afternoon it was back on. Ferry, hit, by the afternoon it was back on. So that's another, like Bill was saying, our response time to out of service hydrants are two days max and it's right back in service.

NFWB 3C: We've been able to catch up on a lot of issues in addition to hydrants. We've been able to catch up with a lot of main breaks. You know, at any given time we could have possibly had numerous main breaks in the system that, you know, weren't big enough that they had to be done right away. But, they had to be fixed. We got caught up with all of that. I mean, we may have one main break out there now that we know of, we may not. You know, I'd have to ask him [Eagler].

NFWB 3B: We have none.

NFWB 3C: OK. We have no main breaks out there that, at this point, that we have to fix. Just jinxed us, we're probably gonna have three by the end of the day.

GORDON: [laughs]

NFWB 3C: But because of that we're able to respond, that's what's helped our response time on everything. Being able to be caught up with main breaks, being able to be caught up with hydrants that are broken and out of service, you know, a big back log of them. That's helped our response time, so. I don't know what contributes totally to the insurance rating, but that's gotta help.

NFWB 3B: What you gotta remember is we also have to, you know, instead of me sitting here saying... the unions. The unions have gotten on board, back then we had two departments with limited resources. So, you had the sewer side and the water side. Water side had main breaks, out of service hydrants, valve leaks, OK? But now, with the union, this administration, Bill Wright, you no longer have the two split departments, now they can help each other. So instead of having just eight guys on a crew to try and get caught up on that, we can have sixteen guys. So now we're putting out two crews to handle water issues, and stuff like that. So, we can't forget that the union, and the guys, have made a commitment of coming together instead of having two separate departments going out there and doing jobs. And that's what's really, probably put us over the top, was getting these two departments together. Whereas, we could work together. So, we can't forget the union or the men who've made it happen.

GORDON: Awesome. And when I've looked at the grade from last time around, I mean, it was close to a two. So, I think now with the changes you've made...

NFWB 3B: What is the point difference?

GORDON: I don't have the data in front of me, I'll get it to you, though.

NFWB 3B: No, yea, I mean, if we're at three and it's let's say forty points, do we gotta get the thirty points to get a two? Like what's the grading system, like the cutoff? Where do we gotta get to to get to a two?

GORDON: I have all that data with carts and I'll get it to you. It's all part of my report that I'm putting together.

NFWB 3C: Can you get me that in an email?

GORDON: Absolutely.

NFWB 3D: I'm curious to see that stuff too. I have passing knowledge of ISO, but the more does better.

NFWB 3C: I think you have my email, because...

GORDON: I'll just have the fire chief send over a copy of the report too, cause it's all in there as well.

NFWB 3B: Is it almost impossible to become a one?

GORDON: Well, here's the thing, there's, the latest data going off of memory, there is about three thousand departments nationwide that had a three. So, that's not terrible. There's somewhere in the range of a thousand that had a two, and there's less than a hundred that had a one. There's only seven in New York State that have a one. And to be honest with you, I think we're gonna be close to a one.

NFWB 3B: Now my question is, are you gonna put the big one sticker on your helmet?

GORDON: [laughs]

NFWB 3B: I've seen them, did you see them?

GORDON: Yea, I saw that. Because I think, who was it?

NFWB 3B: It was Texas.

GORDON: Oh, it was Texas you saw it?

NFWB 3B: Yea, somewhere in Texas.

GORDON: Someone in New York State just got one last year, just got a one.

NFWB 3B: And they put it on their fire helmets, a big number one.

GORDON: Right.

NFWB 3B: Yea.

GORDON: But, I think that'd be huge...

NFWB 3B: Can we have a sticker?

GORDON: Absolutely, you need to.

NFWB 3D: Put them on the waterboard trucks.

GORDON: Yea!

NFWB 3B: If you get a number one sticker, I want a one sticker.

GORDON: I think it'd be huge, public relations wise, for both the water department and the fire department to say, look, only the eighth, you know, municipality in the state to have a one. We're doing everything we can to provide the best fire suppression capabilities in the country. You know, so, we're gonna be close.

NFWB 3B: I'm competitive, so I want to be a one. So tell us what I gotta do, what me and Bill, or whatever else we have to do to become a one. I want to become a one.

NFWB 3D: Some of those low flow older mains might be an issue, right?

GORDON: Yea, those are huge downtown. I mean, you guys were just there on Michigan Avenue, right?

NFWB 3C: Yea.

NFWB 3B: But, that's part of this year's capital, that one.

NFWB 3C: Part of it.

NFWB 3D: Yea, but are we gonna get them all? I mean, it's gonna be a three year window when we're done.

GORDON: Yea.

NFWB 3B: I want to be a one, Sean, don't take my one from me.

GORDON: [laughs]

NFWB 3D: Alright, alright.

GORDON: And like I said, you can always request a new rating, so, if you made changes and you only get to the two and then you make a couple bigger changes a couple years from now you can just request them to come and they'll come and do it again.

NFWB 3B: So, two thousand and nineteen and you said the last one was in sixteen, so we're due for a review this year?

GORDON: Yea, I think the last two were sixteen and ten.

NFWB 3B: So, when's the next review coming?

GORDON: So, the next one I'm going to find out from, his name is Tom Yager from ISO, I'll be speaking with him this week, and he's gonna let me know when the next one is up. But like I said, it's gonna be close, so, you know.

NFWB 3B: Alright, so...

GORDON: And, now that you guys have such a good relationship with the fire department I wouldn't be surprised if they pull you in to talk with Tom Yager when he's in town. Because usually he goes around and, you know, he has to talk to the chief of training, he has to talk to dispatch because dispatch is part of it, I assume he was talking to the water board because water supply is one of the components.

NFWB 3D: I think in 2016, and I would never ever be able to find this, one time I think I ran across an email between somebody associated with ISO and Norm Allen who was the former director of infrastructure and operations. But it was like a...

GORDON: Yea, it might have just been a document transfer.

NFWB 3D: A short email, they might have been setting up a meeting, but there wasn't a lot to it. But I just remember running across it and noting ISO at the time.

GORDON: Yea, because he's gonna, they're not gonna go crazy trying to help you. They'll go crazy trying to help you if you ask them to.

NFWB 3D: Right.

GORDON: But if they call and say, hey, give us this information, they're only gonna expect you to give them the information they ask for. But if you start probing them and asking more questions how can we do this or that, that's his job, is to help you get it up if you want him to help you get it up, you know what I mean.

NFWB 3B: So, flow testing, the painting of the hydrants, these all come into play?

GORDON: It all comes into play.

NFWB 3B: The painting of the hydrants, is that important to an ISO company, or no?

GORDON: I think it's the frequency of flow testing.

NFWB 3B: And the color coding of hydrants, is that a big deal?

GORDON: You know, I'd have to look at the more specific technical details, but we'll find out.

NFWB 3B: Because we drive through a lot of cities and they're not color coded.

GORDON: Right.

NFWB 3B: Some are, but, if you compare to what we have now to a lot of other cities, we got most of LaSalle done, so I'd say we have a lot more color-coded hydrants than a lot of other municipalities. I don't know if that'd help us or not.

NFWB 3C: When I went to Lake George last year I sent him [EAGLER] a picture. Every hydrant had a black cap on it.

GORDON: Oh really, yea?

