

MONTANA FOURTH JUDICIAL DISTRICT COURT
MISSOULA COUNTY

<p>THE CITY OF MISSOULA, a Montana municipal corporation,</p> <p>Plaintiff,</p> <p>vs.</p> <p>MOUNTAIN WATER COMPANY, a Montana corporation; and CARLYLE INFRASTRUCTURE PARTNERS, LP, a Delaware limited partnership,</p> <p>Defendants.</p> <p>and</p> <p>THE EMPLOYEES OF MOUNTAIN WATER COMPANY, et al.</p> <p>Intervenors.</p>	<p>CASE NO. DV-14-352</p> <p>Dept. No. 4</p>
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Taken at the Missoula County Courthouse
Missoula, Montana

Monday, March 23, 2015
8:58 a.m. to 4:05 p.m.

TRANSCRIPT OF PROCEEDINGS

VOLUME 4

Heard before the Honorable Karen S. Townsend

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08:59:57 **1** THE WITNESS: Yes. My name is Craig

08:59:59 **2** Close. Last name, C-L-O-S-E.

09:00:01 **3** THE COURT: Thank you. You may inquire.

09:00:03 **4** DIRECT EXAMINATION

09:00:04 **5** BY MS. PRINZING-JONES:

09:00:04 **6** **Q.** Mr. Close, can you please describe for

09:00:08 **7** the Court what you do for a living.

09:00:09 **8** **A.** I'm an engineer by training, and I work

09:00:12 **9** for HDR Engineering Company and serve as the

09:00:16 **10** Director of Utility Management Services.

09:00:18 **11** **Q.** Were you asked by the City of Missoula to

09:00:21 **12** assess the condition of the Mountain Water

09:00:25 **13** system's facilities and assets, review the

09:00:27 **14** financial operations of Mountain Water and compare

09:00:30 **15** those operations to industry standards?

09:00:32 **16** **A.** Yes.

09:00:35 **17** **Q.** Before we go into the details of your

09:00:37 **18** opinion in this matter, could you please describe

09:00:38 **19** your education, training and background that forms

09:00:40 **20** the basis of your expertise in this case.

09:00:43 **21** **A.** Yes. I received a B.S. degree in

09:00:45 **22** engineering from Swarthmore College. I'm a

09:00:48 **23** registered professional engineer. And I'm board

09:00:52 **24** certified as a--board certified environmental

09:00:57 **25** engineer from the American Academy of

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08:40:03 **1** MONDAY, MARCH 23, 2015

08:47:48 **2** Whereupon, the following proceedings were

08:47:54 **3** had and entered of record in open court, with all

08:48:00 **4** counsel present:

08:58:29 **5** THE COURT: All right, good morning,

08:58:31 **6** everybody. This is a continuation of the

08:58:37 **7** necessity hearing in Mountain Water--I'm sorry,

08:58:41 **8** *City of Missoula versus Mountain Water, Carlyle*

08:58:46 **9** *Infrastructure*, with Mountain Water employees as

08:58:48 **10** intervenors.

08:58:50 **11** Same counsel that has been identified

08:58:52 **12** previously are present.

08:58:54 **13** Are there additional witnesses for the

08:58:56 **14** City?

08:58:57 **15** MS. PRINZING-JONES: Yes, Your Honor.

08:58:58 **16** The City calls Craig Close from HDR.

08:58:58 **17** Thereupon,

08:58:58 **18** CRAIG CLOSE,

08:58:58 **19** having been first duly sworn to tell the truth,

08:59:32 **20** testified upon his oath as follows:

08:59:32 **21** THE COURT: Mr. Close, over here.

08:59:49 **22** Mr. Close, try and make yourself as

08:59:51 **23** comfortable as possible.

08:59:53 **24** Please state your full name, spell your

08:59:55 **25** last name for us.

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09:01:01 **1** Environmental Engineers.

09:01:02 **2** **Q.** Can you describe your work history.

09:01:04 **3** **A.** Yes. I originally started, out of

09:01:06 **4** college, working for Stone & Webster Engineering

09:01:09 **5** Company.

09:01:10 **6** Worked for American Water for most of my

09:01:13 **7** career. Worked--in 1992 I was sent out to run

09:01:19 **8** their West Region operations where I served as the

09:01:24 **9** Vice President of Operations and Engineering for

09:01:26 **10** the four western operating companies. We served

09:01:29 **11** roughly 26 communities, 500,000 people, in four

09:01:35 **12** states.

09:01:35 **13** After that I was a project director and

09:01:39 **14** headed up the water/wastewater program for PBS &

09:01:46 **15** J, which is an engineering consulting firm. And

09:01:48 **16** then HDR, where I serve in my current position.

09:01:51 **17** **Q.** You said you worked for American Water?

09:01:54 **18** **A.** That's correct.

09:01:55 **19** **Q.** Can you just briefly describe the scope

09:01:57 **20** of those operations compared to Park Water, which

09:02:00 **21** is the subject of this litigation.

