



CITY COUNCIL
200 NORTH DAVID STREET

City of Casper

Incorporated 1889
Casper, Wyoming 82601

FILED

APR 28 2006

Terri A. Lorenzon, Director
Environmental Quality Council

April 27, 2006

Barb Barnes
Water Quality Division
Department of Environmental Quality
Herschler Building - 4 W
Cheyenne, Wyoming 82002

Re: Comments of Cross Connection Control

Dear Members of the Environmental Quality Council,

I thank you for your desire to seek answers to questions we have been raising since we first challenged this rule. The public is best served when regulatory rules such as these are validated by solid scientific means versus the unfounded views of a few entities or individuals.

From just a cursory review of the cost and risk to benefit ratio analysis prepared by the Water Quality Division Staff, I believe it is difficult for anyone to conclude residential cross connection can be justified from either a cost or public safety standpoint. Moreover, it is still believed that even these dismal results understate the cost and overstate the risk.

The direct cost for the cross connection device and its installation is but one component of the overall cost of this rule. In order for the residence to have the same pressure as it had before the installation of a dual check, modifications to the residence's system and or the distribution system will be required. The cost of either of these modifications is going to be significant and should not be underestimated when evaluating the true cost.

At a recent dental visit, the subject of cross connection control came up. My dentist's office is in an old residence and he stated since he installed a cross connection device, as required by our current codes, his sprinkler system now fails to adequately water his grass. He was clearly unhappy as he is now left with the option of installing a booster pump or having his system completely redone. While this is a business it nonetheless provides a clear example of what the pressure loss is going to do a residence.

On a system basis, the town of Bar Nunn exemplifies the problems residential cross connection control can cause to an existing system. Barr Nunn is growing rapidly due to a large new residential development. In the newer parts of this development, dual checks are being installed causing low pressure problems that have angered the residential owners. It is interesting to note that this resultant anger played a significant role in the defeat of three existing Wardwell Water and Sewer board members by three write-in candidates in their recent election. The current options available to the residents

are to install a booster pump in their homes or to have the system operator raise the storage tank 10 to 16 feet to compensate for the pressure loss through the check. The latter option is the most efficient way to combat this pressure loss in existing gravity systems but will come at a cost that will dwarf the dual check cost.

In either of the above cases, the cost to the resident to maintain the water pressure which they are accustomed to or for which the system was designed to deliver is going to come at significant additional cost when a dual check is installed. As the residents of Bar Nunn demonstrated, the public is not going to idly sit by and allow this problem to persist. Ultimately, the public will demand action be taken by the system operator.

From a review of the primary data source referenced for the analysis, it is clear that the critical assumption "all waterborne disease outbreaks associated with distribution systems were caused by contamination that would have been prevented by residential and domestic service containment" is completely erroneous. The CDC report in fact shows not one of the 31 events over the two year period was related to a residential cross connection. In short, there were no deaths or illnesses caused by a lack of residential or domestic non-residential service containment. With this in mind, no additional analysis is needed for one to conclude the casualty rates and risk benefit are drastically overstating the already bleak results. I urge you to review this data source if you have any concerns that rescinding this unfunded mandate will pose any risk to the public.

The City of Casper firmly believes in cross connection control in high hazard situations and has put in place the necessary ordinances and codes to meet these ends. The low hazard associated with a residential or domestic non-residential connection as shown by the WQD's own analysis clearly demonstrates what we have all along maintained - this unfunded mandate is unwarranted and the rule should be completely rescinded. I urge you to rescind this rule in its entirety and allow water purveyors the right to make their own decision as it relates to residential and domestic non-residential cross connection control. Ultimately, it is the system operator who assumes the risk for their system and it is they who are responsible for any problems that arise within their system.

Again, thank you for taking the time to delve deeper into this subject before making a decision based on emotion and not facts.