NFWB 3C: So, obviously they're not using a color-coding system because if they were, every hydrant would have been out of service.

GORDON: Right.

NFWB 3C: So, I mean, I drove through another town recently that had all black caps. I mean, I don't know what that's all about, but. So...

NFWB 3B: Yea, the fire department didn't like our blue, so we had to go change all our blue ones.

GORDON: Oh, really?

NFWB 3B: Yea. Winker thought dark blue looked black at night, so he asked us to go to a light blue. So.

GORDON: Oh. [laughs]

NFWB 3B: So, we painted them twice for you guys.

GORDON: [laughs] That's awesome though, that kind of collaboration.

NFWB 3B: So, we have lots of dark blue spray paint if you guys want to buy it off of us.

GORDON: [laughs]

NFWB 3B: Let me know if you need it.

GORDON: Anything else? Any questions you have for me? Anything else to add?

NFWB 3C: If Mr. Yager comes to town and you have any influence, or the fire department has a little influence, somebody from here should be in these talks. Because, you know, we are planning some pretty good capital improvements in the city, so that could potentially help us with the rating.

GORDON: Absolutely.

NFWB 3C: I mean, we've got a pretty big plan going forward with capital improvements and hopefully all the monies get approved and we can start doing some of these things.

GORDON: That's great. I wouldn't be surprised if without me saying anything they would call you in the room at this point. Like I said, they were just singing your praises. Everybody I interviewed with the fire department are just delighted with what you guys have going on.

NFWB 3B: Even McGovern?

GORDON: Even McGovern. [laughs]

NFWB 3C: Really? I didn't think he liked anybody. [laughs]

GORDON: But, you know, it's funny because I started doing some preliminary research two years ago, I'm finishing it up now, but you don't really do too much work on the master's project in between. But it's funny because when I first started looking at where we were, I'm like, oh man, there's an uphill climb to get these things done on the water side. And now, two years later, looking back, all of those problems are pretty much solved already. So, you kind of took the wind out of my sails with any recommendations. But, I mean, it's all good, right?

NFWB 3B: Well, we're always up for recommendations, we get them every day.

GORDON: Awesome. Thank you very much guys, I really appreciate your time.

END OF INTERVIEW

Appendix L

Transcript of NFWB Chairman (NFWB 4) Interview

Date: 04/04/2019
Duration: 06 minutes, 47 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: So, what is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWB 4: Not really sure what all that is.

GORDON: And, so, have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFWB 4: No.

GORDON: OK. And, to your knowledge who would be the main contact at your organization for the Insurance Services Office?

NFWB 4: It would be our human resources, it would be Jim Perry.

GORDON: OK. And has the ISO rating been a part of the strategic planning process of the water board, to your knowledge?

NFWB 4: Yes.

GORDON: OK. And in what way? You guys have discussed it at meetings? Or...

NFWB 4: Yea, at meetings, and we've been trying to do, you know, upgrades to, you know, make our, you know, ISO rating higher, you know, and our safety requirements higher and stuff like that.

GORDON: OK. And, could you describe the collaborative relationship between the water board and the fire department?

NFWB 4: Yea, I mean, we, we're trying to do some co-ventures, and with the hydrants, and the GPS of the hydrants. The flow, the pressures and everything, and to try to get them on a data so we can have them all on the computer so that between the Niagara Falls Water Board and the fire department. You know, when the fire department's out on a call on their way to the hydrant, or an event, or the fire, they would know what hydrants are in the area, what the locations are, what the flow is, the pressure, and we've even color coded the hydrants caps so they'd be identifiable to the GPM.

GORDON: Great. And, how frequent would you say communication or collaborative activity is occurring between the water board and the fire department?

NFWB 4: I would say monthly.

GORDON: OK. And, specifically what forms of communication or collaborative activity are occurring? Is it routine or on an as-needed basis? Is it...

NFWB 4: Well some of it is routine for inspections and for different things and we give updates to the fire chief, and we've, you know, we've had them out to the site a few times, actually upgrade, with the updates on the computers as we finish all the hydrants and then we do the flows, the flushings, and we let them know what all the data is. So, it's pretty much on a regular basis, as we make a change we inform them immediately.

GORDON: OK. And as far as communication, so there's a lot of face to face contact it sounds like, is there any others, is there email, text message...

NFWB 4: I mean, we, I'm not sure who all the players are. But I know the chief at the time was getting some emails from us and he'd come to our building a few times to talk to us and different people, and our outside maintenance and stuff like that so, yes.

GORDON: OK. Do you perceive any obstacles to collaboration between the fire department and the water board?

NFWB 4: No.

GORDON: OK. And, has there ever been any obstacles that you know of?

NFWB 4: Not since I've been here. I mean, we've even gone out to some of the major fires and had a guy there for if there was any problems with the hydrants or if the flow wasn't there to be ready and check on other hydrants and stuff in the area. But, so we kind of work with them hand-in-hand.

GORDON: So, you say there's not really any obstacles, and my next was can you suggest any solutions to overcome obstacles, but you say there are none. So...

NFWB 4: There's none.

GORDON: OK. So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFWB 4: Oh, I would think so. I mean, there's, we're always upgrading our systems and looking for grants and, you know, do co-ventures with the City of Niagara Falls. So, I'd say yes.

GORDON: OK. Do you think it would have been useful if you were briefed about ISO ratings at the beginning of your appointment?

NFWB 4: Yes. [laughs]

GORDON: [laughs] OK. And that didn't occur, right?

NFWB 4: No.

GORDON: And, do you think updates concerning efforts to maintain or increase the ISO rating should occur periodically throughout your appointment?

NFWB 4: Yes.

GORDON: OK. And, how often would you think, and from whom, would that information be communicated would you say between the water board and the fire department?

NFWB 4: You know, I think we should set up some kind of committee. You know, a dual committee of a couple from each or whatever, and then we can spread the news from there. I think that would be a good way to do it.

GORDON: That's a good suggestion actually. Any other information you might want to share, anything regarding the relationship between the fire department and the water board, or the ISO rating, or any questions for me at all?

NFWB 4: No, not really. I mean, we did put on a, within the last we, we put on a special hydrant maintenance truck, and we send it out on a daily basis and we go around, you know like I, we flush, and like I said, we do the pressures. And we're replacing all the older style hydrants throughout the city. I believe at the present time we don't have any hydrants that don't work, and they actually do work overtime if one goes down to make sure it gets back into service. And the only problem I can see is, is, it may be sometimes the sizing of the existing lines under the ground and there's nothing we can really do at the present time. Because sometimes, as well as the fire department knows, is, you know, you go out to a fire and the pumpers can suck the hydrant dry if the flow and the size of the water supply isn't there, you know. And it's something that should be, could be addressed in the future.

GORDON: Right. Yea, it's a major expense, right? And that's somth-

NFWB 4: I think every city in the United States has the same issue.

GORDON: Right, yea.

NFWB 4: But it's something that should someday be addressed, but it's an astronomical figure to do that. But, I mean, if there's problem areas, I mean, you know, everybody's, you know, due diligence is to make sure their protected, you know?

GORDON: Yea, absolutely. Well, thank you very much chairman, I appreciate you participating in the study.

NFWB 4: Oh, no problem. Anytime. And, you know, if you need anybody else let me know. You know, we're here to work with you.

