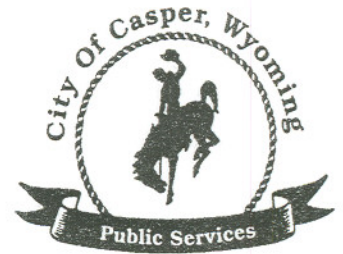


City of Casper  
 Public Services Department  
 Casper, Wyoming  
 82601



April 27, 2006

**FILED**

**MAY 01 2006**

Terri A. Lorenzen, Director  
 Environmental Quality Council

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

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
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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.

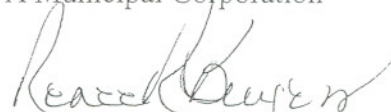
PASSED, APPROVED, AND ADOPTED this 7th day of February, 2006.

ATTEST:



V. H. McDonald  
City Clerk

CITY OF CASPER, WYOMING  
A Municipal Corporation



Renee R. Burgess  
Mayor