09:02:02 **22** **A.** In the four western states in which I was

09:02:06 **23** responsible for operations and engineering work,

09:02:08 **24** California American Water Company, Arizona

09:02:11 **25** American Water Company, New Mexico American Water

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09:02:14 **1 Company, and Hawaii American Water Company.**
 09:02:16 **2 Particularly California American, we had**
 09:02:19 **3 operations in Monterey, Los Angeles, Thousand**
 09:02:22 **4 Oaks, and Sacramento, and also in San Diego as**
 09:02:27 **5 well.**
 09:02:27 **6 Most of the division operations that I**
 09:02:30 **7 was responsible for in California were of a size**
 09:02:33 **8 larger than Park Water and also, you know,**
 09:02:37 **9 Mountain Water Company. We had over 125,000**
 09:02:42 **10 customers in California alone.**
 09:02:44 **11 Q. Can you briefly describe for the Court**
 09:02:46 **12 what you do now at HDR.**
 09:02:49 **13 A. Yeah. In my role as the Director of**
 09:02:51 **14 Utility Management Services, I lead a national**
 09:02:55 **15 group of about 120-some people where we provide**
 09:02:59 **16 various services, much like a public works**
 09:03:04 **17 department; serving everything from rate analysis,**
 09:03:07 **18 planning, management optimization. Particularly**
 09:03:12 **19 regulatory support. I do a lot of consent decree**
 09:03:15 **20 work with EPA that goes into consent decrees.**
 09:03:21 **21 Also, we do a lot of operational type**
 09:03:23 **22 work where we provide operational support for a**
 09:03:27 **23 lot of public agencies and private as well.**
 09:03:32 **24 Q. What would you say your specialty is as**
 09:03:35 **25 an engineer?**
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09:03:36 **1 A. Well, I started off in design engineering**
 09:03:39 **2 and then planning; but I think overall probably my**
 09:03:44 **3 strength is utility operation and management.**
 09:03:49 **4 Q. Okay. I first want to talk to you about**
 09:03:51 **5 the financial assessment that you did in this case**
 09:03:56 **6 with regard to your first report.**
 09:03:58 **7 A. Uh-huh.**
 09:03:59 **8 Q. But before that, maybe a little bit of**
 09:04:01 **9 background would be in order.**
 09:04:03 **10 Can you please explain how a regulated**
 09:04:06 **11 utility operates financially? Just generally.**
 09:04:10 **12 A. In general terms, how an investor-owned**
 09:04:13 **13 utility makes money is they invest a certain**
 09:04:17 **14 amount of capital into a utility plant, which then**
 09:04:23 **15 goes into rate base.**
 09:04:25 **16 Rate base is essentially, in simplistic**
 09:04:30 **17 terms, the original cost of that asset, including**
 09:04:33 **18 all the soft costs, engineering, construction**
 09:04:36 **19 management, less depreciation.**
 09:04:40 **20 Q. Is a regulated utility allowed to earn a**
 09:04:42 **21 profit on their rate base?**
 09:04:44 **22 A. Yes. Typically getting approved for a**
 09:04:49 **23 certain rate of return on equity. In Mountain**
 09:04:53 **24 Water Company's case, I think they are authorized**
 09:04:55 **25 under the last rate case for a return of nine and**
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09:05:00 **1 a quarter percent.**
 09:05:00 **2 Q. 9 and a quarter percent, okay.**
 09:05:02 **3 Can you describe the difference between**
 09:05:03 **4 operational expenses and capital investments.**
 09:05:06 **5 A. Capital investments obviously are for**
 09:05:10 **6 actually what they call a utility plant. These**
 09:05:12 **7 are physical assets that are put in service. And**
 09:05:17 **8 a defined use that they can be in the rate base,**
 09:05:20 **9 is they have to be used and useful. If they are**
 09:05:23 **10 not used and useful, they are not actually used to**
 09:05:26 **11 provide service, the utility can't earn on it.**
 09:05:31 **12 The operational expenses are essentially**
 09:05:36 **13 the pass-through costs. They are typically done**
 09:05:38 **14 based on their test year. Some of them most**
 09:05:41 **15 likely, in most states, it's based on a three- or**
 09:05:44 **16 five-year average of those particular operating**
 09:05:46 **17 expenses.**
 09:05:48 **18 And then what happens is that whatever**
 09:05:52 **19 dollar they spend on operations, on maintenance**
 09:05:56 **20 costs, they get a dollar back in rates to do that.**
 09:05:59 **21 They are compensated for their cost, but they**
 09:06:01 **22 can't make any profit on that O&M expenses, unless**
 09:06:06 **23 they come in under budget.**
 09:06:09 **24 Q. When you said they can't make any profits**
 09:06:11 **25 on O&M expenses, what's O&M mean?**
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09:06:14 **1 A. Operation and maintenance expenses, yes.**
 09:06:18 **2 Q. All right. Is a regulated utility**
 09:06:19 **3 allowed to take capital expenditures and add it**
 09:06:25 **4 into rate base?**
 09:06:26 **5 A. Yes, they are, as long as it's approved**
 09:06:29 **6 in terms of the need for providing service to the**
 09:06:30 **7 ratepayers. That's the case they have to make**
 09:06:33 **8 when they file to the PSC for determination of all**
 09:06:37 **9 the plant that they build is, you know, useful to**
 09:06:41 **10 the ratepayer, a benefit to them.**
 09:06:43 **11 Q. Based on your experience in the industry,**
 09:06:45 **12 can you describe for the Court how it is a**
 09:06:48 **13 regulated utility can maximize their profits to**
 09:06:51 **14 investors.**
 09:06:53 **15 A. Well, one of the areas typically is to**
 09:06:56 **16 maximize the amount of money that they capitalize.**
 09:07:01 **17 Possibly get as much into utility planning to then**
 09:07:04 **18 earn a return.**
 09:07:05 **19 So if they can get--sometimes they push**
 09:07:08 **20 the limits a little bit and get--costs of removal**
 09:07:11 **21 get put in there and some of the other utility**
 09:07:14 **22 plant particularly get as much labor put into**
 09:07:17 **23 capital. Those are some of the areas.**
 09:07:21 **24 The other area is depreciation. Obsolete**
 09:07:25 **25 are one of the things they get depreciation**
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09:07:27 **1 credit. For Mountain Water, that's about 6.4**
 09:07:30 **2 percent of their rate base that they get annually.**
 09:07:34 **3 So they get approximately two plus million dollars**
 09:07:38 **4 a year.**

09:07:39 **5 If they don't put any plant in the ground**
 09:07:41 **6 and they don't retire anything, that is treated**
 09:07:45 **7 just like an operational expense where they get**
 09:07:48 **8 that cash as additional profit.**

09:07:51 **9 Q.** Okay. We'll talk more about depreciation
 09:07:53 **10 in just a moment.**

09:07:55 **11 But before we go there, did you have an**
 09:07:57 **12 opportunity to review those capital expenditures**
 09:08:00 **13 claimed by Mountain Water to the Montana PSC?**

09:08:05 **14 A.** Yeah. We had an opportunity to review
 09:08:07 **15 the last three years of capital expenditures.**

09:08:10 **16 Q.** And generally speaking, is a regulated
 09:08:12 **17 utility allowed to claim things like supplies as**
 09:08:17 **18 capital expenditures?**

09:08:19 **19 A.** It's certainly a very gray area, but
 09:08:21 **20 typically no. Obviously things that I saw in**
 09:08:24 **21 there that were questionable in terms of what**
 09:08:27 **22 should be actually capitalized.**

09:08:29 **23 Q.** What about replacement of small items or
 09:08:32 **24 parts? Is that something that typically should be**
 09:08:34 **25 allowed to be claimed as a capital expenditure?**

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09:08:38 **1 A.** Only if they are retiring an equivalent
 09:08:41 **2 part of rate base out of it. If it's a component**
 09:08:44 **3 of a pump or a component of something else that**
 09:08:46 **4 was not listed as a stand-alone asset, then, no,**
 09:08:49 **5 it's considered maintenance expense to be able to**
 09:08:52 **6 do it.**

09:08:53 **7 Q.** All right. Let's talk briefly--one more
 09:08:54 **8 question.**

09:08:55 **9 You mentioned removal, like removals of a**
 09:08:58 **10 dam house. Is that something that's a regulated**
 09:09:01 **11 capital expenditure typically?**

09:09:02 **12 A.** No. It provides no benefit to providing
 09:09:05 **13 water service to the customers. That's truly a**
 09:09:07 **14 cost of, you know, cost of removal. And you have**
 09:09:11 **15 to charge cost of removals to take assets out of**
 09:09:14 **16 service, and that becomes a credit as part of the**
 09:09:18 **17 depreciation.**

09:09:20 **18 Q.** And then last question on this.
 09:09:22 **19 Typically should a regulated utility be allowed to**
 09:09:25 **20 earn a profit on small office items like coffee**
 09:09:29 **21 makers, chairs, desks, headsets, things like that?**

09:09:34 **22 A.** Well, typically those are not--things
 09:09:38 **23 that are depreciated in a very short amount of**
 09:09:40 **24 time, one or two years, are usually considered**
 09:09:43 **25 expense items. It all depends. It's really up to**

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09:09:47 **1 the PSC to regulate those type of expenditures.**

09:09:49 **2 Q.** Okay. So should the PSC be scrutinizing
 09:09:52 **3 capital expenditure lists for these type of**
 09:09:54 **4 operational expenses?**

09:09:56 **5 A.** I would think so.

09:09:57 **6 Q.** Now, let's talk about depreciation a bit
 09:10:02 **7 more.**

09:10:02 **8 You mentioned that there should be a**
 09:10:06 **9 retirement of an asset. What does that mean in**
 09:10:10 **10 the utility industry, to retire an asset?**

09:10:17 **11 A.** Well, it takes it out of service. It's
 09:10:20 **12 no longer providing water service of some sort,**
 09:10:22 **13 either production of the water or delivery of that**
 09:10:24 **14 water to the ratepayer. Once that asset is no**
 09:10:27 **15 longer providing service, it's removed from**
 09:10:30 **16 service and then retired. It comes out of utility**
 09:10:35 **17 plan. If it's fully depreciated, then it just**
 09:10:38 **18 comes out of utility plan and rate base is not**
 09:10:41 **19 adjusted. If there is non-remaining depreciated**
 09:10:45 **20 value that's left, that comes out of rate base if**
 09:10:48 **21 they retire an asset.**

09:10:49 **22 So if they--if they want to put a new**
 09:10:53 **23 pump in, they have got to take the old pump out.**
 09:10:55 **24 The cost to take the old pump out and get rid of**
 09:10:58 **25 it is the cost of removal. If they put a new**

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09:11:01 **1 pipeline in that is underground and they abandon**
 09:11:06 **2 it, they have to, in terms of cutting and capping**
 09:11:08 **3 the existing pipe and any of the other materials**
 09:11:10 **4 or disposal, those would be cost of removals.**

09:11:13 **5 Q.** What if something just becomes no longer
 09:11:17 **6 useful to the system? Does that also reduce rate**
 09:11:20 **7 base in certain circumstances?**