END OF INTERVIEW

Appendix M

Transcript of NFWB Commissioner (NFWB 5) Interview

Date: 04/04/2019

Duration: 30 minutes, 40 seconds

Interviewer: Gordon Stewart III

Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWB 5: Minimal.

GORDON: Have you ever heard anything about it through your role as a board member?

NFWB 5: Not exactly probably, in those terms. I'm familiar with some of the insurance, but not, we haven't actually had that as a major discussion.

GORDON: OK. And, so have you ever read the Public Protection Classification Report for the City of Niagara Falls?

NFWB 5: No.

GORDON: OK. And, any idea who the main contact at your organization has been for the Insurance Services Office?

NFWB 5: Our insurance is through Lawley. I would think that that might be the contact. Usually, I would say, that would be [inaudible] from the water board, correct?

GORDON: I'm sorry, I couldn't hear you...

NFWB 5: Are you talking about the water board's contact-

GORDON: Correct.

NFWB 5: ...for insurance? Our carrier I believe is Lawley.

GORDON: And, this is specifically for the private company out of New Jersey called the Insurance Services Office that rates municipalities based on their fire suppression capabilities. You don't have any idea who the main contact might be?

NFWB 5: No.

GORDON: OK, no problem.

NFWB 5: Am I the only one who doesn't? [laughs]

GORDON: No, nope, nobody has. You know, they've referred me to other people who might know and that's about it. So...

NFWB 5: OK.

GORDON: Like I said, I'm just trying to document the information that's being shared about the ISO with each piece so we can increase that information share moving forward. That's all.

NFWB 5: OK. It doesn't make me look like I'm dumb.

GORDON: No, it doesn't, and I guarantee you that that's not the goal of this. I'm gonna, you know-

NFWB 5: I know.

GORDON: The goal of this is just to build recommendations to increase the ISO, and it's only for the purpose of this study. And this study will be made available to you when it's completed in May.

NFWB 5: OK.

GORDON: OK? Has the ISO rating been a part of the strategic planning process of the water board, to your knowledge?

NFWB 5: I don't... I know that we, it's been brought up but it hasn't been part of the actual process, in terms of, most of the, I would say, and you're talking about fire suppression? I know that we've gone through with the fire hydrants and the fire loops as part of what we've tried to do in the last year. You're talking about fire suppression, right?

GORDON: Yea, because there's a rating assigned to the City of Niagara Falls, it's called the ISO rating.

NFWB 5: Right.

GORDON: And that's for fire suppression capabilities, correct, yea.

NFWB 5: Yea, I know that we've done quite extensively with improving the quality of the fire hydrants and putting new fire hydrants in when necessary, and coding them so the fire department knows whether or not they're with an eight foot versus a six-foot pipe, and which one's gonna be able to give them more power. Has it been specifically done with terms of the ISO rating, or is it done been more in a sense that we just want to be sure that we, if somebody has a fire in their house we're gonna be able to put it out? I think it's been more emphasized on that end of the story when we discussed it. I know there has been a lot of discussion too on identifying the locations of the different fire hydrants that are privately owned on private property, and try to make sure we have a handle on where they are and whether or not they're getting good water so that it never becomes an issue where the Niagara Falls Water Board is responsible for something that happened in which somebody's plant or building burnt down and there wasn't adequate pressure.

GORDON: OK, great.

NFWB 5: Does that make a good, does that make sense?

GORDON: Absolutely, absolutely, yea, yea. And, you guys have been doing a lot in that sense in the past, about year or two.

NFWB 5: Yea, that, that, that one I, that one I definitely I'll give Nick credit on that one. Not a lot of things, but that one I'll give him credit on.

GORDON: Who's that? Who are you giving credit to?

NFWB 5: Nick. [laughs] I will give him credit on that one. He's, he's really been very instrumental in wanting to get that done.

GORDON: OK. Nick Forster, you mean, right?

NFWB 5: His dad must have been a chief or something?

GORDON: Right, yes, he was. Yep.

NFWB 5: I know that's an issue. And too, I think there was also issues in which at times people didn't have the right water pressure and it became a problem. If a broken fire hydrant, when you get somebody that's, you know, got a building and you see a broken fire hydrant, I think any one of us would be mortified by that. I know talking to the guys in the field, because we just had a hydrant replaced out here on James; one of the guys, and I think he might have even been the one who drove it, was one of the guys from outside water maintenance, Mike, he said, to me this is important, if we don't have these fire hydrants replaced I'm out here every day and if we're not doing the right thing I'm worried about what's gonna happen, you know, I don't want to be the one who's responsible because the fire department couldn't get enough water to put out a house fire.

GORDON: Right.

NFWB 5: And somebody lost their life. I mean, we think about that. We think about a lot of things at the water board. You'd be surprised how much we think about in terms of what's great for the community.

GORDON: That's great. So, to your knowledge, what's the collaborative relationship between the water board and the fire department, would you say?

NFWB 5: I'd say that... I think that we've improved it, considerably. I think the fact that we've gone out and the guys have gone out and they've tagged the fire hydrants. That they're letting people know, you know, where, you know, which ones are working, which ones are not. Color coding them, I think, so they know, if I'm not mistaken, they're coded so they know which ones have more pressure, where to get one with more pressure if needed, particularly at a big fire. I guess there was something with recently, Michigan avenue there was a fire, there was some questions on pressure, and it was a matter of they were using a hydrant that was six foot versus an eight-foot pipe. And I think one of our guys was actually out there, I know, where there are big fires, one that was up on... I want to say, over on Witmer, not Witmer, off of highland where the big paper factory is...

GORDON: Ok...

NFWB 5: [coughing] Excuse me...

GORDON: That's OK...

NFWB 5: Great, you have a recording of that.

GORDON: That's OK. [laughs]

NFWB 5: No, there was, I know, you know which one I'm talking about. The one, the big plant where the paper was, I think it was earlier last year.

GORDON: Yea, Cascade, you mean?

NFWB 5: Yes. Cascade, wow. I know that our guys were there making sure the pumps were working, making sure everything was OK. That's been important. I know, and some of that also comes from the fact that, I believe, previously with the fifty-sixth street, there wasn't, when they had that big Norampac/Greenpac fire, there wasn't fire hydrants that were working properly. And I know that raised a lot of attention. So, people were like, one, I know, let's say a lot of things this board does seem very much, for the most part, wants to make sure that, you know, we're doing right by the city and the people, and making sure the fire department has what they need. Now, are fire department meeting with the water board? No, not that I'm aware of, unless they are, like, individual people, like say, Billy Wright, who's supervisor of outside maintenance. So, I don't know if it's, we haven't had like a big they come to us and sit down and meet. Then again, we were supposed to also have a city council and water board joint meeting that never happened either, so.

GORDON: Oh, really?

NFWB 5: It was supposed to happen. We both had resolutions, but, Craig Johnson never made it happen. I know our lawyers approached him.

GORDON: Yea, but that would make sense, wouldn't it, [laughs], if it happened.

NFWB 5: Well, it would make sense to happen, because simply, you know, think about it, don't you, wouldn't it be good though if the two entities who really had a lot going on could sit down and kind of talk about different synergies, and even the fact that, you know, you guys, the city collects money for taxes, but the, you know, is the water board's bills when they do these in rem auctions, are we getting the money? We don't know.

