

BEFORE THE STATE OF OREGON  
OREGON HEALTH AUTHORITY  
CENTER FOR HEALTH PROTECTION

In the Matter of

City of Bend

BILATERAL COMPLIANCE AGREEMENT

The City of Bend (the City) is a water supplier as defined in Oregon Revised Statute (ORS) 448.115(12) and Oregon Administrative Rule (OAR) 333-061-0020(207). As a water supplier, the City has specific responsibilities that are identified in OAR 333-061-0025.

The City has at all times mentioned herein owned and operated, and continues to own and operate, the public water system serving the City and residents of Bend, Oregon. The Bend public water system is a community water system serving approximately 63,000 people, is identified by public water system ID# OR4100100 and is subject to regulation under ORS 448.115 to 448.290 and OAR 333-061-0005 to 333-061-0272.

Pursuant to its authority under ORS 448.150, the Oregon Health Authority, Public Health Division, Center for Health Protection, Drinking Water Services (DWS) has reviewed the operation of the Bend water system.

This agreement is entered into between DWS and the City, for the purpose of acknowledging that water treatment for *Cryptosporidium* at the Bend water system will not be installed by the compliance date established in rule. The further purpose of this agreement is to establish a commitment by the City to treat for *Cryptosporidium* as quickly as possible.

FINDINGS OF FACT

- The City has conducted monthly monitoring for *Cryptosporidium* since 2005 and has reported the results of that monitoring in its annual consumer confidence report.
- The mean *Cryptosporidium* level was determined to be 0.012 oocysts/L in source water at the Bend water system.
- OAR 333-061-0032, in part, requires water systems using surface water to provide at least 2-log (99 percent) *Cryptosporidium* treatment.
- OAR 333-061-0032(1)(a)(F)(iii) identifies dates by which water systems using surface water must provide *Cryptosporidium* treatment and specifies the Authority may allow up to an additional two years at water systems where capital improvements are being made.
- OAR 333-061-0032(1)(a)(F)(iii)(II) requires water systems serving between 50,000 and 99,999 people to provide *Cryptosporidium* treatment by October 1, 2012.
- On May 23, 2011 the City requested two additional years to comply with the requirement for *Cryptosporidium* treatment because it was in the process of making capital improvements related to *Cryptosporidium* treatment.
- On June 14, 2011 DWS approved the City's request for two additional years to comply with the requirement to provide *Cryptosporidium* treatment due to capital improvements. The City is therefore required to provide *Cryptosporidium* treatment by October 1, 2014.
- The City requested, in letters dated January 9, 2012, January 11, 2013 and September 29, 2014, additional time beyond October 2014 to install *Cryptosporidium* treatment due to events beyond the City's control. The letters are incorporated by reference.
- On April 2, 2014 the City submitted construction plans for a new filtration plant designed to include the necessary water treatment to comply with the requirement to provide *Cryptosporidium* treatment.
- The City has awarded a contract to Mortenson Construction to complete construction of the water filtration plant to meet the requirement to provide *Cryptosporidium* treatment.

AGREEMENT

Upon completion of the activities described below, by the deadlines specified herein, the City will have satisfied the terms of this agreement and will be considered to be in compliance with the rule(s) mentioned hereto.

- Agreement Activity No. 1: The City will, no later than April 1, 2016, meet all the conditions identified in the conditional plan review letter from DWS dated May 17, 2014.
- Agreement Activity No. 2: The City will, no later than April 15, 2016, demonstrate that water delivered to the customers of the Bend water system meets the applicable treatment requirements in OAR 333-061-0032(1), (4) and (5).
- Agreement Activity No. 3: The City will conduct monitoring for *Cryptosporidium* every month until the completion of Agreement Activity No. 2.
  - Samples will be collected from the surface water source for the Bend water system prior to any water treatment and submitted for laboratory analysis according to OAR 333-061-0036(1)(a).
  - The City will report monitoring results to DWS within 10 days of receiving the analysis report from the laboratory.
- Agreement Activity No. 4: The City will, no later than September 1, 2016, complete a tracer study according to OAR 333-061-0050(6)(a)(R).



