Molly O'Leary (ISB # 4996)
Richardson & O'Leary, P.L.L.C.
P.O. Box 7218
Boise, ID 83707
Tel: 208-938-7900
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molly@richardsonandoleary.com

Attorneys for Eagle Water Company, Inc.

RECEIVED
2006 DEC 20 AM 10: 46
IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE INVESTIGATION OF LOW WATER PRESSURE IN A PORTION OF EAGLE WATER COMPANY'S SERVICE AREA	CASE NO. EAG-W-05-102 EAGLE WATER COMPANY, INC.'S PETITION FOR RELIEF FROM THIS COMMISSION'S ORDER NO. 30160

COMES NOW, Eagle Water Company, Inc. ("Eagle Water"), by and through undersigned counsel, and files this Petition for Relief from Commission Order No. 30160 for the reasons stated herein.

Eagle Water has been diligently pursuing the completion of a Final Preliminary Engineering Report to meet the requirements set forth in the Commission's Order No. 29840, as well as to meet the competing demands of a Consent Order entered into with the Idaho Department of Environmental Quality in February of this year. *See* **Exhibit 1**, attached.

To that end, Eagle Water has been working with Jim Rees, P.E., of MTC. Inc. here in Boise, and Chet A. Hovey, P.E., of Ward Engineering Group in Salt Lake City, Utah. Despite Eagle Water's, Mr. Rees's, and Mr. Hovey's diligent

efforts, there have been numerous setbacks in the completion of the report, not the least of which was Mr. Rees's recent surgery to repair an aortic aneurysm.

Eagle Water hereby submits the Affidavit of Chet A. Hovey to aid the Commission's understanding of the progress that has been made to date and that continues to be made on the Final Preliminary Engineering Report despite these setbacks. *See* **Exhibit 2**, attached.

In addition, Eagle Water hereby submits a current invoice from MTC for services rendered by it, to date, on the engineering report. *See* **Exhibit 3,** attached.

As the Commission can see from the foregoing, the costs of the engineering report have exceeded the original estimate of $79,895. Therefore, it is unlikely that there will be an "over collection" of surcharge fees by December 31, 2006. For this reason, Eagle Water respectfully requests the Commission to:

1. Extend the deadline for submission of Eagle Water's Final Preliminary Engineering Report to January 20, 2007;

2. Extend the surcharge collection period at least through the end of January, 2007, when the exact cost of the engineering study will be known; and

3. Extend the deadline for Eagle Water to file an Application for Rate Increase based on the system improvement recommendations in the Final Preliminary Engineering Report to March 1, 2007.

RESPECTFULLY SUBMITTED this 20th day of December, 2006.

Richardson & O'Leary P.L.L.C.

By _____
Molly O'Leary

Attorneys for Eagle Water Company, Inc.

EXHIBIT 1

EAGLE WATER PETITION
FOR RELIEF

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
Toni Hardesty, Director

February 24, 2006

CERTIFIED MAIL:
RETURN RECEIPT REQUESTED

Robert V. Deshazo Jr.
Eagle Water Company, Inc.
172 W. State Street
Eagle, ID 83616

RE: Executed Consent Order for Eagle Water Company, Inc., PWS # 4010049

Dear Mr. Deshazo:

Enclosed is a fully executed copy of the Consent Order (CO) signed by Idaho Department of Environmental Quality's Director, Toni Hardesty. The staff at the Boise regional office will be tracking compliance with the deadlines set forth in the CO. Please send required communications to:

Tiffany Floyd, Regional Drinking Water Manager
Department of Environmental Quality
Boise Regional Office
1445 North Orchard
Boise, Idaho 83706-2239

Thank you for working with the Department to resolve these issues.