GORDON: Right.

NFWB 5: You just get this lump sum, but we don't know what house it was attached to, so we can't write it off of our debt necessarily.

GORDON: Oh yea, right.

NFWB 5: There's a lot of this stuff that could be better between the city and the water board. The fire department, the main issue is, you know, do you have water pressure, do you have fire hydrants and they're working. Do you have, you know, do you have where each of the, you know, what's gonna give you the most volume when you're out fighting a fire? Which pipe? Those are things I think that we've really worked well with. And I think too, also going in and taking a look at, hey, which facilities have their own fire hydrants? Are they being serviced, are they being checked? What about the rest? You know, making sure that they're doing their job to keep their fire suppression working versus, you know, having something come up one day and all of sudden nothing worked and who's fault is it? Oh, let's point fingers over here.

GORDON: Right.

NFWB 5: So...

GORDON: So, how frequent is communication or collaborative activity occurring between the fire department and water board, would you say?

NFWB 5: I'm not sure how often it is, now, I know that during the hydrant, I'm sure that there was collaboration. Again, most of the stuff comes to the majority of the board through reports during meetings. And most of what we've heard about is the hydrants being fixed.

GORDON: OK.

NFWB 5: So, that's, we've had, we've actually, more than anything, the board has gotten updated lists on a frequent basis to let us know, from outside maintenance, that's Billy, what hydrants had been fixed, how many are fixed, how many are out of service. And at this point, I believe that we're pretty much, everything is done. I'm sure there's still little things here and there, and if there's any issues, those will still crop up, it's life.

GORDON: Right. So, you kind of touched on this already, but specifically, what forms of communication or collaborative activity are occurring? So, so you're not sure about the collaboration between the fire department and the employees of the water board, but do you have any knowledge of what forms? You know, is it face to face, is it radio contact, is it email, text message, and are you on the end of any of those?

NFWB 5: The board, as an entity, the board is, you know, five members, we're not, the majority of us are not contacted on that, no. Again, we just get the reports, and my understanding is there probably is some communication between the outside maintenance and the fire department, and especially during the period in which they did have the fire hydrants replaced and make sure they were aware of what was going on. My understanding is they did, you know, at that point they did keep in touch with them and let them know what was where, and what was at fault, and what changes were made.

GORDON: Great. And, do you perceive any obstacles to collaboration between the fire department and the water board?

NFWB 5: Outside of politics, there shouldn't be. [laughs]

GORDON: Right.

NFWB 5: Honestly, we're all in this together. Particularly, with, from my perspective, if, I would love to see the fire department come in, we can talk about any other issues that they have, and see where we can go. Of course, the only other obstacle too is, money which is an issue across the city for everybody.

GORDON: Right.

NFWB 5: I mean, that's, you know, they're expensive. Replacing the hydrants is expensive, and it was definitely worth the investment, I don't disagree with that. But, in terms of, if there's something major like, say, pipes. You know, not having the right pipes, that's a major expenditure. That's something that's gonna have to come along with capital improvements and investment. Which is, you know, not just for the fire department, but also the terms of having, people get good running water to their homes. I mean, there's pipes that're due to break throughout the city, but

the cost of replacing a main, for a water main, is like four hundred thousand dollars. It's staggering.

GORDON: Wow.

NFWB 5: There's people that say we should replace all of them in the city. Do you have four hundred thousand dollars per water main, do you know how many water mains there are?

GORDON: Right.

NFWB 5: And then, you know, I think too, that one of the things that the city and the water board have been better about, is if they're opening up a street to repair it, we get to go ahead and take a look and see if it's something we need to replace.

GORDON: Great. Now when you said aside from politics, do you perceive politics an obstacle to collaboration between the fire department and water board?

NFWB 5: I don't perceive it tha-, I hope it wouldn't be that way, but again, sometimes you're dealing with politics. You're definitely dealing with two different entities and, you know, again, the city has two appointments to the water board and the city is, you know, connected with the fire department. So, I don't see it necessarily as being so much of a problem, as just other than, you know, if you ever get somebody that wants to make it a problem, then you deal with it. But, personally, I don't think at this point there is. Again, I think we're all, have the same end goal, which is to make sure that hydrants are working, fire has adequate water pressure to put out a fire, and go from there.

GORDON: Great. And, if politics were to become an obstacle, do you suggest any solutions to overcome that obstacle?

NFWB 5: Yea, get rid of whoever's making it political.

GORDON: Right. [laughs]

NFWB 5: [Laughs] I'm sorry, for the bold answer. I mean, I think, I see some of the things that we're doing as moving away from that. I mean, we have a new executive director who I think is really going to make a difference, because it's somebody who isn't a political appointee of any sort, and somebody who just worked here in the facility as a director and has the license, has the knowledge, he impressed the four of us that appointed him. And, just really showed that he had what it takes to get in there and identify problems, sincerely work with the people there inside, work with our inside experts, and I think, you know, having somebody like that who really, I mean, this is a guy who, the reason our drinking water is so good is because it's the person who's been running our lab.

Gordon: Right.

NFWB 5: I mean, we have safe drinking water. OK, maybe, well pipes make it worse, or lead, but, definitely out testing of our water shows that we are above standards when it comes to clean water that we are drinking. So, when you think about someone who's been in the helm for that now taking over all of it, I feel more secure we have somebody that is gonna prioritize what it takes and who's gonna work with all of the different entities to get the job done.

GORDON: Yea, I interviewed with Mr. Fama, and I think that was an impressive choice, I think he's quite an asset for you guys.

NFWB 5: Are you kidding? He's amazing, I mean, I'm, I can't imagine how if we had to go through the process of trying to find somebody else, I think everybody was a little nervous about that at one point. But, I think, you know, in comparison, and I don't want to compare two people, but we really lucked out that there was this change.

GORDON: Yea, sure.

NFWB 5: [Laughs]

GORDON: So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFWB 5: I think so, I mean, yea, definitely if there was something there that would allow us to, you're saying helping the homeowners in terms of, are you saying improving the ISO ratings within the city, meaning that we have better ability to suppress fire, correct?

GORDON: Correct, yes.

NFWB 5: And that means that, and I'm just making sure I'm understanding this, so that would mean that every homeowner, their homeowner's insurance would be reduced because our carriers would be aware the fact that there's better suppression, which means less likelihood of complete loss, correct?

GORDON: Right, insurance companies use the ISO rating to set homeowner insurance premiums.

NFWB 5: OK. I would think that would be something that we would have to really seriously look at. Especially if it meant doing more for our residents and helping them to lower, you know, their insurance risks and costs. Definitely I would look at it. I mean, we'd have to see what the costs were though too. Again, you'd have to prioritize, and if you have a situation where, you know, we've got a lot on our plate right now with the DEC consent too. Expectations that are costing us money. But, I think if, you know, we're talking about lowering the ISO rating, increasing the ISO rating and lowering the insurance cost, I mean, it's something that we have to entertain. I think it's definitely worth the conversation and definitely something where we could try to figure out what our options are and maybe get creative.

GORDON: Awesome.

NFWB 5: I mean, I would definitely support looking at it and, I think, what are we talking about here? You got ideas? [laughs]

GORDON: [Laughs] Well, that comes from the ISO, there's a field representative that every so often, every number of years based on their cycle, they come in and they give a new rating. So, he would give specific recommendations, and those, I guess on your end it would basically come down to infrastructure projects. If they were necessary, you know.