Sincerely,



Paul C. Bertoglio
Casper City Councilman
Chairman, Central Wyoming Regional Water System JPB

Cc: Casper City Council
George Parks, Executive Director of WAM
Philip R. Stuckert, Public Services Director
David W. Hill, Public Utility Manager
Public Utilities Advisory Board Members



City of Casper
Public Services Department
Casper, Wyoming
82601



April 27, 2006

FILED

APR 28 2006

Wyoming Environmental Quality Council
Attn: Barb Barnes
Department of Environmental Quality – Water Quality Division
Herschler Building – 4W
Cheyenne, Wyoming 82002

Terri A. Lorenzon, Director
Environmental Quality Council

Re: Chapter 12 Rule Revision Residential and Domestic Non-residential Cross
Connection Control

Dear Environmental Quality Council Members;

The City of Casper is appreciative of the Environmental Quality Council's request for DEQ to perform an "Economic Risk To Benefit Ratio Of Residential And Domestic Cross Connection Control Practices" study. We are appreciative of the continuation of the February 15, 2006 Public Hearing regarding rule revisions for residential and domestic non-residential cross connection control.

Comments in regards to the proposed rule revisions regarding the DEQ-WQD Water Quality Rules & Regulations – Chapter 12 in addition to those submitted at the February 15, 2006 Public Hearing are as follows:

1. The "Economic Risk To Benefit Ratio" study indicates what has long been the position of Casper; that risk and cost to customers does not equate to the benefits.
2. Casper is an advocate of cross connection control, as it has had cross connection control rules and regulations in place since 1981, a cross connection control ordinance in place since 1993, and a fully functioning cross connection control program for industrial/commercial/fire sprinkler systems in place since 1993. Casper's cross connection control ordinance requires retrofitting of existing establishments.
3. Casper has utilized the Uniform Plumbing Code/International Plumbing Code since 1958. These codes require point-of-use backflow preventers. Plumbers are well aware of point-of-use cross connection control for residential solar heat systems, hot water boiler systems, and other point-of-use hazards. Landscape contractors are well aware of the requirements for vacuum breakers or pressure vacuum breakers for lawn sprinkling systems.

Fleet Maintenance
1800 E. K Street
307-235-8245
Fax-235-8417

Parks
1800 E. K Street
307-235-8281
Fax-235-8417

Streets
1800 E. K Street
307-235-8283
Fax-235-8417

Public Utilities
200 N. David
307-235-8213
Fax-234-0709

Engineering
200 N. David
307-235-8341
Fax-234-0709

Solid Waste
200 N. David
307-235-8246
Fax-235-7553

4. Few states in the nation have requirements for residential or non-residential domestic connections using containment dual check valves. It is not a requirement of the Environmental Protection Agency and is not recommended by AWWA or the University of Southern California Foundation For Cross Connection Control and Hydraulic Research.
5. Because of its highly corrosive soils, Casper has a large dollar yearly water main replacement program. Typically, Casper replaces four to six miles of water mains each and every year. This represents anywhere from 350 up to 600 service line connections. Installing dual check valves and expansion tanks, etc. for residential connections would cost approximately \$175,000 up to \$300,000 for this work each year. This represents ½ to ¾ miles of water mains which would not be able to be replaced if the City undertook the cost of residential cross connection control in water main replacement areas.
6. The equity factor is of concern to Casper. That is, Casper mandates commercial and industrial establishments to assume all costs for installing and testing backflow preventers for their establishments. Who would pay for residential and domestic non-residential cross connection control devices? The City of Casper, during Water Main Replacement programs or the customer?

If the customer is responsible, it will lead to strained Customer/City relationships and a large amount of time by City personnel to administer the program.

7. Entering residences to perform hazard classification surveys or to mandate the installation of dual check valves will be very problematic as we have found it extremely difficult to schedule appointments and/or receive permission from customers to enter private residences. This will lead to strained relationships between the City and its water customers, and will involve much time by City personnel to administer the program.

Because of its large water main replacement program, Casper would have to hire additional personnel in order to meet the intent of the existing and proposed rules in performing hazard classification surveys for residential connections associated with the water main replacement program.

8. Casper is willing to assume the risks from residential and domestic non-residential low hazard connections. (See attached City of Casper Resolution). Each water purveyor in the state can decide for themselves if they want to require cross connection control for their residential and domestic non-residential connections and assume the risk.
9. Proper administration of cross connection control programs is essential. Casper has had a detailed cross connection control program for industrial/commercial/fire sprinkler systems customers since 1993. It is extremely important to properly monitor and administer cross connection control for medium to high hazard commercial/industrial/fire sprinkler system connections.