Sincerely,

Jerri Henry
Drinking Water Rule/Enforcement Lead

Enclosure

cc: Stephanie Ebright, Deputy Attorney General
Lance Nielsen, DW Program Manager
Mike McGown, Boise Regional Office
Tiffany Floyd, Boise Regional Office
Molly O'Leary, Attorney at Law, Richardson & O'Leary, 515 N. 27th St, Boise, ID 83702

File
COF

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

In the matter of:	)	CONSENT ORDER
	)	Idaho Code § 39-108
Eagle Water Company	)	
	)	

1. Pursuant to the Idaho Environmental Protection and Health Act, Idaho Code §§ 39-101 through 39-130, the Idaho Department of Environmental Quality (Department) enters into this Consent Order with Eagle Water Company (Eagle), a Public Utilities Commission (PUC) regulated, community public water system serving 2550 connections and 9000 individuals in Eagle, Ada County, Idaho, PWS # ID4010049.

2. By Notice of Violation (NOV) dated August 1, 2005, the Department notified Eagle of violations of the Idaho Rules for Public Drinking Water Systems, IDAPA 58.01.08. The NOV is incorporated by reference into this Consent Order. The NOV provided Eagle an opportunity for a compliance conference to discuss the violations and enter into a consent order. A compliance conference was held on August 16, 2005.

3. In order to return to compliance with applicable state and federal laws, Eagle hereby agrees to perform the following actions in the time periods set forth in order to demonstrate compliance with IDAPA 58.01.08:

a. Eagle shall continue to provide quarterly public notice concerning the system's loss of pressure and/or depressurization events, and the steps the system plans to take to return to compliance with the pressure requirements, in accordance with IDAPA 58.01.08.150, to each residence on the system by mail or hand delivery. Eagle shall continue to provide public notice to each residence on a quarterly basis (every 3 months) until such time as the Department provides written notice that quarterly public notification is no longer required.

b. Eagle shall provide the Department with proof of each quarterly notification via the Department's supplied notification form and a copy of each quarterly notification within ten (10) days of completion.

c. No later than ~~February 24~~ March 10 XX, 2006, Eagle shall submit for Department approval a Preliminary Engineering Report. The Preliminary Engineering Report shall delineate the steps that will be taken to bring Eagle into full compliance with IDAPA 58.01.08 and shall include the following:

i. Recommendations for actions to be taken for Eagle to meet the requirements of IDAPA 58.01.08 including: additional sources or system modifications as needed to meet the water quality, quantity and pressure requirements for current and future dwelling units and other uses.

ii. A funding plan to implement the recommendations selected under the provisions of Paragraph 3.c.i. This plan shall include, but not be limited to: the amount of funding needed, sources of funding, procedures and program requirements to secure funding from those sources, and a schedule with milestones to obtain all funding in a coordinated effort to implement the project.

iii. A project implementation schedule for the recommendations selected under the provisions of Paragraph 3.c.i. This schedule shall include, but not be limited to: plans and specifications, preparation of bidding documents, supervision of bid openings and bid awards, pre-construction meetings, construction schedules, construction inspection, and record drawings.

iv. The Department shall review, comment and/or approve the Preliminary Engineering Report as specified in Paragraph 5 of this Consent Order until the Department advises Eagle and their engineer that a Final Engineering Report may be submitted for approval.

d. The conditions and completion dates in the Department approval letter for the Final Engineering Report, including the detailed financial plans described in Paragraph 3.c.ii of this Consent Order and the work plan described in Paragraph 3.c.iii of this Consent Order, shall be incorporated into this Consent Order and shall be enforceable as provided by applicable law. The submittal review and approval process described in Paragraph 5 shall apply to all formal submittals.

e. Within 30 days of completion of the items described in the project implementation schedule of the Final Engineering Report incorporated by reference in Paragraph 3.d., Eagle shall submit as constructed plans and specifications to the Department in accordance with Idaho Code §39-118 and IDAPA 58.01.08.551.