- Agreement Activity No. 5: The City will publish public notice for failing to provide *Cryptosporidium* treatment. The notice will meet all of the applicable requirements of OAR 333-061-0042(4) and be distributed so that every person served by the Bend water system receives the notice. The notice will be reissued every three months, until all corrections are made, and all system users receive drinking water that meets all applicable state and federal drinking water laws and rules (OAR 333-061-0025 and OAR 333-061-0042(3)(b)(C)). A copy of the notice and certification of the method of distribution must be submitted to DWS no later than 10 days after completing the public notification per OAR 333-061-0040(1)(i).
  - The City will submit copies of the public notice to: Brad Daniels, OHA Drinking Water Services, PO Box 14450, Portland, OR 97293-0450.

### GENERAL PROVISIONS

This Agreement does not constitute a waiver, suspension or modification of the requirements of the Oregon Drinking Water Quality Act; ORS 448.115 to 448.285 and administrative rules OAR 333-061-0005 to 333-061-0272, which remain in full force and effect.

This Agreement does not relieve the City of any responsibilities or liabilities established pursuant to any applicable federal, state, or local law or regulation.

DWS has determined that additional enforcement action is not warranted at this time, and so long as the City meets all of the requirements and deadlines specified in this Agreement, DWS will forgo additional enforcement action which could include the assessment of civil penalties as prescribed by OAR 333-061-0090.

If, for reasons beyond the City's control, the activities or deadlines agreed to herein cannot be met, the City must request an extension in writing, identifying the reasons for the delay and proposing a new deadline. DWS will review the request and if appropriate, an amended agreement will be considered.

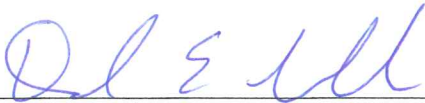
Bend, Oregon  
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Dated this 1<sup>st</sup> day of October, 2014.



Paul Rheault, Director  
City of Bend, Utilities Department

Dated this 1 day of OCTOBER, 2014.



David E. Leland  
Interim Administrator - Center for Health Protection  
Oregon Health Authority, Public Health Division

cc: Michelle Byrd, OHA-DWS

# Memorandum

**To:** David Leland – Oregon Health Authority  
**From:** Steven Prazak - City of Bend  
**Subject:** Update to OHA on Bend's Route to LT-2 Compliance  
**Date:** September 29, 2014



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## **Request from Dave Leland – Oregon Health Authority - Drinking Water Services**

### **Goal of requested Memo**

To document the activities and related actions that have occurred from the last update letter to the City of Bend's present status. The last update letter mentioned by Dave Leland in a meeting on Friday, Sept. 26, 2014, was the Jan. 9, 2012 letter to Gail Shibley. Our records show a more recent update letter to Dave Leland dated Jan. 11, 2013.

### **List of Recent Letters to and from OHA**

- Jan. 11, 2013 - Bend Letter to Dave Leland OHA - 2.5 pages from Eric King Bend City Manager: Request for Alternative Compliance schedule, notes Bend making steady progress, cites legal challenges, replacing aging water lines, pipeline as priority, 90% design of Treatment plant, permitting delays (pipeline lawsuit), PFP challenge, prioritizing the pipeline, still making best efforts but extremely concerned about meeting deadline.
- Feb 1, 2012 - OHA to Bend: Suggesting BCA – specified end dates, interim measures, and public information provisions – conduct a detailed financial study and technical data to determine earliest feasibility date.
- Jan. 9, 2012 – Bend Update Letter to Gail Shibley, OHA 7 pages plus map: Thanking for meeting, confirms understanding of variance option, explaining system and project facts, interim measures, exploring the various pathways to compliance that absorb the permitting and process delays and related extenuating circumstances and relationships with related projects and processes (pipeline, PFP processes, County Road, economic conditions) and suggested a path forward together with OHA.

### **Related City Council Actions / related important dates**

#### **Treatment Decision / Treatment Plant Construction**

**Summary:** Council actions postponed an earlier approval of membrane treatment and created a public advisory group to revisit the issue. After a brief but intense public process, an advisory group's recommendation, Council again voted to approve investment in membrane treatment to comply with LT-2 Rules. Ends with project groundbreaking for the water treatment plant on May 27, 2014