NFWB 5: I know that that's one of the things that right now we've been going to the five-year capital plan, and that's one of the things where we have, we had a five-year capital plan with the previous director and it's been thrown out the door. We're looking more at getting input less from the consulting firms and more from our internal experts who are in the field every day, who know what needs to be done first, and I know that there are definitely they're looking at which mains are in worst condition and need more help than others. So, hopefully that's going to make a difference.

GORDON: Great.

NFWB 5: But there's other things that they have to look at too. I mean, there's like different things where I think I'm finding out right now that the more I can hear from the people inside and less I can hear from like, CPL [Clark Patterson Lee] [laughs], the better things are. I think CPL tends to have their own perspective on what they want done first.

GORDON: Gotcha. So, do you think it would have been useful if you were briefed on ISO ratings at the beginning of your appointment?

NFWB 5: Oh yea. [laughs]

GORDON: [laughs] And...

NFWB 5: I mean, again, there's no real training, it's like, you show up and you go to the meetings and you kind of learn as you go.

GORDON: Really? OK.

NFWB 5: You're only there for, you know, I've got a three-year appointment, so I'm there through the end of the year and hopefully, you know, it's gonna be tough because I'm a Republican Senator's appointee with now a Democratic Senate in charge.

GORDON: Right.

NFWB 5: But, I've done a good enough job that hopefully they'll keep me on board.

GORDON: Great. Yea, you know, it's one of those things where, you know, although I'm a Democrat, I always appreciated having a, you know, Senator Ortt in there in the majority and now we can't even have that, right?

NFWB 5: He's so good, too. He does, he and Angelo [Assemblyman Morinello] did a really good job for this area, and people don't understand. I think, you know, it's funny, politics locally is more about to the victor go the spoils in the sense it's not the ideology...

GORDON: Right.

NFWB 5: ...as much, I think.

GORDON: Yea, that makes sense, yea.

NFWB 5: I mean, seriously. How many of us who are in the political world, you know, are arguing based on our ideology, based from party ideologies. No.

GORDON: Right...

NFWB 5: We're arguing based on who can we get in the office.

GORDON: Yea.

NFWB 5: And who do we know's gonna be, you know, and the you want fiscal conservatives and you get people who want partisan, and everybody's got their own views on what to do.

GORDON: Right. Yea, on the local-

NFWB 5: Do you miss being a chair?

GORDON: I'm sorry, what's that?

NFWB 5: Do you miss being a chair?

GORDON: Oh, it's been great not being a chair. [laughs]

NFWB 5: This year you're probably loving it with petition season getting hit in February and March.

GORDON: [Laughs] Oh yea, it's quite a challenge now, isn't it? With the changes.

NFWB 5: I ended up, I ended up not having, Bill had me doing literature, you know palm cards and some graphic design work instead. So I ended up not getting out there because my weekends were spent coming up with palm cards and graphic stuff.

GORDON: Oh boy.

NFWB 5: So, I was able to kind of escape the petition process, but...

GORDON: Nice, well it goes more to your skill set then, right?

NFWB 5: Well that, and everybody, the guys that were, at least two of the candidates were in my district, the areas that I had responsibility for doing the petitions for, they were hitting all the houses, the people that were actually signed anyways, so I was like, I don't have anybody left to sign, guys. You're gonna have to give me another list.

GORDON: [Laughs] Right... So, do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your term of appointment?

NFWB 5: Absolutely.

GORDON: OK. And, how often, from whom, and in what way would you suggest that information be communicated?

NFWB 5: OK. Well, I think that definitely it needs to come from, you know, your... Well, who issues the ISO standards? In the, who is the organization?

GORDON: The Insurance Services Office, they come and they send a fieldwork, a field representative, and he comes in and mostly his main contact is through the fire department.

NFWB 5: OK. I would suggest that when that person's in that they also meet with the water board. Perhaps have a meeting with the water board executive director and possibly the chairman, and outside maintenance, because then, like, at least a part of the conversation would, takes to us. So, at least they can get the information, then bring it back to the board.

GORDON: Great, I think that's a great suggestion, yea. And, any-

NFWB 5: I think that if you don't have them in the meeting and you just have the, you know, it's great to throw ideas out there when you don't have a picture of the practicalities. I would want somebody like a Billy Wright in there, and Pat Fama, to sit down and be able to say, well this sounds great in theory, but here's my dilemmas, here's what, here are my restrictions here where I'm facing an obstacle with what you're saying, and here's where, you know, I need to get more help. And again, too, that's also when, you know, you can be able to sit down, you can say, we have a major problem here, the water board doesn't have the funding, I mean, that's now where we can go back and start looking at, well now it's a fire hazard, can we get a grant?

GORDON: Right.

NFWB 5: So, I think it's important. But definitely I think it's important at least having Pat and Billy Wright in these meetings. To me, those are the two who are gonna know, where you need, where things are gonna get done. And those are the ones who are gonna be able to visualize form the city, here's what we can do, here's an alternative. There are, you know, having the experts, the ones who are in there digging, who know what's underneath, those are the ones that you want to be able to talk to whoever's coming in from the insurance.

GORDON: Great. And, do you have anything else you might want to add? Any questions regarding the ISO rating or the relationship between the Niagara Falls Fire Department and Water Board?

NFWB 5: What is our current ISO rating? I'm just curious.

GORDON: Yea, no problem. Right now, we're at a three. We've been three for the past few ratings that we've, reports that we've gotten. And it's, the scale is one to ten, one being the best.

NFWB 5: OK.

GORDON: So, we were a two, I think it was four reports ago, and the we dropped down to a three and the last report, specifically why I am focusing so much on this project on the relationship between the fire department and water board is that in the last report there was a zero out of seven for hydrants. So, there was a zero percent for hydrants on the water supply portion of the report. So, so, you know, I'm just trying to-

NFWB 5: Did, did those, so that's a zero as in bad or good?

GORDON: As in, bad. Yea, a zero out of seven, seven being the most points you can be awarded and zero being the least.

NFWB 5: We just had all those hydrants replaced though, what happened?

GORDON: Yea, the last report was in twenty sixteen.

NFWB 5: Oh.

GORDON: Yea, so there's been a lot of changes since, and it's funny because I started my preliminary research on this project two years ago, and since then, you guys have made so many changes that you've kind of taken the wind out of my sails with recommendations. But that's OK. As long as we can, you know, get some further recommendations to get that grade up, that's all that matters, so.

NFWB 5: I think, well I think, then if we have a chance, you're talking about we can probably get it lowered then maybe this year? Or... when's the next time they give a report?

GORDON: I'm waiting to hear back from the ISO field rep for his interview. I'm hoping he, you know, he was supposed to do it this week, but he needs clearance for being audio recorded during the interview. So, I'm not sure of the exact time, but it's gonna be in the couple years they're gonna do it again. And we were very close to a two last time, so I think with many of the changes that have been made, as long as we are following the, you know, the deficiencies in the report and reporting that those deficiencies have been addressed, and maybe looking at other areas where we can pick up some more points, I think it's safe to say that it's in the realm of possibility to go to a two, and possibly even a one. And one is extremely rare. There's only seven municipalities in the state that have a one.