4. Civil penalties of THIRTEEN THOUSAND FIVE HUNDRED DOLLARS ($13,500.00) were assessed in the NOV and will be resolved as follows:

In settlement of the civil penalty for matters included in the NOV, Eagle shall pay a monetary penalty of THIRTEEN THOUSAND FIVE HUNDRED DOLLARS ($13,500.00) to the Department in eight quarterly payments of ONE THOUSAND SIX HUNDRED EIGHTY-SEVEN DOLLARS AND FIFTY CENTS ($1,687.50) beginning no later than ~~February 24,~~ March 10, 2006. Payment shall be made payable to the Idaho Department of Environmental Quality and shall be submitted to:

Accounting
Financial Management
Attn: Drinking Water Penalty Payment
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

5. Department Review and Approval Submittal Review Process. Unless otherwise set forth specifically herein, the following document submittal and review process (Submittal Review Process) shall be followed regarding submittals required by this Consent Order for which Department approval is required. This process shall be followed until the Department approves the document or the review time frame has expired.

a. Within thirty (30) calendar days of receipt of Eagle's submittal, the Department shall 1) notify Eagle in writing the document is approved; 2) notify Eagle in writing of any deficiencies in the document; or 3) notify Eagle of the Department's extension of the Department's review and comment period for up to an additional thirty (30) days. If the Department notifies Eagle of deficiencies in the document, Eagle shall submit a revised document to resolve those deficiencies within thirty (30) calendar days of receipt of the Department's notice.

b. The Submittal Review Process shall be repeated until the Department notifies Eagle the document is approved. However, the submittal must meet the Department's approval within sixty (60) days from the due date for the first submittal of the document, unless the Department provides Eagle with a written extension of the sixty (60) day time frame. Eagle's failure to obtain Department approval of a submittal within such time frames shall constitute a violation of this Consent Order.

c. If the Department extends its review and comment period beyond the initial thirty (30) day period described above, the time frames within which Eagle's documents shall meet the requirements of this Consent Order shall be extended by an equivalent number of days. Once the Department approves these documents, they shall be incorporated herein and enforceable as a part of this Consent Order.

6. All communications required of Eagle by this Consent Order shall be addressed to:

Tiffany Floyd, Regional Drinking Water Manager
Department of Environmental Quality
Boise Regional Office
1445 N. Orchard
Boise, Idaho 83706

7. All notices, reports and submittals required of the Department by this Consent Order shall be addressed to:

Robert V. Deshazo Jr.
Eagle Water Company, Inc.
172 W. State Street
Eagle, ID 83616

Molly O'Leary, Attorney at Law
515 N. 27th Street
Boise, ID 83702

8. This Consent Order shall not in any way relieve Eagle from any obligation to comply with any provision of the Idaho Rules for Public Drinking Water Systems, or any applicable local, state, or federal laws.

9. Eagle recognizes that failure to comply with the terms of this Consent Order may result in district court action seeking specific performance of this Consent Order; assessment of costs and expenses; available penalties under Idaho Code §39-108; restraining orders; injunctions; attorney fees; and other relief available by statute or rule as the court considers to be just and reasonable under the circumstances.

10. This Consent Order shall remain in full force and effect until the Department acknowledges in writing that the Consent Order is terminated and that Eagle has fulfilled all requirements of this Consent Order.

11. This Consent Order shall bind Eagle, its successors and assigns, until terminated in writing by the Department.

12. Each undersigned representative to this Consent Order certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Order, and to execute and legally bind such party to this document.

13. The effective date of this Consent Order shall be the date of signature by the Director of the Idaho Department of Environmental Quality.

DATED this 17th day of February, 2006.

By: _____
Toni Hardesty, Director
Idaho Department of Environmental Quality

DATED this 17th day of February, 2006.

By: _____
Robert V. Deshazo Jr.
Eagle Water Company, Inc.

EXHIBIT 2

EAGLE WATER PETITION
FOR RELIEF

Molly O'Leary (ISB # 4996)
Richardson & O'Leary, P.L.L.C.
P.O. Box 7218
Boise, ID 83707
Tel: 208-938-7900
Fax: 208-938-7904
molly@richardsonandoleary.com

Attorneys for Eagle Water Company, Inc.