#### **Key Milestones**

- Resolution 2817 – original approval of membrane filtration (passed Dec. 1, 2010)
- Feb. 20, 2013 – Council passed Resolution 2900 – Council revisits the treatment decision; Sections 3, 4, 6: form citizen task force, hire third party individual reviewer and facilitate meetings.
- May 2013 – Water Treatment Advisory Committee (WTAC) committee members sought, consultant hired, process determined.
- Water Treatment Advisory Committee meets – July 26, 2013 to Oct. 2, 2013, See WTAC website <http://www.ci.bend.or.us/index.aspx?page=986>
- Oct. 22, 2013 – Council Vote on membrane delayed until November 2013
- Nov. 6, 2013 – Bend Council Re-Votes for Membrane Filtration (See Resolutions 2817, 2900)
- May 27, 2014 – Groundbreaking on water treatment plant

## **Land Use Approvals – Goal 11 - Public Facility Plan Approval (ties to funding / rates / Master Plans and related requirements)**

**Summary:** Oregon Land use laws require an approved Public Facility Plan (PFP) be adopted for provision of water and incorporated into the general plan. City's updated plan was originally remanded by LUBA, and sent back to the City for refinement. Required changes were made and after another appeal of the PFP by LandWatch, LUBA ruled in Bend's favor and affirmed the PFP in September of 2013. Pipeline and Treatment are components of the PFP.

### **Key Milestones**

- March 6, 2013 Public Hearing on Water PFP First Reading
- March 20, 2013. Amendments to Chapter 8 of the Bend Area General Plan, Public Facilities and Services – addressing remand issues in LUBA's final opinion and Order (LUBA file No. 2012-043)
- PFP appealed by Central Oregon LandWatch
- Sept. 12, 2013 LUBA affirms PFP, denies Central Oregon LandWatch

## **Pipeline Replacement**

**Summary:** Since January of 2013, steady progress has been made on the pipeline replacement portion of the project that eventually will supply the water to the treatment plant. Six miles of the steel line on the lower section of the pipe route was allowed to be constructed by a federal judge after a second injunction was partially granted – when Central Oregon LandWatch and WaterWatch of Oregon filed a complaint against the USFS and permitting decision. While the court case is proceeding, completion of the lower six miles of steel line is nearing completion, though it will not be allowed to be connected and used until resolution of the legal complaint. Instead, re-route of the existing water lines will be made at the Outback site to accommodate connection to the treatment plant, with the expectation that the upper reaches of the pipe route will be allowed and the new line will eventually be connected.

### **Key Milestones**

- Nov. 4, 2013 - USFS gives project go ahead to updated Special Use Permit
- Nov. 14, 2013 – Central Oregon LandWatch / WaterWatch file complaint/injunction against USFS decision
- Feb. 14, 2014 – Court Ruling against LandWatch / WaterWatch and lets portion of pipeline construction proceed (under the county road)
- March 6, 2014 Groundbreaking on Pipeline project portion occurring under paved portion of Skyliner's Road
- Sept. 2014 – Contractor is nearing completion of steel pipe portion of project – ahead of schedule due to less rock than anticipated. Pipe will not be allowed to be connected until permitting lawsuit is resolved.



January 11, 2013

Dave Leland  
Office of Environmental Public Health  
Public Health Division, Oregon Health Authority  
800 NE Oregon Street  
Portland, OR 97232

710 NW WALL STREET  
PO BOX 431  
BEND, OR 97701  
[541] 388-5505 TEL  
[541] 385-6676 FAX  
WWW.CI.BEND.OR.US

Re: Long Term 2 Enhanced Surface Water Treatment Rule Alternative  
Compliance Schedule

Dear Mr. Leland:

JEFF EAGER  
*Mayor*

JODIE BARRAM  
*Mayor Pro Tem*

TOM GREENE  
*City Councillor*

SALLY RUSSELL  
*City Councillor*

JIM CLINTON  
*City Councillor*

MARK CAPELL  
*City Councillor*

SCOTT RAMSAY  
*City Councillor*

ERIC KING  
*City Manager*

The purpose of this letter is to provide you with a status update of the City of Bend's efforts to comply with the LT2 Rule on its Bridge Creek surface water source. Given recent legal challenges to the project, the City is concerned with being able to comply with the LT2 Rule by the extended deadline of October 2014.

In addition to complying with the LT2 rule, this project also involves replacing aging water lines and an intake facility. As outlined in our letter to you dated January 9, 2012, the City Council strongly believes that the top priority amongst these issues is the aging water lines and intake facility. As you can understand, a new treatment facility is useless without adequate infrastructure to deliver the water for such treatment. The sequence of our construction proposal includes replacement of an intake facility to allow for a more efficient use of Bridge Creek water eliminating return flows when the water demand is low.