NFWB 5: Wow.

GORDON: Yea, so, and nationwide there's less than a hundred.

NFWB 5: Wow.

GORDON: Yea. So, I think it'd be really good for both the water board and the fire department to be able to say, hey look, we are providing, you know, the best fire suppression capabilities, according to the ISO which is the national standard. And there's been some iteration of the ISO since the 1800s, so, you know, it's definitely a standard that is known.

NFWB 5: What made you decide to do this as your subject? Just the fact that it was so low, or?

GORDON: Well, I had to pick a project and so, I just went right to my fire chief, at the time it was Tom Colangelo, I went to him and I said, you know, I'm gonna be doing a project, it might as well be something that benefits the department. So, he got back to me, you know, a week later and he said, I want you to work on the ISO rating. So, that's where this came from.

NFWB 5: Well, that's really interesting. And, now, when do you graduate?

GORDON: If I finish my project up, I'll be finishing in May. [laughs]

NFWB 5: Great!

GORDON: Yea, thanks. I'll, I'm pretty happy, I'll tell you what, it went by pretty fast.

NFWB 5: How many year you been going to school for your master's?

GORDON: Two years. I've been going fulltime, and you know, with having the four kids under the age of four, and the-

NFWB 5: Yea...

GORDON: ...fulltime work, it's been quite a plateful.

NFWB 5: I bet your wife is gonna be very happy when you're done.

GORDON: She absolutely will be, yes.

NFWB 5: Yea, no, Greg went back for his MBA.

GORDON: Oh nice.

NFWB 5: He did four years working fulltime, because he was just doing it part time. But my, he started when my son was four.

GORDON: Oh, really? Wow. Yea, so you get it.

NFWB 5: Yea. Oh, I got it.

GORDON: Yea.

NFWB 5: It was painful.

GORDON: Yea. And, you know, I-

NFWB 5: You know, I have to remind him that it's like, you went back for your MBA when the kids were little. [laughs] When do I get to go again for mine?

GORDON: [laughs] Right. And, you know, Tony Ross is my captain on the fire department, he's my boss. So, he's actually mentioned to me some of the work you guys do is pretty impressive. The stuff you guys do with all the technical stuff.

NFWB 5: Oh, oh my cousin.

GORDON: Yea, your cousin, Tony Ross, yea.

NFWB 5: Yea. That's your boss?

GORDON: Yea, he's my boss, yea. He's my direct supervisor. And he said you guys have quite the technical operation there with all of the servers and everything. It's pretty cool you're able to run a small business like that, it's pretty awesome.

NFWB 5: Well, we don't, we have... My husband is an IT consultant, he actually works for a company based out of Ohio.

GORDON: Oh, oh, cool.

NFWB 5: Yea, so he's, you know, he, most every technical consultant these days is remote. There's very few that, none of them go to offices. They're either home, or they get sent out to the field. When he first started in IT, he started at Praxair, but when he first started with IT, he had to go to Calgary, Alberta once a week. And that was another killer.

GORDON: Wow, yea, I bet.

NFWB 5: Oh, that, I mean, it was fun to visit there, mind you. Get to go to the Canadian Rockies once a week was pretty awesome. But, it's not a lot of fun, again, when your kids are, at that point, nine and just starting high school. And, you got your husband who's heading up to Hamilton once a week and flying back at one o'clock in the morning.

GORDON: Wow.

NFWB 5: Yea, so, there's little things that can, we have to go through things. But, I'm the one who actually has a, I have a business of my own, that's with the, it's copywriting, graphic design, and editing. I have to main subcontractors, one who's out of Mumbai, India...

GORDON: Oh, wow.

NFWB 5: ...and, well, it's a company called Edited Your Cactus, and we, I basically pick up assignments from them where I edit any kind of work resumes, term papers, articles, brochure stuff. It's all written by, like, Japanese or Taiwanese, or Korean authors.

GORDON: Really?

NFWB 5: And then, yea, and then I just have to, you know, either they wrote it themselves and they had someboso translate and I have to make it sound like natural English, correct all their grammer...

GORDON: Oh, how cool.

NFWB 5: I'm not even sure who wrote the one that I'm working on right now. But, it's bad.

GORDON: Is it? [laughs]

NFWB 5: Yea, so I need to get back to it. [laughs]

GORDON: Well, I really appreciate your time, Colleen. Thank you so much for participating.

NFWB 5: Oh, you're welcome. Hopefully I didn't sound too dumb.

GORDON: No, no. You sounded great, and it was very consistent with the other interviews that I conducted, and you actually provided some more lengthy eloquent answers. So, it's all good.

NFWB 5: OK, great. I appreciate that.

GORDON: Oh, and could you give me your email so I can send you this consent form?

NFWB 5: Sure. It's a little bit long, so...

GORDON: OK.

NFWB 5: You know, can I, I'll tell you what. I'm gonna make it easy for you. I'm just gonna go onto facebook and click it on, OK?

GORDON: Oh, OK. Thank you, perfect.

NFWB 5: That'll make it a lot easier.

GORDON: Awesome. If you have any questions at any time, feel free to give me a call back, or email, or message, or whatever, you know. Any questions you ever have about ISO or anything else.

NFWB 5: Actually, this was very enlighteneing to me. I mean, I knew somewhat, but I didn't have the information, and now that I'm more aware of it's something I wish... They need a handbook for those of us who are on the board, that kind of has all these little things. Again, it's on the job training.

GORDON: That's a good idea, yea.

NFWB 5: Well, thank you.

GORDON: Well, thanks Colleen, take care now.

NFWB 5: You too, Gordy.

GORDON: OK, bye now.

END OF INTERVIEW

Appendix N

Transcript of NFWB Commissioner (NFWB 6) Interview

Date: 04/04/2019
Duration: 07 minutes, 44 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: So, what is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWB 6: It's very limited. I would say very limited. Basically, I know it's a rating and accreditation to, I think it is something to justify fire service or something to that effect.

GORDON: Right, yea. It's... I'll just give you an overview. It's, the Insurance Services Office is a private company out of New Jersey and they serve the insurance industry and they give a rating to municipalities regarding their fire suppression capabilities. So, it's not everything involved with the fire department, it's just specifically it's fire suppression and a large portion of that is water supply which is why I'm so interested in hearing from the water board.

GORDON: So, have you ever read the actual document, the Public Protection Classification Report for the City of Niagara Falls?

NFWB 6: I have not.

GORDON: OK.

NFWB 6: [laughs]

GORDON: And none of the other board members have either. So, you're not alone.

NFWB 6: OK.

GORDON: Who has been the main contact at your organization to your knowledge, with the Insurance Services Office?

NFWB 6: If anyone has would be the main contact I would think it would be our corporate council Sean Castello.

GORDON: OK. And...

NFWB 6: I would think it would be him, then also our executive director.

GORDON: OK.

NFWB 6: Which, he's brand new, which would be Pat Fama.

GORDON: I actually spoke with him a couple days ago and I think you guys made a good choice with him.

NFWB 6: Thank you.

GORDON: Yea, sure. Has the ISO rating been a part of the strategic planning process of the water board, to your knowledge?

NFWB 6: Not to my knowledge. I don't remember it ever coming up in a meeting. But, not to my knowledge.