Is this amount of administrative scrutiny really needed for low hazard residential and domestic non-residential connections? Especially if the water purveyor is willing to assume the risk of contamination from these low hazard connections?

10. Another problem is the pressure loss caused by dual check valves for residential and domestic non-residential connections. Casper's water distribution system is a pumped system, involving six different pressure zones. Customers in our highest pressure zone receive water that has been pumped five times.

Casper is not fortunate like so many communities around the state that rely almost solely on gravity for their water pressure.

When Casper's water system was built, it was designed to minimize energy costs for pumping. That is, customers at the highest level in a pressure zone, were to receive 35 psi of water pressure, which was then, and still is, the minimum pressure requirement by DEQ-WQD in its Chapter 12 Rules & Regulations. Customers are no longer satisfied with 35 psi, due to lawn sprinkler systems, point-of-use reverse osmosis units, etc. as well as the construction of larger houses (i.e. two story houses).

Dual check valves will induce a pressure loss of 4-5 psi in use. That means customers in the upper part of our six pressure zones could receive water pressure no greater than 30 pounds in their houses. This will be unacceptable to many customers and could lead to removal of the dual check valves and/or use of in-line booster pumps.

Comments have been made that tanks can be raised in order to provide better pressure in the different pressure zones. The City of Casper has 15 above-ground steel tanks, and one underground reservoir. The cost to raise these tanks and underground reservoir approximately 12 feet (5 psi) would be approximately \$6.5 M+. In addition, our ten water booster stations may need pump replacements or modifications in order to handle the additional head in the water storage tanks, leading to even more cost.

Casper has had, and will continue to receive, low water pressure complaints from its citizens, as the public is desirous of higher water pressures than the current minimum requirement by DEQ-WQD. The use of dual check valves will only exasperate the problem. One nearby water and sewer district has had citizen uproar about low water pressures partially caused by the requirement of dual check valves.

11. Casper questions the life of dual check valves. Dual check valves, as required by DEQ-WQD for residential and domestic non-residential connections are untestable.

Since 1993, through our cross connection control program, we have found that approximately 20% of the double check valves, pressure vacuum breakers, and reduced pressure backflow preventers, which are tested, fail on an annual basis and have to be repaired and/or replaced. Will un-testable dual check valves be any different?

12. Casper is aware that DEQ-WQD and many water purveyors around the state are concerned that several systems have already instituted the use of containment cross connection control (dual check valves) for residential and domestic non-residential connections associated with new, existing or replacement water mains.

Promulgation of rules, regulations, and ordinances, etc. is always a dynamic process, modified as additional information is obtained. We see no reason for DEQ-WQD to continue the practice of mandating dual check valves for residential and domestic non-residential connections as the Risk to Benefits Ratio does not show a demonstrated need to continue the current rule. What happened in the past is past.

Once again, water purveyors would be free to institute the use of residential and domestic non-residential cross connection control within their systems if they want to further minimize the risk of cross connections.

In conclusion, it is recommended that the proposed DEQ-WQD Chapter 12 Rules & Regulations - Cross Connection Control involving residential and domestic non-residential cross connection control be modified as follows:

- a) Complete removal in Section 14 (a)(i) of Chapter 12 Water Quality Rules & Regulations of any reference to residential water service connections and residential and domestic non-residential cross connection control;

Or as an alternative;

- b) Make the following change to the second sentence of Section 14(a)(i)(B) (I): "A residential connection made after March 12, 2003, to a new, existing, or replacement water main, may be exempted from the requirements for containment if a hazard classification survey is on record that all potential internal cross connections have been properly isolated OR IF THE WATER SUPPLIER IS WILLING TO ASSUME THE RISK OF CONTAMINATION FROM RESIDENTIAL CONNECTIONS BY A LETTER TO THE WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY DIVISION." ~~The exemption status of the connection shall expire ten years after the last hazard classification survey of record.~~ And;

Make the following change to the third sentence of Section 14(a)(i)(B)(II): "~~A hazard classification survey must be accomplished at the time of a change of use.~~" "A domestic non-residential connection made after March 12, 2003 to a new, existing, or replacement water main may be exempted from the requirement for containment if a hazardous classification is on record that all potential internal cross connections have been properly isolated OR IF THE WATER SUPPLIER IS WILLING TO ASSUME THE RISK OF CONTAMINATION FROM DOMESTIC NON-RESIDENTIAL CONNECTIONS BY A LETTER TO THE WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY DIVISION." ~~The exemption status of the connection shall expire ten~~

~~years after the last hazardous classification survey of record. The exemption status shall expire with any change of use or ownership. And;~~

Deletion of Section 14(a)(i)(B)(III).