09:11:23 **8 A.** If it's not fully depreciated, yes. And
 09:11:25 **9 if it's not being used or useful in terms of**
 09:11:28 **10 providing service, they are required to take that**
 09:11:30 **11 out of service. And, again, if it's not fully**
 09:11:33 **12 depreciated, it would reduce rate base.**

09:11:36 **13 Q.** Did you--now, let's talk about
 09:11:37 **14 depreciation.**

09:11:39 **15 Did you find evidence that the owners of**
 09:11:42 **16 Mountain Water Company were trying to maximize**
 09:11:45 **17 their depreciation before exiting as an owner?**

09:11:51 **18 A.** Well, there were--I didn't really find
 09:11:55 **19 evidence. There were certainly indicators that**
 09:11:57 **20 were in their accumulated depreciation schedule.**

09:12:00 **21 Q.** Let's look at 1496, and you can just look
 09:12:03 **22 up on the board.**

09:12:04 **23 MS. PRINZING-JONES:** This is a
 09:12:05 **24 demonstrative, Your Honor, and it's Page 4.**

09:12:09 **25 MR. CONNER:** Your Honor, I'm going to
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09:12:11 1 register an objection at this point. I think his
 09:12:13 2 testimony was he did not really find any evidence
 09:12:15 3 of that. If that's the case, then I think that
 09:12:19 4 there is no foundation for a response to that
 09:12:22 5 question.

09:12:22 6 MS. PRINZING-JONES: I can lay
 09:12:23 7 foundation, Your Honor.

09:12:24 8 THE COURT: All right.

09:12:24 9 **Q.** (By Ms. Prinzing-Jones) Did you find
 09:12:26 10 evidence of accelerated depreciation in the
 09:12:30 11 financial records of Mountain Water Company and
 09:12:32 12 Park Water?

09:12:34 13 **A.** Yes, it appears so.

09:12:35 14 MS. PRINZING-JONES: Your Honor, if we
 09:12:37 15 can look to 1496, Page 4.

09:12:40 16 THE COURT: All right.

09:13:02 17 **Q.** (By Ms. Prinzing-Jones) Can you please
 09:13:02 18 explain your findings regarding accelerated
 09:13:05 19 depreciation as compared to retired plant.

09:13:09 20 **A.** First of all, you look at the balance at
 09:13:11 21 the end of the year. That is the accumulated
 09:13:13 22 depreciation that they then reduce utility plant
 09:13:18 23 by overall. Essentially rate base. Or in the
 09:13:21 24 amount of investment that they have made in the
 09:13:23 25 system is essentially the accumulated

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09:13:27 1 depreciation, plus rate base, is the amount they
 09:13:30 2 overall invested in. So they have a rate base of
 09:13:33 3 roughly \$39 million. And as of 2013 they had
 09:13:38 4 \$30 million worth of depreciation, accumulated
 09:13:42 5 depreciation. They have invested roughly
 09:13:45 6 \$69 million in the system.

09:13:46 7 **Q.** Okay.

09:13:47 8 **A.** All right. Each year they get a credit
 09:13:49 9 for depreciation which is about roughly, for them,
 09:13:53 10 a little over 6 percent of rate base where they
 09:13:57 11 are depreciating their assets. That accrual is
 09:14:01 12 charged to the depreciation account. That is--in
 09:14:03 13 2013 that was a little over--a little over
 09:14:06 14 \$2.4 million.

09:14:08 15 What was curious about this when we
 09:14:11 16 looked at it, was the book cost of plant retired.
 09:14:15 17 How low the amount--if they are actually putting
 09:14:18 18 three and a half to four and a half million
 09:14:21 19 dollars worth of capital in the ground and they
 09:14:23 20 are depreciating it, they are taking out very
 09:14:27 21 little book plant, retiring it.

09:14:30 22 What it really tells you is that they are
 09:14:32 23 starting to highly--either they are
 09:14:35 24 overdepreciating it rather than what they are
 09:14:37 25 retiring, or that they are actually putting so

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09:14:40 1 **much capital in the ground and it's not replacing**
 09:14:42 2 **old assets. It's more really for new assets for**
 09:14:46 3 **growth.**

09:14:47 4 **Q.** Okay. So if we could look at the chart--
 09:14:52 5 Tina, could you highlight Book Cost of
 09:14:55 6 Plant Retired.

09:15:05 7 Is this the line item that is concerning
 09:15:07 8 to you?

09:15:08 9 MR. CONNER: Objection, Your Honor. He
 09:15:10 10 didn't testify it was concerning.

09:15:11 11 THE COURT: That's overruled.

09:15:17 12 **Q.** (By Ms. Prinzing-Jones) You can answer.

09:15:18 13 **A.** The concern is that the difference
 09:15:20 14 between the amount, in terms of accruals, of, you
 09:15:25 15 know, over \$2 million a year of credits versus the
 09:15:28 16 very little amount of booked plant that's being
 09:15:31 17 retired.

09:15:31 18 That amount of book plant retired is what
 09:15:35 19 gets reduced to the overall utility plant account.

09:15:40 20 **Q.** Okay. So should the Book Cost of Retired
 09:15:43 21 Plant equal the Total Credits, which is the line
 09:15:47 22 above?

09:15:48 23 **A.** Not necessarily equal, but they should
 09:15:50 24 certainly be closer together.

09:15:52 25 **Q.** Okay. Tina, can you highlight the Total
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09:15:55 1 Credits.

09:15:56 2 **A.** Actually, it's the Accruals Charged to
 09:16:02 3 Depreciation.

09:16:03 4 **Q.** Okay, there you go.

09:16:05 5 So is it these two lines that we
 09:16:08 6 highlighted here, Accruals Charged to Depreciation
 09:16:11 7 Account versus Book Cost of Plant Retired, that
 09:16:15 8 leads you to the conclusion that there was
 09:16:18 9 accelerated depreciation in the years 2010
 09:16:21 10 through 2013?

09:16:22 11 **A.** It appears that way.

09:16:24 12 The other number that was interesting on
 09:16:26 13 this was how low the cost of removals were. Like
 09:16:29 14 I said, when you are putting that much plant in
 09:16:32 15 the ground, three and a half to four and a half
 09:16:35 16 million dollars a year, and you have that less
 09:16:37 17 of--cost of removals, that's a red flag for me.

09:16:41 18 **Q.** Okay. Tina, can you highlight the cost
 09:16:44 19 of removals. Okay.

09:16:52 20 **A.** So if--I'm sorry.

09:16:54 21 **Q.** Go ahead.

09:16:55 22 **A.** So if they didn't actually make any
 09:16:58 23 investments or retirements, that number, which is
 09:17:02 24 Accruals Charged to Depreciation, is a profit.
 09:17:10 25 That's considered profit.