As it turns out, the City was correct in setting the pipeline as the priority project because in recent months the current transmission lines have had two separate rupture events. It is likely this kind of failure will continue to impact the City's ability to rely on the Bridge Creek water supply source.

The City has been making steady progress and has completed the design of both the intake and pipeline, and selected a contractor to construct the project. We were proceeding to construction on the pipeline portion with the intent to complete this phase of the project by the summer of 2013. The intake facility was planned to be completed in the fall of 2013, at which time the City was anticipating the start of construction on the treatment facility. The City is currently at 90% design of the treatment facility.



### Permitting Delays

As you know, the City's transmission lines run through Federal land on the United States Forest Service (USFS) property. Therefore, the City needed a special use permit from the USFS for the new proposed pipeline for the project prior to construction of the pipeline. As part of the permit process, the USFS was required to comply with the National Environmental Protection Act (NEPA) and analyze potential environmental impacts of the proposed intake facility and pipeline. The City worked closely with USFS on a thorough and detailed NEPA process. This included an in depth analysis of stream flow effects and impacts to vegetation in wetland and riparian areas resulting from the project.

In September 2012 Central Oregon Land Watch (COLW) sued the USFS and challenged the NEPA process for the City's pipeline and intake projects in Federal District Court. Concurrently, COLW filed for a preliminary injunction to stop the project pending a more detailed review of specific components of the project. The City of Bend intervened. In October 2012, the court issued an injunction against the City's project stopping all construction related activities. The City has recently submitted a new special use permit application and is working with the Forest Service to address the two issues raised by the Federal judge in the injunction – impacts to wetlands and water temperature. Upon review of the additional work, which is expected to be completed by mid-summer of 2013, the City believes the concerns will have been resolved with the NEPA process and is hopeful that a revised special use permit can be issued. Please note it is possible that this additional environmental work will be challenged again in Federal Court. If that occurs, timelines become very uncertain making the 2014 LT2 timeline very difficult to meet.

In addition, COLW challenged the City's water public facilities plan (PFP) before the State's Land Use Board of Appeals (LUBA) on a myriad of issues. The City prevailed on many of the claims, but on 11/29/12, LUBA remanded the PFP back to the City to include additional descriptions of the surface water project and associated timelines as well as an unrelated issue regarding City water service to a destination resort adjacent to City limits. At a minimum, these remand items will take several months to address. Further, once the City Council adopts findings to resolve these issues, the petitioner can once again appeal to LUBA. I raise this as another potential uncertainty relating to the City's ability to meet the 2014 deadline.

In sum, the City is extremely concerned about our ability to meet the LT2 October 2014 compliance timeline. In fact, the current delays have already made our ability to comply with the rule very challenging, if not impossible. The City is taking legal steps necessary to reduce risks as much as possible, but uncertainty exists nonetheless, despite our best efforts to move the project forward on the projected timeline.

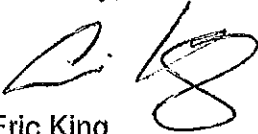
Dave Leland  
January 11, 2013  
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In light of these events, the City requests an opportunity to discuss a schedule beyond October 2014 to satisfy the LT2 Rule. I understand that this would likely require the City entering into a bilateral compliance agreement with your agency. I realize the State has limited ability to grant a further extension, and yet I request that the State recognize events beyond the City's control that prevent us from meeting our current compliance date of October 2014.

Please consider this letter a request to meet in person to discuss the best way to proceed.

I look forward to your response and beginning a conversation that can assist us in finding an acceptable solution for the State and City.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. King', written over a faint horizontal line.