Each water purveyor could decide for itself if residential cross connection control is worth the logistical, administration problems, pressure loss problems, public relations problems, etc. and if it is willing to assume the risk of contamination from these low hazard residential and domestic non-residential cross connections. Casper is willing to assume the risk.

Representatives from the City will address the Environmental Quality Council at its hearing continuation on May 11 and 12, 2006. We are appreciative of the Environmental Quality Council and DEQ-WQD's consideration of rule revisions for residential and domestic non-residential connections.

Please feel free to contact Philip R. Stuckert, Public Services Director, at 307 235-8298 or myself, at 307 235-8213, if you have any technical questions. Please contact City Manager Thomas O. Forslund at 307 235-8244, Councilman Paul Bertoglio at 307 577-1990, if you desire additional elected official input.

Sincerely,



David W. Hill
Public Utilities Manager
City of Casper

Cc: Paul Bertoglio, Casper City Councilman
Thomas O. Forslund, City Manager
George Parks, Executive Director - WAM
Philip R. Stuckert, Public Services Director
Public Utilities Advisory Board Members

RESOLUTION NO. 06-21

A RESOLUTION REQUESTING REPEAL OF DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY DIVISION CHAPTER 12 RULES AND REGULATIONS AS IT APPLIES TO CROSS CONNECTION CONTROL FOR RESIDENTIAL AND DOMESTIC NON-RESIDENTIAL WATER SERVICES.

WHEREAS, Chapter 12 Rules and Regulations of the Department of Environmental Quality - Water Quality Division (DEQ-WQD), as it applies to cross connection control for residential and domestic non-residential services, has detrimentally impacted water purveyors throughout the State of Wyoming; and,

WHEREAS, the Department of Environmental Quality - Water Quality Division's self-initiated policy (DEQ-WQD Policy 14.14.11) requiring dual check valves be installed on residential services during water main replacement projects, is an unfunded mandate that is now, and in the future, going to have serious repercussions for financing and water main replacement projects; and,

WHEREAS, proposed changes to the DEQ-WQD Chapter 12 Rules and Regulations, as it applies to cross connection control on residential and domestic non-residential water services, allows water purveyors to perform hazard classification surveys in lieu of mandatory installation of dual check valves for residential and domestic non-residential water connections; and,

WHEREAS, such dual check valve installation and/or hazard classification surveys are both costly and logistically difficult for local governments and water purveyors to administer, implement, and enforce; and,

WHEREAS, such dual check valve installation and/or hazard classification surveys are an unfunded mandate by the State of Wyoming; and,

WHEREAS, residential and domestic non-residential connections pose a low risk of contamination to the City Water Distribution System; and,

WHEREAS, the City of Casper is willing to assume the risks of contamination from these low hazard residential and domestic non-residential water connections.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CASPER, WYOMING: That the Casper City Council urges the Wyoming Environmental Quality Council and the Department of Environmental Quality to repeal those sections of the Water Quality Chapter 12 Rules and Regulations that govern mandatory dual check valve installation and/or hazard classification surveys on residential and domestic non-residential water service connections, unless otherwise determined by the discovery of a hazardous condition.

BE IT FURTHER RESOLVED that if such a repeal of the Department of Environmental Quality – Water Quality Division Chapter 12 Rules and Regulations is unsuccessful, the City of Casper strongly encourages the Environmental Quality Council and the Department of Environmental Quality to work with water purveyors to develop flexible compliance plans that are cost effective to water purveyors and their customers.

PASSED, APPROVED, AND ADOPTED this 7th day of February, 2006.

ATTEST:



V. II. McDonald
City Clerk

CITY OF CASPER, WYOMING
A Municipal Corporation



Renee R. Burgess
Mayor