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09:17:11 **1 Q.** That's considered profit, if the
 09:17:13 **2** accelerated depreciation is taken out?
 09:17:13 **3 A.** Yes, if they are not making any capital
 09:17:16 **4 improvements, that's a credit they get.**
 09:17:18 **5 Q.** Okay, all right. Thank you, Tina, you
 09:17:21 **6** can take that down.
 09:17:22 **7** Now, let's talk about your field
 09:17:24 **8** investigation regarding the condition of the
 09:17:28 **9** Mountain Water assets.
 09:17:30 **10** Can you please describe the procedures
 09:17:32 **11** that you and your team followed in assessing the
 09:17:36 **12** condition of the Mountain Water assets and looking
 09:17:39 **13** at whether the maintenance and repairs--the
 09:17:43 **14** maintenance and capital improvements met industry
 09:17:48 **15** standards.
 09:17:49 **16 A.** Okay.
 09:17:49 **17 Q.** Big question.
 09:17:50 **18 A.** Big question. I'll start off with the
 09:17:53 **19 first part of that, which is our procedures and**
 09:17:56 **20 how we would assess the other facilities to be**
 09:17:58 **21 able to do that.**
 09:18:00 **22 What we do is we devise several teams to**
 09:18:05 **23 go and inspect the facilities. We broke them into**
 09:18:08 **24 three teams, two-man teams, and we split up to do**
 09:18:15 **25 the pump stations and wells and tanks in the**
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09:18:18 **1 facilities. And we brought in a specialist, Scott**
 09:18:22 **2 Brand, to look at the dams.**
 09:18:24 **3 What we did then in terms of our approach**
 09:18:28 **4 was that we broke the--all the assets down into 11**
 09:18:33 **5 asset classes. We then evaluated each of those,**
 09:18:38 **6 like pumps, structures, HVAC, all separate. And**
 09:18:42 **7 we rated those from zero to five. Zero is we**
 09:18:46 **8 couldn't inspect it. 1 being poor, it needs to be**
 09:18:49 **9 replaced. 5 being it's in good condition.**
 09:18:52 **10 Once we rated those and once we inspected**
 09:18:55 **11 all of the facilities, we found a great deal of**
 09:18:59 **12 things that, again, we would compare at night and**
 09:19:03 **13 make sure we tried up.**
 09:19:06 **14 Overall, our assessment of the system**
 09:19:09 **15 after going through that process was fair to poor**
 09:19:13 **16 overall in terms of our rating of the Mountain**
 09:19:16 **17 Water Company system.**
 09:19:17 **18 Q.** What are the general components of a
 09:19:19 **19** water system? And let's just be specific.
 09:19:22 **20** What were the parts of the water system
 09:19:24 **21** that are of particular concern to you as you look
 09:19:27 **22** at the operations of Mountain Water in its current
 09:19:31 **23** status?
 09:19:32 **24 A.** Yeah. The backbone of the system
 09:19:34 **25 obviously is their wells, the mains in the ground,**
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09:19:39 **1 services, delivering that, pump station and tanks.**
 09:19:43 **2 Those are the primary items that we looked at.**
 09:19:45 **3 Q.** When you say services, do you mean
 09:19:47 **4** service lines?
 09:19:48 **5 A.** Service lines, yes.
 09:19:50 **6 Q.** In the industry do you refer to that as
 09:19:51 **7** services?
 09:19:52 **8 A.** Yes.
 09:19:53 **9 Q.** Okay. All right. Well, let's talk
 09:19:55 **10** briefly about the underground assets, the piping
 09:20:00 **11** distribution system.
 09:20:03 **12** Can you--let's bring up 1496, Page 2.
 09:20:18 **13** MS. PRINZING-JONES: Your Honor, this is
 09:20:19 **14** a demonstrative exhibit, if we could show that.
 09:20:23 **15** THE COURT: All right.
 09:20:25 **16 Q.** (By Ms. Prinzing-Jones) Can you please
 09:20:26 **17** describe to the Court the age of the system and
 09:20:30 **18** the materials at play in the underground piping
 09:20:34 **19** system, and whether that's a concern to you as an
 09:20:37 **20** engineering specialty in water utilities.
 09:20:43 **21 A.** They have quite a diverse type of piping
 09:20:46 **22** materials that are out there, particularly
 09:20:48 **23** materials that have not--that weren't really made
 09:20:53 **24** for use for potable water; that being Kalamein and
 09:20:56 **25** invasion piping. And most of the older pipes,
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09:21:00 **1 galvanized and everything else. Approximately**
 09:21:03 **2 almost 50 percent of their mains are 45 years and**
 09:21:06 **3 older, which is relatively old. And those**
 09:21:09 **4 materials are such that probably 20 percent of**
 09:21:15 **5 their mains have exceeded their useful life.**
 09:21:17 **6 Q.** What is the useful life for mains when
 09:21:20 **7** you are talking about a water utility?
 09:21:21 **8 A.** Well, useful life is always the time
 09:21:24 **9** frame--the definition is from the time that you
 09:21:26 **10** install it, that you take it and retire that
 09:21:29 **11** plant.
 09:21:29 **12** It's different--the projected useful life
 09:21:33 **13** is certainly different for the different types of
 09:21:35 **14** materials based on the makeup of the material,
 09:21:39 **15** soil conditions. There's a number of variables
 09:21:42 **16** that we can get into and look at in terms of a
 09:21:47 **17** main's useful life.
 09:21:49 **18 Q.** Generally, when you said that 20 percent
 09:21:51 **19** or more is beyond its useful life, what type of
 09:21:54 **20** pipe are you talking about there?
 09:21:56 **21 A.** The types of pipe that we're referring
 09:21:58 **22** to, as I said, pipe that is either galvanized
 09:22:01 **23** steel, cast iron, Kalamein pipe, and also invasion
 09:22:08 **24** piping. Those are the ones that have typically
 09:22:11 **25** reached or near--very much near the end of their
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09:22:15 **1** useful life.

09:22:15 **2** **Q.** Are those five pipes located in the

09:22:17 **3** Mountain Water system?

09:22:19 **4** **A.** Yes, they are.

09:22:19 **5** **Q.** What's the problems with Kalamein pipe

09:22:21 **6** and steel invasion pipe?

09:22:23 **7** **A.** Well, they were not really made for

09:22:25 **8** potable water systems, particularly Kalamein pipe.

09:22:29 **9** Kalamein pipe was really made for boiler systems

09:22:33 **10** back in the late 1800s.

09:22:34 **11** As a matter of fact, in late 1880--or I

09:22:39 **12** think it was 1884 at the AWWA conference, it was

09:22:44 **13** recommended not to use Kalamein pipe for water

09:22:46 **14** systems.

09:22:47 **15** Invasion pipe is much thinner-walled

09:22:53 **16** steel that was made during the war. That's very

09:22:56 **17** thin, much more aggressive in terms of corrosion,

09:23:00 **18** so it really wasn't made for buried pipe for

09:23:03 **19** long-term use.

09:23:04 **20** **Q.** Now, you mentioned that 40 percent of the

09:23:07 **21** pipe is 45 years or older. Is that pipe also

09:23:10 **22** reaching the end of its useful life?

09:23:12 **23** **A.** It's very much nearing that over the

09:23:14 **24** next, you know, ten normal years.

09:23:17 **25** **Q.** Now, we have heard it generally stated
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09:23:20 **1** that infrastructure in the United States is in

09:23:23 **2** need of major investment. Do you agree with that?

09:23:26 **3** **A.** Yes.

09:23:27 **4** **Q.** And is that true here at Mountain Water?

09:23:32 **5** **A.** Yes.

09:23:34 **6** **Q.** How would you compare generally what's

09:23:36 **7** going on nationally to what we see in Missoula,

09:23:39 **8** Montana?

09:23:40 **9** **A.** Well, obviously the piping and wells is

09:23:45 **10** the backbone system. There has been a lot of

09:23:47 **11** deferred maintenance. They have not been

09:23:50 **12** replacing assets as they are nearing or have

09:23:53 **13** reached the end of their useful life. So they are

09:23:56 **14** more susceptible for unexpected failures and

09:24:01 **15** service outages that are out there.

09:24:03 **16** So, yes, I would rate them very similar

09:24:07 **17** to the ASCE which does a rating for water, you

09:24:11 **18** know, in terms of their score card.

09:24:14 **19** **Q.** And what's the score card used?

09:24:16 **20** **A.** I think typically around D minus that

09:24:19 **21** they use in terms of water infrastructure.

09:24:22 **22** **Q.** Okay. Now, can you please explain the

09:24:25 **23** industry standard for leakage.

09:24:28 **24** **A.** Typically, historically a well-run water

09:24:32 **25** utility has leakage less than 15 percent by
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09:24:38 **1** volume. Normal goals--and even some states have

09:24:41 **2** set goals where they have to maintain their water

09:24:45 **3** leakage or water loss less than 10 percent.

09:24:50 **4** So the average, however, within the

09:24:52 **5** industry is probably 20 to 25 percent. Mountain

09:24:58 **6** Water's percent is more than double that.

09:25:01 **7** **Q.** Okay. And based on the evidence that you

09:25:03 **8** reviewed, what is the measure of leakage within

09:25:05 **9** Mountain Water system?

09:25:07 **10** **A.** Based on all the data that we received

09:25:09 **11** and evaluated in reports, it appears that the

09:25:13 **12** leakage at Mountain Water is a little over 50

09:25:17 **13** percent, or in the range of either the high 40s,

09:25:20 **14** 49 to 56 percent.