Eric King  
City Manager, City of Bend

EK/nf

cc:



PUBLIC HEALTH DIVISION  
Drinking Water Program

John A. Kitzhaber, MD, Governor

Oregon  
**Health**  
Authority

800 NE Oregon Street, #640

Portland, OR 97232-2162

Phone 971-673-0405

FAX 971-673-0694

TTY-Nonvoice 971-673-0375

February 1, 2012

Mr. Jeff Eager, Mayor  
City of Bend  
710 NW Wall St.  
PO Box 431  
Bend OR 97710

City of Bend

FEB 06 2012

Received Administration

Dear Mayor Eager:

In your letter of January 9, 2012, you stated your intent to seek additional time beyond the compliance date in rule of Oct. 1, 2014 for the City of Bend to comply with the source water treatment requirements of the Long-Term 2 Enhanced Surface Water Treatment Rule. You cited the technical challenges of sequencing the two significant construction projects needed to achieve compliance with the rule and the challenges of the economic impact of these projects on the community as the primary reasons for additional time.

When a water supplier does not comply with a rule by the date specified in that rule, OHA as primacy agency for drinking water must establish and enforce a compliance schedule. These schedules may take various forms, including an Administrative Order established by OHA, or a Bilateral Compliance Agreement executed jointly and appropriate when a water supplier commits to achieving compliance. In any case, the compliance schedule must contain 1) a specific series of interim steps with completion dates leading to full compliance with the rule by a specified end date; 2) specific interim measures to protect public health; and 3) provisions for keeping the public informed. Note that the compliance date for Bend already includes the two-year extension provided in the rule when capital construction is needed, and that extension was granted by OHA on June 14, 2011.

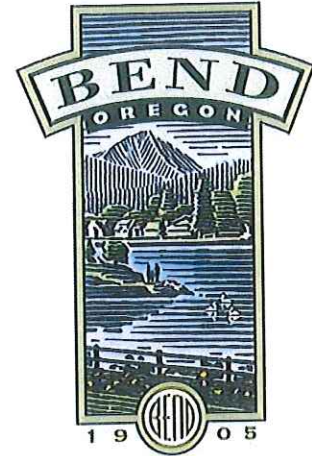
As a first step the City should conduct a detailed analysis of financial and technical data to determine the earliest feasible date by which the City can comply with the LT2 rule requirements, and formulate that analysis into a specific time schedule proposal for our review.

We appreciate your continuing efforts and dedication to safe drinking water in the City of Bend.

Sincerely,

Gail R. Shibley, JD, Administrator  
Office of Environmental Public Health

GRS:dw



January 9, 2012

710 NW WALL STREET  
PO BOX 431  
BEND, OR 97701  
[541] 388-5505 TEL  
[541] 385-6676 FAX  
WWW.CI.BEND.OR.US

Gail R. Shibley, JD, Administrator  
Office of Environmental Public Health  
Public Health Division, Oregon Health Authority  
800 NE Oregon Street  
Portland, OR 97232

*Re: Long Term 2 Enhanced Surface Water Treatment Rule  
Compliance Issues and Bend System Specific Considerations*

JEFF EAGER  
*Mayor*

Dear Ms. Shibley:

JODIE BARRAM  
*Mayor Pro Tem*

TOM GREENE  
*City Councilor*

KATHIE ECKMAN  
*City Councilor*

JIM CLINTON  
*City Councilor*

MARK CAPELL  
*City Councilor*

SCOTT RAMSAY  
*City Councilor*

ERIC KING  
*City Manager*

We want to thank you for taking the time to talk to Mayor Jeff Eager, Councilors Tom Greene and Scott Ramsay, as well as the City Manager, City Attorney, City Engineer and Water Resources Manager on December 6, 2011 regarding Long Term 2 Enhanced Surface Treatment Rule ("LT2") compliance issues as they relate to the City of Bend's surface water system and Safe Drinking Water Act treatment requirements. The conversation was very helpful, and we appreciated your candor and willingness to consider Bend's unique situation and challenges.

This letter will first confirm our understanding related to the variance process, and the recent proposed Order granting a 10-year variance from treatment to Portland. The Portland Order identified two critical reasons for finding that treatment is not necessary to protect public health: (1) Portland's extensive year-long testing program detected no *Cryptosporidium* oocysts (the EPA standard being that an unfiltered water system may show a level at or below 0.075 per 1000 liters, which translates to 0.000075 oocysts per liter); and (2) the various legal protections for the Bull Run Watershed, as well as the fact that it is a closed and protected watershed where the public is not allowed and no logging or other operations are permitted. While you stated that you could not pre-judge any application by the City of Bend, it was clear from our conversation and the above-listed criteria that it is extremely unlikely that Bend would qualify for a variance. Unlike Portland, Bend has had seven documented positive test results for



*Cryptosporidium* in our surface water supply since sampling began in 2005 which ranged from 0.1 to 0.2 oocysts per liter, which is above the EPA standard requirement. In addition, Bend's municipal watershed is open and accessible to the public as compared to Portland's Bull Run watershed, which is closed to all public access.