GORDON: OK. And what is the collaborative relationship between the water board and the fire department to your knowledge.

NFWB 6: A lot better than it used to be, when we, when the new board took over. And, the new board reached out to the fire department in order to deal with the fire hydrants, because you know, that we were behind in terms of broken fire hydrants, so, and also to monitor the water flow. So as of late, and I would say within the last year, maybe year and a half, the coordination has been fairly good with the fire department.

GORDON: OK. And, to your knowledge, how frequent is communication or collaborative activity occurring between the water board and the fire department?

NFWB 6: I think definitely when needed. Definitely we work together when there are fires that take place because the fire department depends upon the water board to make sure that, you know, the pressure, you know, flow is there and everything in case there is a major fire. And, like I said before, we've worked very hard to fix a lot of the broken fire hydrants. So there has been more collaboration and communication than ever before. And I think every fire hydrant, just about, is working properly now. I mean, there might be one or two in which there was a car accident or something like that. But, I think people, you know, two departments work collaboratively. The fire department will let us know, we try to get a crew out there to make repairs as necessary.

GORDON: What forms of communication or collaborative activity are occurring, I know you just touched on that, but a lot of that sounds like it's face to face, is there, are there...

NFWB 6: Yea, telephone, face to face, there've been meetings, the fire chief has come to the water board and the water board personnel have gone and met with the fire department, you know, in his office. So, there has been a lot of face to face meetings and telephone contact as well.

GORDON: And, do you perceive any obstacles to collaboration between the fire department and the water board?

NFWB 6: Not at all.

GORDON: OK, great. And, so my next question was can you suggest any solutions to overcome obstacles, but you don't, there's no obstacles that you can identify?

NFWB 6: No, not at all. There used to be, when we had the... Prior administration [laughs] and, because like this is the second one. It seems as though, like I said, the fire hydrants were broken and there was a lack of communication. But, we've worked to resolve that since the new board took over. And I think things are working a lot better than what they used to. How they used to-, as opposed to how they used to work.

GORDON: OK, great. If there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFWB 6: Funds from whom?

GORDON: Well, I guess on your end I'd be, I'm just wondering if there's, if there'd be any issue with using funds toward improvements that might contribute to a higher ISO rating on the water board side.

NFWB 6: I don't know if we can contribute to that. So, I would have to have corporate council check into the legality of it. But, if it's something that we can legally do I would not be opposed to it.

GORDON: And most of that would actually be in the form of, just, infrastructure improvements, actually.

NFWB 6: Well, we're working to try to do that now. [laughs]

GORDON: Are you? Great.

NFWB 6: Yes, yes, we are in the process of trying to improve infrastructure. As a matter of fact, we're trying to get funding wherever we can. Be it from our elected officials, grant funding, foundations, whatever.

GORDON: Great. Do you think it would have been useful if you were briefed on ISO ratings at the beginning of your appointment?

NFWB 6: Oh, definitely. It would have been nice. [laughs]

GORDON: OK. [laughs] And, do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your appointment?

NFWB 6: Yes. Most definitely.

GORDON: OK. And, how often might you say, or from whom, and in what way would you suggest such information be communicated?

NFWB 6: Well, whoever is in charge, you know what I'm saying. Whoever's in charge of putting forth that ISO information, it would be good if they would communicate to us by making a presentation before the water board, they can send letters, you know, email us, any kind of form of communication. You know, even text for that matter. But, as long as it's some sort of, I would prefer official presentations before the water board because that way I and the rest of the water board, we, the public would know, and we would know too, that, you know, this information has been brought forth to us as a collective body. And that's probably the best way to handle it. But...

GORDON: OK, great. And is there anything else you want to add regarding the relationship between the fire department and the water board, the ISO, or any questions you might have?

NFWB 6: No, I don't have any questions, I just hope that information will be forthcoming so that we can better understand exactly the impact of the ISO to the homeowners and the ratepayers and how we as the waterboard can assist in any way. In

terms of, to make things more feasible and better for our homeowners and ratepayers.

GORDON: Great. Well, I really appreciate your participation, Ms. Kimble. Thank you so much for your time.

NFWB 6: Listen, and thank you.

END OF INTERVIEW

Appendix O

Transcript of NFWA Commissioner (NFWA 1) Interview

Date: 03/28/2019
Duration: 13 minutes, 37 seconds
Interviewer: Gordon Stewart III
Location: Telephonic

GORDON: What is your knowledge of the Public Protection Classification grade issued by the Insurance Services Office?

NFWA 1: I have no knowledge of it.

GORDON: OK. Have you ever read Public Protection Classification Report for the City of Niagara Falls?

NFWA 1: I'm sorry, say that again, you were breaking up there.

GORDON: OK, no problem. Have you ever read Public Protection Classification Report for the City of Niagara Falls?

NFWA 1: No, I have not.

GORDON: OK. And, to your knowledge, who's been the main contact with the water board with the Insurance Services Office?

NFWA 1: We've had no knowledge of the Insurance Services. It was explained to us that when we were appointed to the water authority, one that it was kind of a defunct group and the reason that they, that they needed to appoint people to the water authority was only for bonding purposes, adding debt to where they currently were. So, I'm not actually on the water board, I'm on the water authority, we have limited responsibilities compared to the water board and we're not privileged to everything that they are from my understanding, from their attorneys.

GORDON: Great. And has the ISO rating been a part of the strategic planning process of the water authority or the water board to your knowledge, whatsoever?

NFWA 1: Not to my knowledge, but I also haven't attended many water board meetings.

GORDON: But, you're not required to though, correct?

NFWA 1: Right, no. So, we have water authority meetings that are separate from the water board. Obviously, the public or water board members are allowed to attend those. But there's been extremely little interaction between us and the water board.

GORDON: OK. So, there's not much interaction between authority members and board members?

NFWA 1: Correct.

GORDON: OK. And to your knowledge do you know anything about the collaborative relationship between the authority and the fire department? Is there anything there?

NFWA 1: No, I think that'd be more on the water board level.

GORDON: OK. And what about between the authority and board, there's very little interaction, right?

NFWA 1: There's not a lot of interaction. Because our scope and sequence of what we can do is limited compared to what they can do, they're not technically involved in the day to day operations, but they are involved in setting policy, you know, what's the budget that's set on a year to year basis. We don't even have input on the year to year budget, we only have, so let's say the water board has to, for example, two years ago there was an issue where their bond was coming to an end and they wanted to be able to borrow more money, you know, to provide infrastructure upgrades and things that, you know, needed to be done to the exit sewage plant part of the process for the waterboard. So, they had to be able to borrow money, they had to come to us, we sat we listened to presentations from several different entities that we could bond and borrow money from. You know, we weighed the cost, you know, draw backs of each one. Length of loan, length of the terms, what the, obviously, the interest rates would be, the benefits, how soon, how long we were locked into it, if we could renegotiate at any certain points. You know, we looked at those things, and you know, we chose the best of what was available to us. To be able to do that. And you know, it made sense at the time, it saved us about four and a half million dollars because the interest rates changed so much it would be foolish for us not to re-bond at that point.

GORDON: Awesome. So, as far as frequency of or collaborative activity occurring between the fire department and water board, and the water authority, it's very little frequency.