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE INVESTIGATION OF LOW WATER PRESSURE IN A PORTION OF EAGLE WATER COMPANY'S SERVICE AREA	CASE NO. EAG-W-05-1 AFFIDAVIT OF CHET A. HOVEY, P.E.

STATE OF UTAH)
) ss.
County of Salt Lake)

COMES NOW Chet Hovey, P.E., and being first duly sworn upon oath, states and affirms the following:

1. I make this affidavit based upon my own personal knowledge.

2. I am a professional engineer, duly licensed in the state of Idaho, Utah, and Nevada.

3. I have professional expertise in the area of public drinking water systems.

4. My resume is attached hereto as **Exhibit A.**

5. I have been working with Jim Rees, P.E., and principal engineer with MTC, Inc. ("MTC") on computer modeling of Eagle Water Company, Inc.'s ("Eagle Water") system for a Final Preliminary Engineering Report.

6. My involvement was necessitated by the departure of the previous engineer from MTC, and the highly complex nature of the modeling software as applied to Eagle Water's system.

7. MTC did a professional job in initially setting up the model. When I received the model, it was very detailed and provided a very powerful tool for Eagle Water.

8. The model has been a challenge because of the unique characteristics of Eagle Water's system.

9. Prior to my involvement, MTC sent the model back to Haested (which sells and supports the WaterCAD Software) for its review to ensure that the water model was optimizing the water system. The model was then incorporated into the Preliminary Engineering Report which was submitted to the Idaho Department of Environmental Quality ("DEQ") on or about May 31, 2006.

10. Comments were received back from the DEQ in mid- to late August.

11. In early October, Mr. Rees and I met with DEQ to respond to its comments. By that time, we had made modifications to the model (additional scenarios and so forth) to address DEQ's original comments. During our meeting with DEQ, we reviewed and discussed each comment separately.

12. DEQ then came up with additional comments and Mr. Rees and I went back to work. In particular, DEQ requested that we verify the model representing the actual conditions by comparing our results to the fire hydrant flow tests.

13. We then modeled each fire hydrant flow test to determine if the model was calibrated correctly and presented this to DEQ the following day. (It should be noted that the existing model did not need any calibration but DEQ wanted to make sure it was calibrated correctly.)

14. DEQ also questioned the peak hour demand flow rate. DEQ was unconvinced that the peaking factors use by MTC, which were obtained from Dewberry & Davis' Land Development Handbook, were representative of the area. DEQ asked that we send a letter justifying the peaking factors and methodology for their use.

15. After spending considerable time researching the peaking factor issue to satisfy DEQ's concerns, we received a letter from DEQ in late October stating that it had since changed its interpretation for pumping redundancy and fire flow. *See* **Exhibit B**, attached hereto.

16. In response to this change, MTC sent a letter to DEQ asking for approval on the methodology behind our revised peak day demand rate, which was based on the average of the last four years of peak day demand data. This methodology had been previously discussed with DEQ. *See* **Exhibit C**, attached.

17. As the modeling was being completed based on the foregoing methodology, DEQ rejected our peak day demand flow rate and asked that we use the 2006 peak day flow rate.

18. We then restarted the process of changing the model and updated the model to reflect the latest available data which included updating the water accounts and use data obtained from Eagle Water in early October.

19. DEQ asked that we go back a few years and see if the flow rate per account is consistent with time. In doing so, I found that the flow rate for 2006 was higher than the previous years. I called MTC and asked that they verify the flow rate. Apparently, the flow rate that was given for the 2006 peak day demand was for a 30 hour period instead of a 24 hour period, so we had to regroup yet again and revise the modeling to reflect the lower flow rate.

20. Each of these modeling changes requires the following:

a. Modification of the flow requirement in each demand junction (over 900 separate junctions must be modified).

b. Adjustment of the pump curves. As one pump curve is adjusted, the pump rates of the other pumps are changed resulting in iteration after iteration.

c. Identification of system improvements that must then be modeled to support the required flow rates.