During the call, we discussed that a variance application would require extensive, expensive testing that the City does not presently undertake. Considering that our current testing at lower volumes demonstrates "hits" above the EPA standard, additional testing would not likely yield less detection of oocysts per liter. Please let us know if our understanding is in any way inaccurate, but suffice it to say that we were left with very little optimism that a variance is a viable approach for the City of Bend.

Nonetheless, during the call there was a lengthy and helpful conversation about ensuring that Bend had a feasible compliance schedule. That is, whether there may be specific, articulable facts that warrant a compliance schedule adjustment, beyond the October 1, 2014 deadline. You mentioned an EPA letter of November 30, 2011 to Mayor Richards of Rochester, New York, which notes that many public water systems face multiple challenges in managing, maintaining and operating those systems. In her letter to Mayor Richards, Acting Assistant Administrator Stoner further states:

Infrastructure construction projects can also present challenges. It is entirely appropriate for primacy agencies to consider these system specific facts when evaluating a request to adjust a compliance schedule. If a schedule adjustment is appropriate, the public water system should have in place robust interim measures to ensure public health protection, and those interim measures should remain in effect until that system comes into compliance with the rule.

We understand the distinction between a compliance schedule for an open reservoir system and a source treatment deadline, and that Mayor Richard's query was with regard to the open reservoir requirements. The follow-up email from our regional Manager, Dave Leland, confirmed that if a system is not in compliance with source treatment by the specified date (10/1/2014, in the case of Bend), the Department must begin formal enforcement. We respect that this is the position you must take.

To ensure that the public is protected and that the City has the flexibility required to fully comply with the rule, we would like to explore a negotiated administrative order that accounts for the additional time the City will need to begin treating the source water. We believe such an approach fits well within the parameters of the purpose of the regulations and our common goals of protecting the public health and safety and our ability to maintain the high quality dual supply source of water here in Bend. In

advancing that discussion, we thought a letter outlining Bend's particular circumstances would be a helpful place to start the conversation.

### **Extenuating Circumstances**

To fully and effectively accomplish LT2 compliance, Bend must undertake two significant projects. The first is replacing transmission lines that deliver the source water and would service the new treatment facility. The second project would be the actual construction of the treatment facility. For both technical feasibility reasons and because of Bend ratepayer's unique situation described below, we believe that these projects must be sequenced in a way that requires additional time for construction of the treatment facility.

### ***Background and Setting***

Over the last two decades, Bend has been characterized by an exceptionally high growth rate, becoming the fastest growing city of comparable size in the state. By 2005, Bend's population had surpassed its 2020 forecast, 15 years earlier than anticipated, growing by over 60,000 people, or 365%, since the last urban growth boundary expansion in 1981. Adopted projections predict that the population will swell to 115,065 by 2028. This growth resulted in significant increases in water and sewer demands and the City needed to commit to the accompanying infrastructure improvements required to keep pace with that growth, as well as projected population increases. As you are well aware, Bend, along with the rest of Oregon and the country, has been hit by the worst recession in recent memory. As the bottom fell out of the economy, Bend's reliance on two volatile industries—real estate/development and tourism—made it especially susceptible to alarming levels of unemployment, foreclosures, and poverty.

Bend has one of the highest unemployment rates in the State, stubbornly remaining above 12%. Even modest utility rate increases during such a period of high unemployment became a serious burden on rate payers already struggling to make ends meet. Over 15% of Deschutes County residents have incomes below the poverty level and over half of children in the County are eligible for free or reduced lunch rates. While foreclosures have been in the national spotlight, Bend has been an epicenter for the crisis as our foreclosure rate rose again to over five percent.

As is well known even in the national news, Bend's economy has been dependent on the real estate development industry to provide employment. The continued drag on housing development and the lack of other primary industries will mean that the City's economic recovery will be slow and unemployment will remain high. Substantial water rate increases during this period of slow economic recovery and high unemployment is detrimental to Bend's struggling families. Bend's economy, even more heavily today, relies on tourism. That

tourism is served by a network of small family owned businesses, like restaurants that use a large volume of water. Significant water rate increases impact these small businesses and hamper their ability to survive this recession and slow recovery.