NFWA 1: We have no, as far as the water authority I can attest for, you know, I can't speak for the other two board members, but to my knowledge we've had zero interaction with the fire department. I know there's been a limited interaction with the water board and the fire department.

GORDON: OK. Specifically, what form was that communication that you did cite, that limited communication that you had with the water board? Was it a face to face meeting, was it through telephone, email, or text? Or...

NFWA 1: It's been a little bit of everything depending on, it was, they were a little more apt to work with us when Mrs. Leffler was the president of the board. Since the turnover, I think some people look at political lines as a way to divide even, you know, municipal government and things like that. So, I think it, just with this it's one of those things where they're only comfortable talking to certain stakeholders. And I think as far as the, you know, the board doesn't need our approval for anything, so they haven't come to us for anything because I don't think they feel like there's really been a need to.

GORDON: OK. So, you said before there was a little more communication between the authority and the board. And that's changed a little bit?

NFWA 1: Some, and I think part of it I think has to do with the fact that, you know, there was a need to re-bond at the time.

GORDON: OK.

NFWA 1: So, there had to be some communication. But, I did receive one email of a meeting notice. And there were a few phone calls made to me from board members and also from the board attorney, just to kind of apprise us to what's available to us. And that was right when I was just initially appointed to the water authority. So, I kind of got up to speed. I did meet with, I'm trying to think of... Paul... Paul Drof at the time and, you know, I requested that I wanted to know a little more about the process. So, I got, I was able to get a tour of the water intake plant where they're actually servicing the water that's gonna be pushed out to the customers that are, you know, purchasing water from the water authority. I did get a chance to see some of the things that they were, you know, they were working on and some of the ideas they had to implement. Such as, how they were using the lab and they were opening that up to, you know, be a source of income rather than just something they were paying for, to monitor the water, you know, they were taking on some projects and things and outsourcing some of the availability of some of the tests and things they could do there on sight that couldn't be done too many places. But, other than that, past that point I really haven't had any interaction with the current water board members or the folks that are running the water board really in control of the water board at the point the, the voting group that blocks together.

GORDON: OK. So, my next question is do you perceive any obstacles to collaboration between the authority and the board. And you kind of mentioned that a little bit, maybe some political obstacles?

NFWA 1: I think with anything when something's appointed politically, typically, you know, you get people, stick their feet kind of stuck in the sand and they decide that, you know, you were appointed by a Democrat or you were appointed by a Republican and there's no reason for us to have interaction, depending on who has the majority. You know, I think, you know, most people that know me know that I'm not, I don't necessarily make decisions along staunch political lines. But, you know, like I said, I don't think there's, they really haven't needed anything from us. Because they haven't re-bonded or anything. I've heard whispers that, from Chairman Murgia from the water authority that we may have a meeting upcoming just to look over a few things and, you know, we both thought that that would be something beneficial because we kind of are on the outside looking in when it comes to the process. And, you know, I don't want to make uninformed decisions when it comes to things that deal with the water board.

GORDON: Sure. So, would you suggest any solutions to overcome such obstacles? Are there any solutions that you can maybe suggest, or recommend, or think of?

NFWA 1: As far as the collaboration between the water board and the water authority?

GORDON: Correct.

NFWA 1: Yea, I mean, I would propose a change to the bylaws of the water authority to require more regular meetings. As of right now they're really, we're only required to hold one meeting a year. And I think as busy as, you know, it's a volunteer position, so as busy as people sometimes are with their personal lives and personal businesses and other aspirations I think from time to time it become easy to have that one meeting a year. So, you know, and really for the last few meetings it's only been Mr. Murgia and I, we haven't even seen our third member of the water authority, Mr. Sanquin Starks at the last couple meetings that we've had. So, you know, it become difficult, especially when you have such a small

number on the water authority, like you know, with three people, you know, I think that's tough to work with. You're really limited if one person is not overly involved in the whole process.

GORDON:

Right, right.

NFWA 1:

So, if there were specific solutions to increase the ISO rating that might contribute toward reducing homeowners' insurance rates for residents and ratepayers, do you perceive there would be support for using funds toward such improvements?

NFWA 1:

Yea, absolutely, as long as they're within reason. I think there's always a cost benefit, you know, you weigh a cost benefit to everything you do. Some things, you know, it's easy to say you're going to lower insurance premiums, but sometimes at what cost to the taxpayers? How comfortable are taxpayers gonna be with the rates that they pay at this point. I know the water board is a separate entity than the City of Niar Falls at this point, but in reality, it's another service that's mandated and paid for by the taxpayers. As rates increase its more like a subsidized tax increase that normally would be passed on to them by the city if the city were running it. So, yea, I think, I mean, anytime there's the possibility to improve anything or pass on savings to taxpayers and ratepayers, I think that's absolutely something that I would highly encourage.

GORDON:

Great. Do you think it would have been useful if you were briefed on ISO ratings at the beginning of your appointment on ISO ratings?

NFWA 1:

I do, I do. And I've done some research, there's a short class you have to take when you become a water authority member. But there's not a lot of direction given when it comes to it. So, and you, you kind of, you know, you realize you're not really involved in the yearly budget process and things like that. The scope of what you can do is fairly limited.

GORDON:

And then, I guess, sort of on the same vein, do you think updates concerning efforts to maintain or increase an ISO rating should occur periodically throughout your appointment?

NFWA 1:

Yea! I think that, you know, I think that anytime you have a, you know, standardization limit set, I think, you know, and there's ways to improve things, I think that's, you know, common sense tells you that it's a good thing.

GORDON:

Right. And, maybe how would you suggest some sort of frequency? Like how often do you think, you know, in your role as an authority member, you think would be useful for being updated on something like this? And from wh-, who would it come from and in what way would you suggest the ISO information to be communicated to authority members?

NFWA 1:

Well, I think I, obviously I think there should be a working relationship between the water authority and the water board. You know, and I think, don't get me wrong, I think there's a lot of mutual respect between some of the board members on both of them. But, you know, when it comes to communicating information, it's so easy to share things via email these days, and, you know, we're, the water board definitely, I know they have all of our emails, because that's how we get their meeting notices when they're interested in having a meeting. And vice versa, really, on our part. I don't want to put all the blame on them because some of it lies on the water authority also. But I think you quickly become frustrated when you realize that there's not a whole lot of decision

making on your part, and you know, you do the best that you can with the decisions you are able to make to make sure that, you know, things do move in the right direction. But, you know, just regular communic-, and as far as frequency of meetings, I mean, I think any board, you know, should meet fairly regularly. I mean, I would say for a rule of thumb, you know, once a month I don't think is out of the question. Meetings don't necessarily have to be long, you know, and they can kind of be based on, you know, things that are, information that needs to be shared at that point. But, you know, something as important as the water authority and the water board, I think when you're affecting all the residents of the city of Niagara Falls, and beyond that too because they do service other areas also. I think you kind of have a responsibility to meet more regularly.

GORDON: Great. And just to wrap things up, anything else you'd like to share? Anything else you'd like to share about anything regarding the ISO or the relationship between the water board, the water authority, and the fire department, or any other questions you have?

NFWA 1: No, I, no, not at this time.

GORDON: Great. I really appreciate this, some great information, believe it or not. I really appreciate you participating.

NFWA 1: Oh, not a problem. Any time.

END OF INTERVIEW