21. There are currently 12 models of the Eagle Water distribution system per DEQ and Idaho Public Utility Commission requirements. Thus, each remodeling takes an enormous amount of time and extreme patience due to the complexity of the system and limitation within the modeling software.

22. Ward Engineering Group's original estimate to assist MTC with the computer modeling for the Final Preliminary Engineering Report was $15,000.00 to $23,000.00. Due to the remodeling that has been required, to date, the current invoice for Ward Engineering's work on this project is $35,000.00 and I expect that we will expend another $5,000.00 to $7,000.00 before our work on this project is completed. This amount is over an above MTC's billing.

FURTHER your affiant sayeth naught.

DATED this 19th day of December, 2006.

By: Chet A. Hovey
CHET A. HOVEY

SUBSCRIBED AND SWORN to me this 19th day of December, 2006.

NOTARY PUBLIC
COLLEEN CAMPBELL
910 N. FAIRFIELD RD
LAYTON, UT 84041

Colleen Campbell
Notary Public for Utah
Residing at: Layton Utt
Commission Expires: Sept. 1, 2009

EXHIBIT 3

EAGLE WATER PETITION
FOR RELIEF

MTC, INC.
CONSULTING ENGINEERS, SURVEYORS, AND PLANNERS
707 N. 27th STREET
BOISE, ID 83702
208- 345-0780 fax 208 - 343-8967

FOR PORFESSIONAL ENGINEERING SERVICES

FEDERAL IN NO. 82-0398542

ACCOUT OF
EAGLE WATER COMP.
P.O BOX 455
EAGLE, ID 83616

JOB NUMBER:
05-840
DEC.19, 2006

JOB # 05-840
PUC STUDY
FOR EAGLE WATER COMPANY

AUGUST TO DECMEBER 2005	$44,741.29
JANUARY .. 2006	$13,165.00
FEBRUARY	$12,714.70
MARCH	$10,028.75
APRIL	$10,131.58
MAY	11,928.75
JUNE	1,919.96
JULY	791.88
AUGUST	340
SEPTEMBER	$890.00
OCTOBER	$582.91
NOVEMBER	$340.00
DECEMBER... 2006	$680.00
TOTAL	**$108,254.82**

EXHIBIT A

AFFIDAVIT OF
CHET HOVEY

CHET HOVEY, P.E.

PROJECT PRINCIPAL

EDUCATION:

University of Utah
Salt Lake City, Utah
B.S. Civil & Environmental Engineering

REGISTRATION:

Registered Professional Engineer:

Utah No. 368556
Idaho No. 11861
Nevada No. 17357

SWANA Certifications
Certified Landfill Manager (MOLO)
Certified MSW Management Manager

Mr. Hovey has seven years experience in water resources, environmental, solid waste planning, design and construction management. Chet's overall water system experience includes drinking water source protection plans, master plans, preliminary engineering reports, environmental permitting, and effluent management plans. His experience also includes wells, springs, pump stations and pipelines planning and design, and he serves as a SWANA on-site training course instructor.

SELECTED PROJECT EXPERIENCE:

PROJECT NAME	RESPONSIBILITY
Water Resources	
Rodeo Irrigation Pump Station, Oakley, UT	Project Engineer
Golf Course Irrigation Pump Station, West Wendover, NV	Project Engineer
Eagle Water Company Culinary Master Plan, Boise, ID	Project Manager
Spiral Springs Water System Design, Erda, UT	Project Manager
Effluent Management Plan, West Wendover, NV	Project Engineer
USDA Reuse Water Project, West Wendover, NV	Project Engineer
Shafter Water Transmission Pipeline West Wendover, NV	Project Engineer
Johnson Spring Rehabilitation Project, West Wendover, NV	Project Engineer
Culinary Water and Wastewater Master Plan, West Wendover, NV	Project Engineer
Summit Park Water Distribution System, Mountain Regional Water SSD, UT	Project Engineer
Nicklaus Booster Pump Station, Mountain Regional Water SSD, UT	Project Engineer
USDA Reuse Water Projects	Project Engineer
Environmental Engineering	
Bauer Class I Landfill Permit Application, Tooele County, UT	Project Engineer
Class I/Class IV Landfill Permit Application, Duchesne/Wasatch County, UT	Project Engineer
Landfill Master Plan, Duchesne/Wasatch County, UT	Project Engineer
Landfill Master Plan, West Wendover, NV	
Geohydrologic Assessment, Duchesne/Wasatch County, UT	Project Engineer
Class I – Phase II Cell Expansion, Duchesne/Wasatch County, UT	Project Engineer
Promontory Point Class I Landfill Permit Application, Box Elder County, UT	Project Engineer
Bauer Class IV Landfill Permit Application, Tooele County, UT	Project Engineer
Bauer Class IIIB Landfill Permit Application, Tooele County, UT	Project Engineer
Construction Management	
Shafter Water Transmission Pipeline, City of West Wendover, NV	Project Engineer
USDA Reuse Projects, City of West Wendover, NV	Project Engineer
Johnson Spring Rehabilitation Project, West Wendover , NV	Project Engineer
Golf Course Pumping Project, West Wendover Recreation District, NV	
Phase #5 Sewer Line Extension, Town of Alta, UT	Project Engineer
Three-Mile Reservoir Aluminum Cover, West Wendover, NV	Project Engineer
Water Transmission Pipeline Phase III Pipe,West Wendover, NV	Project Engineer
Shafter Well #5 Pump Station, West Wendover, NV	Project Engineer

EXHIBIT B

AFFIDAVIT OF
CHET HOVEY

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON • BOISE, ID 83706-1255 • (208) 373-0502

JAMES E. RISCH, GOVERNOR
TONI HARDESTY, DIRECTOR

MEMORANDUM

TO: Kirby Cole, Lewiston Regional Office Administrator
Mark Dietrick, Pocatello Regional Office Administrator
Gwen Fransen, Coeur d'Alene Regional Office Administrator
Doug Howard, Twin Falls Regional Office Administrator
Jim Johnston, Idaho Falls Regional Office Administrator
Jon Sandoval, Boise Regional Office Administrator

FROM: Barry Burnell, Water Quality Division Administrator

SUBJECT: **Drinking Water Rule Interpretation—Pumping Redundancy and Fire Flow**

DATE: October 10, 2006

Proposal: The proposed phase 2 drinking water facility standards rule has sections that address pumping redundancy and fire flow. The proposed rule language, as modified in response to public comments during August, separates fire flow requirements from the more general requirement that public water systems be designed with pumping capabilities sufficient to provide peak demands with the largest pump out of service. **This memo directs DEQ engineers performing plan and specification reviews for public water systems to use the framework agreed upon in the proposed rule before it becomes final in the spring of 2007.**

Current Rule Interpretation: The most literal reading of Recommended Standards for Waterworks ("Ten States") would require that public water systems be designed with sufficient pumping capacity to supply peak day demand plus fire flow where provided. Any pumping facility within the water system would need to have sufficient redundancy to provide this peak day demand plus fire flow when the largest pump is out of service. DEQ has not been consistent in application and interpretation of this requirement. Most offices have not held to the most literal reading of Ten States. This is understandable by the fact that Ten States makes an assumption that all systems will be designed with storage in the amount of average daily demand. In Idaho, many systems do not install storage and depend upon pumping to supply all of their needs. The challenge of providing fire flow differs substantially between systems that have storage and those that depend on pumping alone.

New Proposed Facility Standards Rule: The proposed rule only requires pumping redundancy for domestic flows. Fire flows are now treated separately in the proposed rule. Public water system owners are allowed to reduce or eliminate redundancy for fire flow systems, if local fire authorities certify that the water system's fire fighting capabilities are compatible with the water demand of existing and planned fire fighting equipment and fire fighting practices in the area served by the system. The system may be designed to provide slightly lower total flows during a fire event, taking into account the drop in distribution pressure that will occur when fire flow is provided. The proposed rule provides definitions for the terms that refer to design flows and uses these key terms in a consistent manner throughout sections that deal with redundancy criteria.