### ***Water Line Replacement***

The City has two transmission mains that deliver high quality Bridge Creek water to Bend. One of these lines was built in the 1920's and the other in the 1950's. These lines currently run through forest service property as well as private property. Years of unmanaged vegetative growth threaten the integrity of the pipes. In addition, residential structures have encroached upon the lines -- in many cases either on the pipes or within a few feet. This encroachment poses a serious potential danger for health and life safety if either of these lines were to fail. Lastly, these lines run at velocities that are well beyond standard engineering design practices today. As a result, the velocity has degraded the interior wall linings of the pipes and poses the risk of line collapse. All of these factors have put the City of Bend in a position that in order to continue the use of the Bridge Creek water supply, the City must replace these lines.

Complicating replacement of these lines, the Federal Highway Administration ("FHWA") and Deschutes County are planning on a complete rebuild of the existing Skyliners Road, under which the City wishes to relocate the transmission lines. A map of Skyliners Road and the City's project is attached. Federal funding is available for replacement of the road and the FHWA currently plans on project construction occurring in 2013. The County, FHWA, and the City of Bend have all been working together so that the City can install the pipeline in the roadway prior to the reconstruction. The City is at 90% design for the pipe replacement project, and has been working closely with the Forest Service on the NEPA process. In addition, the design of the new pipe will actually improve some environmental conditions. The City is not able to shut down the current lines on a routine basis, and thus the City diverts a constant rate of 18.2 cfs, even if the City does not take that much water into its distribution system. The replacement of the transmission lines with a thick walled steel pipe designed to hold the water pressure will allow the City to only take water when the system demands warrant, and when the City demand does not warrant, the water will by-pass the intake on Bridge Creek, and the flow will remain in the upper reach of Tumalo Creek below Tumalo Falls and end the potential for erosion.

Because of the financial circumstances related to the road reconstruction and potential collapse of the lines, replacement of the lines must precede construction required for LT2 treatment. If line replacement were delayed, not only is line failure a very real and present threat, but if the 2013 road construction window is missed, the federal funding for the roadway project could be jeopardized. If the treatment facility required by the LT2 rule were constructed first, it is also entirely possible that the

lines would fail and the treatment plant would become a stranded asset, essentially useless until the City could replace/repair the failed pipe.

Further, while it is not certain (although thought likely) that the federal funding schedule would be lost, if the City decided to delay line replacement, current County code would not allow the replacement of the lines for five years; even if that limitation were waived, the City would be required to entirely reconstruct a lane of the newly reconstructed road. A low estimate of this additional cost is \$4-7 million dollars; a more likely estimate is closer to ten million dollars depending on what the County ultimately requires the City to reconstruct. Moreover, the City has already pre-purchased steel for the 6.5 miles of the pipeline at a cost of approximately \$4 million dollars, at a time when steel prices were relatively low. In short, delay of the line replacement is impractical, expensive and makes LT2 treatment potentially ineffective.

The estimated cost of the pipeline replacement on its current schedule is \$30 million.

### ***Impact to Community of Two Significant Projects***

The LT2 treatment and pipeline replacement projects, as well as other necessary sewer projects (treatment plant and interceptors) are all critical to the public health and economic stability of our community. Bend residents and businesses simply cannot afford to pay for both of the water projects simultaneously. The City has been aggressive in pursuing both the line replacement (already purchasing the steel) and in moving towards the design of the treatment facility. However, as the recession has lasted longer than expected and Bend's recovery will be even slower, it has become abundantly clear that these two projects need to be sequenced. The City is doing everything it can to pursue other funding sources for these projects, but other than low interest loans, the City has not been able to get any type of grant funding for these major capital investments.

Given the logistical and economic challenges associated with simultaneously moving forward in these projects it is imperative that we stage them to achieve maximum utility, cost effectiveness and protect public health. We believe that achieving full compliance with LT2 later than 2014 is crucial to achieving those goals.

### **A Path Forward**

Based on all of the above, the City is seeking an opportunity to work with the State to develop an LT2 compliance schedule. The City is fully aware that the State must enforce its date certain requirements on treatment mandated by the EPA and understands that the State may need to place the City under an administrative order with a defined schedule for compliance. We would like to start those constructive



conversations now. The City offers the following concepts as a way that the City and the State could work together to find such an agreement.