09:25:22 **15** **Q.** Okay. We'll go back to leakage in a

09:25:24 **16** moment, but let's talk for a moment regarding the

09:25:27 **17** above-ground assets, the wells and the pumps at

09:25:30 **18** Mountain Water.

09:25:31 **19** You mentioned that you inspected those?

09:25:35 **20** **A.** Yes.

09:25:36 **21** **Q.** Did you and your team take photographs

09:25:39 **22** documenting the observations you made during your

09:25:41 **23** field inspections?

09:25:42 **24** **A.** Yes, we did.

09:25:44 **25** **Q.** Would those photographs assist the Court
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09:25:45 **1** in understanding both your testimony and the

09:25:50 **2** condition of Mountain Water's above-ground assets?

09:25:53 **3** **A.** Yes, they would.

09:25:54 **4** MS. PRINZING-JONES: Your Honor, we would

09:25:55 **5** move the admission of the City's Exhibit 1190

09:25:59 **6** through 1196, which is all the photographs taken

09:26:05 **7** by HDR during their field inspection.

09:26:08 **8** THE COURT: Any objection?

09:26:09 **9** MR. CONNER: Are those Exhibits 1190

09:26:13 **10** through 1196? Is that what you said?

09:26:15 **11** MS. PRINZING-JONES: Yes.

09:26:15 **12** MR. CONNER: Your Honor, that's literally

09:26:18 **13** hundreds of photographs. Just for the record,

09:26:23 **14** that's fine if that's what you want to do, but

09:26:25 **15** literally hundreds of photographs. I just want

09:26:29 **16** the Court to be aware of the extent of it.

09:26:33 **17** THE COURT: And are those, Ms. Jones,

09:26:36 **18** contained in this binder or is there a separate?

09:26:39 **19** MS. PRINZING-JONES: No, they are not.

09:26:40 **20** That would be many binders or maybe a couple

09:26:45 **21** binders there.

09:26:46 **22** What we've taken, is we've created a

09:26:48 **23** demonstrative exhibit where we can talk about a

09:26:51 **24** select amount of those photographs to save time.