As a condition for DEQ approval of fire flow designs that do not incorporate full redundancy, the proposed rule language includes a requirement that existing or potential customers be informed of the system's firefighting capabilities and the acceptance of these capabilities by the local fire authority. Although there was some

opposition to this provision, this requirement is consistent with similar language negotiated for the proposed rule section dealing with standby power. In both situations, the operative principle is that systems that obtain approval for a reduction in reliability or redundancy should be willing to inform customers of this fact. This notification does not need to be stated in negative terms, because the system design is in compliance with regulation. In this interim time, prior to the proposed rule becoming effective, DEQ will waive the notice requirement so long as the system complies with Section 501.17(b)(i), as quoted in the Attachment to this memo. Once the proposed rule becomes effective, the notice requirement must be met as part of the plan review.

Summary: The framework provided in the proposed rule is consistent with past practices in Idaho and allows for system designs that provide a reasonable level of redundancy. The proposed rule establishes a standard for redundancy that is consistent with Ten States and then provides for departures from that standard when doing so is acceptable to the local fire authority and does not compromise the ability of the water system to reliably meet domestic flows. Standardizing around this approach will help to improve consistency in the way these requirements are implemented around the state.

BNB:jt

Attachment

Summary of Proposed Facility Standards Rule Language Dealing with Pumping Redundancy and Fire Flows

1. The terms used to describe design flows in the rule are average day demand, peak hour demand, maximum day demand, and fire flow capacity. These terms may be assigned slightly different meanings in various engineering references. Because these terms are of key importance in interpreting the rule requirements, they are defined as follows.

Average Day Demand. The volume of water used by a system on an average day based on a one (1) year period.

Peak Hour Demand. The highest hourly flow, excluding fire flow, a water system or distribution system pressure zone is likely to experience in the design year.

Maximum Day Demand. The average rate of consumption for the twenty-four (24) hour period in which total consumption is the largest for the design year.

Fire Flow Capacity. The water system capacity, in addition to maximum day demand, that is available for fire fighting purposes within the water system or distribution system pressure zone. Adequacy of the water system fire flow capacity is determined by the local fire authority.

2. The above terms are then used throughout those sections of the rule that deal with redundancy requirements. The pertinent sections are shown below. Highlighting is used to emphasize the key terms. These excerpts may be viewed in context by accessing a copy of the proposed rule through DEQ's website at http://www.deq.idaho.gov/rules/drinking_water/58_0108_0602_proposed.cfm or by calling Tom John at 373-0191.

513. **FACILITY AND DESIGN STANDARDS - NUMBER OF GROUND WATER SOURCES REQUIRED.** New community water systems served by ground water and constructed after July 1, 1985, or existing community water systems served by ground water that are substantially modified after July, 2002, shall have a minimum of two (2) sources if they are intended to serve more than twenty-five (25) homes or equivalent. Under normal operating conditions, with any source out of service, the remaining source or sources shall be capable of providing either the peak hour demand of the system or maximum day demand plus equalization storage. See section 501.17 for general design requirements concerning fire flow capacity. for the purpose of section 513 only, the department shall consider a system to be "substantially modified" when there is a combined increase of twenty-five percent (25%) or more above the system's existing configuration in the following factors:

541. 02. Pumping Units. At least two (2) pumping units shall be provided for raw water and surface source pumps. Pumps using seals containing mercury shall not be used in public drinking water system facilities. With any pump out of service, the remaining pump or pumps shall be capable of providing the peak hour demand or maximum day demand plus equalization storage. See Section 501.17 for general design requirements concerning fire flow capacity. The pumping units shall meet the following requirements: **[Remaining language from this subsection is not listed because it does not deal with redundancy]**

541.04. c. Each booster pumping station shall contain not less than two (2) pumps with capacities such that peak hour demand, or maximum day demand plus equalization storage, can be satisfied with the largest pump out of service. See Section 501.17 for general design requirements concerning fire flow capacity.