### **1. Continued Pursuit of Treatment**

The City of Bend has been spending millions of dollars on designing a membrane system to meet the treatment deadline, and is currently beyond the 60% design level for the treatment portion of the project. To date, the City has spent approximately \$6.6 million for feasibility, design and other costs associated with this project. The City of Bend is proposing to continue with the design of the water treatment plant to the 100% design level. This would not only include design, but a full set of bid ready construction and specification documents. With design and project documents complete, Bend would have a shovel ready project.

### **2. Watershed Management Practices**

#### ***Existing:***

The City meets the current exemption criteria for unfiltered surface water sources by demonstrating control of human activity in the watershed. Our watershed is jointly managed with the U.S. Forest Service, under a 1926 Cooperative Agreement with the Dept. of Agriculture as well as a 1991 Memorandum of Understanding ("USFS MOU") that further outlines the exemption criteria. This includes re-routing a popular trail back in the 1990's away from Bridge Creek to further protect it from human contact and additional threats to water quality. The City has also installed and maintained self-issued permit stations at all trail entrances to the delineated watershed. Copies of the permits are collected by City staff. In addition, we have a funding agreement that pays for a USFS staff to help patrol the watershed and surrounding areas and educate and inform the public of the rules excluding pets, camping and contamination of the watershed. Other measures put in place over the last five years include increased security monitoring at the intake with remotely controlled cameras and motion detection equipment.

#### ***Proposed Additional Protections:***

In addition to the regular watershed activities already occurring, the City proposes to explore opportunities and work with the Forest Service to enhance the protection of the watershed from additional threat of contamination from human activities in and around the delineated watershed. These could include additional signage, closing off of the watershed with additional gates, enhancing public education such as through the kiosk at Tumalo Falls and creating/implementing an ongoing seasonal public outreach campaign related to human use in the watershed, and the like. The City could also begin an update of the 1991 USFS MOU to reflect current conditions and changes since the original agreement was put in place. The City is open to working with the State to explore

other ideas and opportunities for additional protections. We believe that while these additional protections do not create a totally closed watershed such as Portland's, they would help eliminate unauthorized entry to the watershed and thus create additional characteristics of protection for the watershed that would contribute to an even lower risk of *Cryptosporidium*.

### 3. Shutdown Limitations

Currently, the City is required to shut down if the turbidity reaches 5 ntu. However, the City's normal operating protocol never allows system diversions at the 5 ntu level. The City closely monitors turbidity and when the turbidity hits 1 ntu, City staff is paged at which point they begin monitoring the trending of the turbidity. If the turbidity continues to trend up beyond 1.2 ntu, the City begins shutting down the surface water supply. At no point does the City continue to divert above a 1.5 ntu. This is done to protect the public to ensure that drinking water standards are always met.

### 4. Alternative Compliance Schedule

The City is requesting to delay implementation of the membrane filtration construction by a number of years. The City would construct the new pipeline, and would design and construct the pipeline system so that the treatment facility could be easily added and in a manner that does not double up the costs to the Bend community of financing both projects simultaneously. The City still proposes difficult rates increases to build reserves over the course of an agreed upon number of years as part of its compliance schedule. The hope is by spreading them out, the impact will be less devastating to the ratepayers and citizens of Bend.

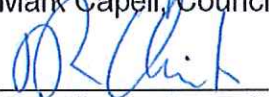
The City of Bend welcomes the opportunity to discuss these ideas with you and your staff to explore the opportunity for an extended compliance schedule for treatment.

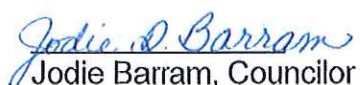
Respectfully,

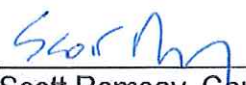
Bend City Council

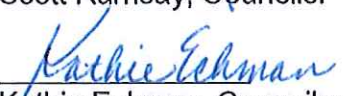
  
Jeff Eager, Mayor


  
Mark Capell, Councilor

  
Jim Clinton, Councilor

  
Jodie Barram, Councilor

  
Scott Ramsay, Councilor

  
Kathie Eckman, Councilor

  
Tom Greene, Councilor

# Bridge Creek Surface Water System