09:26:54 **25** But we do believe that the entirety of the
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09:26:56 **1** photographs should be admitted as an exhibit to
 09:26:59 **2** give the Court an indication of the overall
 09:27:01 **3** condition of the assets inspected.
 09:27:05 **4** THE COURT: And, Mr. Conner, your
 09:27:07 **5** objection is there are just too many?
 09:27:09 **6** MR. CONNER: Well, Your Honor, it's no
 09:27:11 **7** objection. It's however they want to try their
 09:27:13 **8** case. I'm not commenting on that.
 09:27:14 **9** I just want the Court to be aware that
 09:27:16 **10** this is a tremendously large set of photographs.
 09:27:20 **11** THE COURT: So I think that it's
 09:27:22 **12** appropriate for me to review those as a part of
 09:27:25 **13** this decision. So 1190 through 1196 of these
 09:27:32 **14** exhibits are admitted.
 09:27:35 **15** MR. CONNER: Your Honor, the only thing I
 09:27:38 **16** would point out is that you may not be able to
 09:27:41 **17** know what pictures they are of, since they are
 09:27:44 **18** just pictures of assets.
 09:27:45 **19** I don't suspect she's going to take the
 09:27:47 **20** time to go through each one of them to identify
 09:27:49 **21** them. That would be my only concern with respect
 09:27:51 **22** to the record, that we don't have--the photographs
 09:27:54 **23** themselves, I don't think, are tied to any
 09:27:56 **24** particular well house or pump station. And that
 09:27:59 **25** would be a problem, I think, as far as the record
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09:28:01 **1** is concerned on knowing exactly what they are.
 09:28:05 **2** THE COURT: Ms. Jones, are they
 09:28:06 **3** identified?
 09:28:07 **4** MS. PRINZING-JONES: If you turn to D100
 09:28:11 **5** in the notebook that we gave you.
 09:28:12 **6** THE COURT: This one?
 09:28:18 **7** MS. PRINZING-JONES: Yes.
 09:28:19 **8** THE COURT: Got it. Okay.
 09:28:23 **9** MS. PRINZING-JONES: This is the packet
 09:28:26 **10** of the demonstrative that we would like to go
 09:28:28 **11** through with the witness right now.
 09:28:29 **12** You will note when you look at D100,
 09:28:32 **13** Page 1, at the beginning of every set of
 09:28:34 **14** photographs there is a picture of the
 09:28:38 **15** identified--identification of where the well house
 09:28:40 **16** is and its name. And then behind that identifier
 09:28:44 **17** are the photographs from that well house. And
 09:28:48 **18** then when you hit another indicator, you have
 09:28:52 **19** reached the next well house.
 09:28:53 **20** THE COURT: And so the big set of them
 09:28:55 **21** had this kind of identification in them; is that
 09:28:59 **22** right?
 09:29:00 **23** MS. PRINZING-JONES: Exactly.
 09:29:01 **24** THE COURT: Sounds like they are
 09:29:02 **25** identified.
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09:29:03 **1** MR. CONNER: I just want to make sure for
 09:29:05 **2** the record, Your Honor, so we know how to tell
 09:29:09 **3** exactly what they are.
 09:29:10 **4** THE COURT: Go ahead.
 09:29:13 **5** EXHIBITS:
 09:29:13 **6** (Exhibit Nos. 1190-1196 received into
 09:29:14 **7** evidence.)
 09:29:14 **8** Q. (By Ms. Prinzing-Jones) We're going to
 09:29:15 **9** look at some photographs here, Craig.
 09:29:17 **10** Can you briefly describe for the Court
 09:29:19 **11** what your general and main findings were during
 09:29:23 **12** the field inspection regarding the components of
 09:29:25 **13** the above-ground assets.
 09:29:27 **14** A. Of just the wells or overall assets? I'm
 09:29:30 **15** sorry.
 09:29:30 **16** Q. Let's just start with the wells.
 09:29:32 **17** A. Okay. Overall the well assets, the well
 09:29:35 **18** houses, we rated from fair to poor. Most of the
 09:29:41 **19** pumping equipment was antiquated and is again
 09:29:48 **20** either reaching or has reached the end of its
 09:29:50 **21** useful life. There was a lot of corroded piping
 09:29:52 **22** in terms of the piping.
 09:29:54 **23** The HVAC systems were all in extremely
 09:29:58 **24** poor, if not needed to be replaced immediately.
 09:30:00 **25** And there were considerable problems with their
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09:30:04 **1** chemical feed systems that need considerable
 09:30:07 **2** improvements.
 09:30:08 **3** Q. You said that their equipment was
 09:30:10 **4** antiquated. Did you also review the documents on
 09:30:13 **5** Mountain Water and the efficiency studies to get
 09:30:15 **6** an idea of what was located within these well
 09:30:19 **7** houses?
 09:30:20 **8** A. Yes. We looked at the year-end study and
 09:30:24 **9** they had done two reports; one for wells, one for
 09:30:27 **10** booster stations.
 09:30:28 **11** In general they confirmed our conclusions
 09:30:31 **12** that all the--most, if not all, of the
 09:30:34 **13** efficiencies for the well pumps and for the
 09:30:37 **14** majority of the booster pumps were well below
 09:30:41 **15** standards for--below the expected levels for those
 09:30:45 **16** type of assets.
 09:30:46 **17** Q. When you say they are well below
 09:30:48 **18** standards, what is the baseline that you are
 09:30:50 **19** looking for on efficiency testing?
 09:30:52 **20** A. Well, on a vertical turbine well pump,
 09:30:56 **21** typically we would see efficiencies in the 70, 75
 09:31:02 **22** percent range. We saw some down in the 40s and
 09:31:04 **23** 50s.
 09:31:05 **24** Q. Okay. Now, let's look at some of these
 09:31:08 **25** photos and we can talk in more detail about some
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09:31:11 1 of your findings.
 09:31:12 2 Which well house are we dealing with
 09:31:15 3 here?
 09:31:16 4 **A. This is the North Russell Well, Well 19.**
 09:31:21 5 **Q. Okay, go to the next photo.**
 09:31:23 6 **A. This is an example of one of the**
 09:31:25 7 **discharge pipes from the well. You can see that**
 09:31:27 8 **the piping is severely corroded.**
 09:31:30 9 **The other thing is you can look up below**
 09:31:33 10 **to the right are the chemical feed application**
 09:31:35 11 **points, where they are leaking and corroding the**
 09:31:38 12 **pipe below and the concrete floor below. So this**
 09:31:41 13 **is piping that is at the point that the deferred**
 09:31:45 14 **maintenance, they haven't painted it or cleaned it**
 09:31:47 15 **for quite some time, and you would be looking at**
 09:31:50 16 **either trying to rehabilitate it or replace it.**
 09:31:52 17 **Q. Can you make sure the microphone is a**
 09:31:55 18 **little closer to you.**
 09:31:57 19 **A. Sorry.**
 09:31:57 20 **Q. And that was D100-002.**
 09:32:02 21 **Let's look at the next page.**
 09:32:04 22 **A. This is another picture of those chemical**
 09:32:06 23 **feeds. As you can see, there have been leaks**
 09:32:09 24 **dripping down below on the pipe below and**
 09:32:12 25 **corroding it. And that there is corrosion on**
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09:32:15 1 **the--and peeling of paint on the floor. That**
 09:32:17 2 **concrete is falling on the floor, and exposed**
 09:32:21 3 **aggregate. Yeah, they have got concerns there in**
 09:32:25 4 **terms of both corrosion and chemical feed spills.**
 09:32:29 5 **Q. Does this appear to be a problem that is**
 09:32:31 6 **chronic in nature and that has been in place for a**
 09:32:33 7 **long time?**
 09:32:34 8 **A. We saw this at numerous locations.**
 09:32:38 9 **Q. Let's look at the next photo, D100-004.**
 09:32:41 10 **A. This is an example of their HVAC system**
 09:32:45 11 **where we saw a lot of the fans that were**
 09:32:47 12 **inoperable, plugged up, closed off. And for fans,**
 09:32:54 13 **they had just bought regular house fans and tried**
 09:32:56 14 **to put that in the wall to keep the equipment**
 09:33:00 15 **cool.**
 09:33:01 16 **Q. Is it an appropriate HVAC system to strap**
 09:33:07 17 **with a bungee cord a box fan to the ventilation**
 09:33:11 18 **system of a pump house?**
 09:33:12 19 **A. Absolutely not, no.**
 09:33:15 20 **Q. What should be there?**
 09:33:15 21 **A. There should be actually, you know,**
 09:33:17 22 **in-the-wall mounted, you know, industrial type**
 09:33:20 23 **fans. We saw a lot of them being corroded and**
 09:33:24 24 **most of them not operable.**
 09:33:27 25 **Q. Okay. All right.**
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09:33:28 1 **Let's go to the next page, D100-005.**
 09:33:34 2 **A. This is an example--it was very obvious**
 09:33:37 3 **that the chemical feed, which they use for**
 09:33:39 4 **disinfection of the water, that they were added**
 09:33:42 5 **after the well houses and very much in rudimentary**
 09:33:48 6 **type of installations.**
 09:33:49 7 **You can see the spill in terms of the**
 09:33:51 8 **chemical spill at the bottom of the tank. There's**
 09:33:56 9 **corrosion on the wall eating at the--the other**
 09:34:01 10 **concern is that the floor drain is there. There**
 09:34:04 11 **were a number of them that we checked that were**
 09:34:07 12 **not plugged up. That they were open floor drains,**
 09:34:12 13 **which is a sanitary survey concern.**
 09:34:16 14 **Q. What's the concern there?**
 09:34:17 15 **A. Obviously you are putting a hazardous**
 09:34:19 16 **chemical out into wherever the drainage of that**
 09:34:22 17 **goes, whether it's out on the ground or**
 09:34:24 18 **potentially to the sewer. They are not supposed**