544.01. Sizing. Storage facilities shall have sufficient capacity, as determined from engineering studies that consider peak flows, fire flow capacity, and analysis of the need for various components of finished storage as defined under the term "Components of Finished Water Storage" in Section 003. The requirement for storage may be reduced when the source and treatment facilities have sufficient capacity with standby power to supply peak demand of the system.

3. Finally, a new provision in General Design Considerations (Section 501) to address the requirements and exceptions that apply to fire flow capacity.

501.17. Redundant Fire Flow Capacity.

a. Public water systems that provide fire flow shall be designed to provide maximum day demand plus fire flow instead of peak hour demand plus fire flow. This allowance is made because distribution pressures can be expected to fall during a fire event and overall demand would be less than peak hour. Pumping systems supporting fire flow capacity must be designed so that fire flow may be provided with the largest pump out of service.

b. The requirement for redundant pumping capacity specified in 501.17.a. may be reduced to the extent that storage is provided in sufficient quantity to meet some or all of fire flow demands. Where storage is not provided, the requirement for fire flow pumping redundancy may be reduced or eliminated if the following conditions are met:

i. The local fire authority states in writing that the fire flow capacity of the system is acceptable and is compatible with the water demand of existing and planned fire fighting equipment and fire fighting practices in the area served by the system.

ii. In a manner appropriate to the system type and situation, positive notification is provided to customers that describes the design of the system's fire fighting capability and explains how it differs from the requirements of 501.17.a. The notice shall indicate that the local fire authority has provided written acceptance of the system's fire flow capacity.

EXHIBIT C

AFFIDAVIT OF
CHET HOVEY

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

James E. Risch, Governor
Toni Hardesty, Director

TSCPE-239/2006

October 25, 2006

Mr. James M. Rees, P.E.
MTC, Inc.
707 N. 27th Street
Boise, Idaho 83702-3113

RE: Response to Proposed Peak Day Demand Rate *(Eagle, Ada County)*

Dear Mr. Rees:

Your letter of October 18, 2006 proposed a peak day demand rate for use in evaluating the sufficiency of your system. This evaluation is required for completing your Water Supply System Study. That rate, 3,556 gpm, is the average of the peak day demand rates for 2003 through 2006. You further note that approximately 60 percent of this water is utilized by irrigation accounts. In a previous meeting, you informed DEQ that you expected the volume of water used for irrigation to decrease as your service area builds out. You also indicated that developed areas consume less water than undeveloped irrigated areas so that the peak day demand rate observed each year would eventually level out even if the population of your service area increases. Your letter requested DEQ to agree with your proposed rate so that you could use that rate as a basis for completing your study.

DEQ acknowledges that we previously agreed in principle to try to establish a peak day demand rate based on the methodology set forth above. However, the data in your letter indicates that the peak day rate is not only growing, but accelerating (a 2.5% increase between 2003 and 2004, an 8.3% increase between 2004 and 2005 and a 14.8% increase between 2005 and 2006). Your letter does not provide any explanation or analysis to demonstrate why we should expect future peak day demand rates to stop increasing and stabilize in the 5 to 6 million gallon per day range. Having data that demonstrates the peak day rate is still growing and lacking justification for why we should expect it to stop growing, DEQ cannot agree to your proposed peak day rate.

To resolve this issue as quickly as possible, DEQ recommends that we hold a working meeting with you and your consultants with the objective of finding a defensible methodology for establishing peak day rates for use in your study. Please contact me with any questions at 373-0514, or via e-mail at peter.bair@deq.idaho.gov if you have any questions in this regard.

Sincerely,

Peter S. Bair, P.E.
Technical I Engineer

PSB:sjt

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