 09:34:28 19 **to put any hazardous chemicals outside of the**
 09:34:32 20 **containment area.**
 09:34:33 21 **Q. How should the chemical feed--**
 09:34:35 22 **MR. CONNER: Your Honor, I'll just make**
 09:34:37 23 **an objection for our clarification. Is this still**
 09:34:40 24 **the North Reserve?**
 09:34:41 25 **A. North Russell. This is still the North**
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09:34:44 1 **Russell.**
 09:34:44 2 **MR. CONNER: Okay. I just wanted to make**
 09:34:45 3 **sure we're on the same place. Thank you.**
 09:34:48 4 **Q. (By Ms. Prinzing-Jones) How should the**
 09:34:49 5 **chemical feed system be handled to meet industry**
 09:34:52 6 **standards?**
 09:34:55 7 **A. Well, first of all, they can't have any**
 09:34:57 8 **floor drains or any ability to have any chemical**
 09:35:00 9 **leave the containment area. The containment area**
 09:35:05 10 **needs to be at least 110 percent of the full**
 09:35:08 11 **volume of that tank.**
 09:35:10 12 **They need to be able to provide dual**
 09:35:13 13 **piping of all the chemical feed lines that are**
 09:35:16 14 **outside of that small containment area, from there**
 09:35:21 15 **to the application point. It's to prevent spills**
 09:35:25 16 **and any dripping that could get on other**
 09:35:27 17 **equipment.**
 09:35:28 18 **Q. Now, is there also an issue with**
 09:35:30 19 **preserving the chemical in a status that will**
 09:35:33 20 **actually work to be a disinfectant into the water**
 09:35:37 21 **system?**
 09:35:38 22 **A. Well, obviously temperature is an issue**
 09:35:41 23 **with sodium hydrochloride feeding which they are**
 09:35:44 24 **feeding. If they don't maintain a temperature of**
 09:35:47 25 **75 degrees or less, the actual chemical can**
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09:35:51 **1 convert to chlorate, which has less of an effect**
 09:35:56 **2 for disinfection and can result in not obtaining**
 09:35:59 **3 an effective chlorine residual.**
 09:36:01 **4 Q.** Because you need to keep the temperature
 09:36:03 **5 down in these chemical feed units, is the AC and**
 09:36:07 **6 ventilation systems that much more important?**
 09:36:10 **7 A. Yes. As I said, a lot of the fans and a**
 09:36:13 **8 lot of the cooling systems were inoperable.**
 09:36:16 **9 Q.** All right. Let's go to the next picture,
 09:36:19 **10 D100-006.**
 09:36:21 **11 A. This is the same chemical feed. You can**
 09:36:23 **12 see the corrosion at the fittings and the**
 09:36:25 **13 corrosion on the brace, and that's then corroding**
 09:36:30 **14 the wall down the side.**
 09:36:33 **15 Q.** Let's go to the next photo.
 09:36:36 **16 A. This is a well--this is the Pattee Creek**
 09:36:39 **17 well.**
 09:36:40 **18 Q.** So we're moving to a different well, the
 09:36:42 **19 Pattee Creek well; is that right?**
 09:36:44 **20 A. That's right.**
 09:36:44 **21 Q.** Let's go to the photo.
 09:36:47 **22 A. What you are looking at here is the well**
 09:36:49 **23 pump and motor. The gray part is the motor. The**
 09:36:53 **24 blue is the pump head.**
 09:36:55 **25 Q.** And what are the problems noted in this
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09:36:57 **1 photograph?**
 09:36:58 **2 A. Well, the concern that we saw here, and I**
 09:37:01 **3 think there's a close-up of it as we go forward,**
 09:37:05 **4 is a great number of the well pumps that we saw**
 09:37:09 **5 were not actually mounted to the foundation. They**
 09:37:12 **6 were just sitting there, which is really not best**
 09:37:16 **7 practices to be able to do that.**
 09:37:18 **8 Q.** What's the problem when you don't mount
 09:37:20 **9 the motor and pump to the base concrete?**
 09:37:22 **10 A. Well, you are actually exposing it to**
 09:37:25 **11 accelerated deterioration due to vibration. You**
 09:37:30 **12 know, mechanical equipment, rotating equipment has**
 09:37:32 **13 vibration. And we detected that in some of the**
 09:37:36 **14 facilities that we inspected.**
 09:37:38 **15 If you don't mount it down and hold it**
 09:37:41 **16 down to a rigid body, it will continue to, you**
 09:37:45 **17 know, vibrate more and more and accelerate the**
 09:37:47 **18 deterioration of the pump.**
 09:37:49 **19 Q.** Let's stop for a moment there and talk
 09:37:52 **20 about this a little more.**
 09:37:53 **21 When you inspected--how many locations**
 09:37:57 **22 did HDR review?**
 09:38:00 **23 A. Well, I think we inspected all--I think**
 09:38:03 **24 it's 37 wells.**
 09:38:05 **25 Q.** Okay.
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09:38:05 **1 A. And I'll have to take a look, but 20--some**
 09:38:15 **2 booster stations.**
 09:38:18 **3 Q.** When HDR reviewed the wells, were any of
 09:38:22 **4 the motors and pumps operating?**
 09:38:28 **5 A. No, not on our first round of inspection.**
 09:38:33 **6 We made a point of that and it was agreed**
 09:38:37 **7 that--they agreed to--Mountain Water agreed to**
 09:38:40 **8 turn five facilities on for us to inspect at a**
 09:38:45 **9 later date, several days later. We inspected a**
 09:38:49 **10 couple wells and a couple booster stations at a**
 09:38:52 **11 later date when they were running.**
 09:38:54 **12 Q.** And when you did inspect the motors when
 09:38:58 **13 they were operating, what were your findings?**
 09:39:00 **14 A. What we found--in all cases we downgraded**
 09:39:05 **15 the condition of the facilities because we found**
 09:39:07 **16 vibration, we found that most if not all, if I**
 09:39:12 **17 recall, all of the motors that we tested were**
 09:39:15 **18 running hotter than their acceptable level within**
 09:39:18 **19 the range of manufacturer levels of temperature.**
 09:39:20 **20 And using equipment we were able to detect ping**
 09:39:24 **21 within the motors that shows some type of**
 09:39:27 **22 mechanical irregularity in the rotating device.**
 09:39:34 **23 Q.** Let's go to the next photo, 100-009.
 09:39:37 **24 A. This is the same pump that we showed.**
 09:39:40 **25 You can see the hole where the anchor bolt would**
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09:39:45 **1 normally be to anchor it down to the foundation.**
 09:39:48 **2 Typically you--you can see the corrosion on the**
 09:39:51 **3 foundation itself. Typically you have a concrete**
 09:39:57 **4 base, use a nonmetallic, nonshrink grout to float**
 09:40:02 **5 underneath the pump head and they are anchor**
 09:40:05 **6 bolted down to the foundation for a very solid**
 09:40:10 **7 installation.**
 09:40:11 **8 Q.** Given the amount of corrosion and chronic
 09:40:15 **9 water on the concrete shown in that picture, does**
 09:40:17 **10 that indicate a problem to you?**
 09:40:19 **11 MR. CONNER: Objection, Your Honor.**
 09:40:20 **12 She's mischaracterizing the--**
 09:40:28 **13 COURT REPORTER: Mischaracterizing what?**
 09:40:32 **14 MR. CONNER: She's testifying given the**
 09:40:33 **15 chronic water. There is no evidence in the record**
 09:40:34 **16 as of yet that there is a chronic issue yet.**
 09:40:37 **17 There may be some water there, if that's what she**
 09:40:39 **18 wants to say.**
 09:40:43 **19 THE COURT: Ms. Jones, can you rephrase,**
 09:40:45 **20 please?**
 09:40:45 **21 MR. CONNER: Thanks, Your Honor.**
 09:40:47 **22 Q.** (By Ms. Prinzing-Jones) Does the
 09:40:47 **23 discoloration and the degradation to the concrete**
 09:40:50 **24 base indicate to you that there has been a chronic**
 09:40:53 **25 problem with that well?**
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09:40:56 **1 A. Well, there has been a long-term water**
 09:40:59 **2 exposure there. What's inside of that metal mesh**
 09:41:01 **3 is obsolete. The coupling, where the motor shaft**
 09:41:05 **4 and the pump shaft come together into the stuffing**
 09:41:08 **5 box, it appears there's a lot of water leaving**
 09:41:11 **6 that connection point and spraying and leaking out**
 09:41:14 **7 onto the floor. You can see the water on the**
 09:41:16 **8 floor and the corrosion on the concrete. We saw**
 09:41:20 **9 that at numerous locations.**
 09:41:23 **10 Q. Is that a problem?**
 09:41:24 **11 A. Yes.**
 09:41:24 **12 Q. Why?**
 09:41:25 **13 A. Well, you are just--you are creating a**
 09:41:28 **14 corrosive environment there in terms of the water**
 09:41:31 **15 that's going to wear these things out at a higher**
 09:41:34 **16 rate if that is left there.**
 09:41:38 **17 Q. What is indicative in terms of the**
 09:41:39 **18 mechanical problem?**
 09:41:40 **19 A. Well, it really shows that there is**
 09:41:42 **20 deferred maintenance on maintaining that packing,**
 09:41:46 **21 the stuffing box, in terms of the pump.**
 09:41:48 **22 Q. Okay. Let's go to the next photo,**
 09:41:54 **23 100-010.**
 09:41:54 **24 A. Same thing. This is just a different**
 09:41:55 **25 view, different corner of another of the anchor**
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09:41:58 **1 bolts that's not nailed down. Again, you can see**
 09:42:01 **2 the corrosion on the pump, you know, plate, and**
 09:42:07 **3 all over the concrete there.**
 09:42:08 **4 Q. Okay. 100-011. Can you zoom in on the**
 09:42:17 **5 top.**
 09:42:19 **6 A. This is again the same--the same**
 09:42:22 **7 foundation, same pump. You can see the same**
 09:42:25 **8 conditions and the corrosion along the pump head**
 09:42:27 **9 itself.**
 09:42:28 **10 Q. When you say corrosion along the pump**
 09:42:31 **11 head, what do you mean?**
 09:42:32 **12 A. Right underneath the white pipe you can**
 09:42:35 **13 actually see the rust on the pump head that's**
 09:42:36 **14 there.**
 09:42:37 **15 Q. Okay. Let's go to the next location.**
 09:42:41 **16 We're on 100-12. And what are we looking at here?**
 09:42:46 **17 A. This is a booster station. This is the**
 09:42:48 **18 Rattlesnake Booster Station that we went and**
 09:42:51 **19 looked at. This was actually one of the**
 09:42:53 **20 facilities that we looked at initially and then**
 09:42:56 **21 came back and had them run it for us.**
 09:42:58 **22 Q. Overall, what was your--and for the**
 09:43:02 **23 record, is the Rattlesnake Booster Station up on**
 09:43:05 **24 the hill on Waterworks Hill?**
 09:43:07 **25 A. Yes, it is.**
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09:43:08 **1 Q. Okay. And overall, what was HDR's**
 09:43:12 **2 assessment of the entirety of the Rattlesnake**
 09:43:15 **3 Booster Station?**
 09:43:17 **4 A. We rated this a poor facility that would**
 09:43:21 **5 require either a major renovation or replacement**
 09:43:24 **6 of the overall facility itself.**
 09:43:25 **7 Q. And what does a booster station do?**
 09:43:28 **8 A. Typically takes water from one elevation**
 09:43:31 **9 within the system. Wells pump up to a certain**
 09:43:34 **10 elevation. The booster stations take that and**
 09:43:39 **11 pump it to a higher elevation.**
 09:43:41 **12 Q. Okay. Let's look at the photos. So**
 09:43:47 **13 we're on 100-13. Can you please describe for the**
 09:43:50 **14 Court what you found when you went into the**
 09:43:52 **15 Rattlesnake Booster Station?**
 09:43:55 **16 A. There are three pumps in this booster**
 09:43:57 **17 station. And the one that's hard to see in the**
 09:44:00 **18 back corner that has the truck mats over the top**
 09:44:04 **19 of it, the screening, is--one of the pumps in the**
 09:44:08 **20 corner, you can see the discharge piping in the**
 09:44:15 **21 check valve coming towards us here on the left**
 09:44:17 **22 side.**
 09:44:18 **23 You can see corrosion on the piping.**
 09:44:23 **24 The--there was so much spray that they had coming**
 09:44:25 **25 off of that pump, that they put the mats over the**
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09:44:29 **1 top of it. You can see it's corroded the**
 09:44:32 **2 electrical panels around the pump that's over**
 09:44:35 **3 there. Yeah, it's obvious that there is some**
 09:44:42 **4 deferred--considerable deferred maintenance with**
 09:44:44 **5 these facilities.**
 09:44:45 **6 Plus, we'll see in the future pictures**
 09:44:49 **7 the pumps were not mounted down on any foundation.**
 09:44:52 **8 They were actually put on wood slats, just sitting**
 09:44:57 **9 on wood beams, rather than tied down to the**
 09:45:01 **10 concrete or any foundation there.**
 09:45:03 **11 The other thing is that these pumps are**
 09:45:05 **12 so close together. OSHA requires that there's at**
 09:45:09 **13 least three feet to be able to get around any**
 09:45:11 **14 mechanical equipment and a four-foot clearance**
 09:45:15 **15 around electrical panels.**
 09:45:16 **16 We saw this in a lot--it was particularly**
 09:45:19 **17 evident here, but we saw it in a great deal and**
 09:45:23 **18 number of their facilities that they didn't have**
 09:45:24 **19 proper clearances.**
 09:45:25 **20 Q. What was the status of the floor at the**
 09:45:27 **21 Rattlesnake Booster Station?**
 09:45:29 **22 A. Well, it was partially concrete, but a**
 09:45:31 **23 good portion of it was just dirt. And the piping**
 09:45:35 **24 was over dirt. As you can see the edge of the**
 09:45:37 **25 concrete right there to the right side, right**
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09:45:41 **1** there, yup, to the right side of the pump, the
 09:45:47 **2** piping that's there.
 09:45:48 **3** **Q.** That's just dirt there?
 09:45:50 **4** **A.** Underneath that piping is just dirt.
 09:45:51 **5** **Q.** All right. Let's go to the next photo.
 09:45:55 **6** **A.** You can see how close these are together
 09:45:57 **7** and how difficult it would be to work on them. I
 09:46:00 **8** mean, obviously the distance between that motor
 09:46:05 **9** and the check valve, difficult to even get a
 09:46:10 **10** wrench in there to be able to work on it.
 09:46:12 **11** Again, you can see that the grating and
 09:46:16 **12** the--that they put over the top of it was to try
 09:46:20 **13** to keep down the water spray from the coupling
 09:46:23 **14** between the motor shaft and the pump shaft.
 09:46:26 **15** **Q.** You mentioned truck mats were placed over
 09:46:28 **16** these pumps. What do you mean?
 09:46:30 **17** **A.** As you can see in the top left-hand
 09:46:33 **18** corner, mats--those mats right there--are laid
 09:46:38 **19** over there to knock down the water spray that was
 09:46:40 **20** coming off the pumps.
 09:46:41 **21** **Q.** Does that indicate to you a problem?
 09:46:45 **22** **A.** Well, obviously there's a problem where
 09:46:47 **23** they are having that much leakage in the coupling
 09:46:50 **24** and loss, to the point where it's affecting and
 09:46:54 **25** corroding the electrical panels.
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09:46:59 **1** **Q.** Was there evidence that this has been a
 09:47:01 **2** chronic long-term problem?
 09:47:03 **3** **A.** Obviously, the amount of corrosion that
 09:47:06 **4** we saw and the amount of--the length of time it
 09:47:12 **5** would take to do that corrosion, this has been
 09:47:14 **6** going on for some time.
 09:47:15 **7** **Q.** Does this photograph show some of the
 09:47:18 **8** corrosion that you discussed?
 09:47:19 **9** **A.** Yeah. Obviously you can see the
 09:47:21 **10** electrical panel right above there where the spray
 09:47:24 **11** is hitting that, where it's corroding that
 09:47:26 **12** particular electrical panel that's there.
 09:47:29 **13** **Q.** Okay. Let's go to the next photo.
 09:47:34 **14** **A.** This is the same panel to the right. You
 09:47:37 **15** can see the other electrical panel to the left is
 09:47:41 **16** also--the bottom of it is also corroded. So it's
 09:47:44 **17** just additional ones.
 09:47:46 **18** **Q.** Can you reduce that so we can get the
 09:47:49 **19** whole photo in?
 09:47:52 **20** MR. CONNER: What's the number on this
 09:47:53 **21** one?
 09:47:54 **22** MS. PRINZING-JONES: It's 100-15.
 09:48:05 **23** **Q.** (By Ms. Prinzing-Jones) Let's just go on
 09:48:07 **24** to the next one. Let's go to 100-16. All right,
 09:48:12 **25** there we go.
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09:48:13 **1** **A.** Yeah, there's a close-up of the
 09:48:15 **2** electrical panel, the corrosion. You can see the
 09:48:18 **3** water stains and the spray and the rusting of the
 09:48:21 **4** panel itself. Obviously concerns that if this
 09:48:25 **5** gets into either electrical panel or
 09:48:30 **6** instrumentation panel, that any moisture or
 09:48:32 **7** leakage inside that could cause an outage or
 09:48:35 **8** failure.
 09:48:36 **9** **Q.** Is it a safety concern?
 09:48:40 **10** **A.** Electrical panels, it certainly could be,
 09:48:42 **11** yes.
 09:48:43 **12** MR. CONNER: Ms. Jones, could we
 09:48:46 **13** get--some of these photographs, I would like to
 09:48:48 **14** get the exhibit number, as well as the
 09:48:50 **15** demonstrative, and I can't see it from the
 09:48:52 **16** photograph.
 09:48:54 **17** MS. PRINZING-JONES: We'll just give you
 09:48:56 **18** a copy of the demonstrative which has the exhibit
 09:48:58 **19** number on it.
 09:49:01 **20** **Q.** (By Ms. Prinzing-Jones) Let's look at
 09:49:01 **21** the next photo, which is D100-17.
 09:49:09 **22** **A.** This got turned a little bit, it's hard
 09:49:11 **23** to read. What you can see is a warning label here
 09:49:16 **24** where there is an arc flash concern from the
 09:49:20 **25** motor. And you can see the burn amount on the
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09:49:25 **1** thing there.
 09:49:26 **2** An arc flash concern with water around
 09:49:32 **3** would certainly be a safety issue.
 09:49:34 **4** **Q.** What's an arc flash?
 09:49:35 **5** **A.** Obviously it's sparking coming out of the
 09:49:38 **6** motor.
 09:49:39 **7** **Q.** Okay. When you have an excessive amount
 09:49:42 **8** of water being thrown out of these pumps, can that
 09:49:45 **9** be a concern when you have instrumentation and
 09:49:47 **10** electricity in the same location?
 09:49:49 **11** **A.** Obviously it's a safety concern, yeah.
 09:49:52 **12** **Q.** Did you find evidence that there had
 09:49:54 **13** actually been burn marks there?
 09:49:55 **14** **A.** Yeah, there are burn marks on that
 09:49:57 **15** equipment.
 09:49:58 **16** **Q.** All right. Let's go to the next one,
 09:50:00 **17** which is 100-18.
 09:50:04 **18** **A.** Well, what this is showing, the amount of
 09:50:06 **19** corrosion on the discharge of the pump. You can
 09:50:10 **20** see the grating, that's been covering up the pipes
 09:50:16 **21** leak. We zoomed in to show that the condition of
 09:50:18 **22** the piping was severely corroded.
 09:50:21 **23** **Q.** Okay. Is there a point beyond which you
 09:50:25 **24** simply cannot see--sand and seal and preserve the
 09:50:30 **25** pipe?
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09:50:30 **1 A. Yeah. You start reducing so much**
 09:50:34 **2 material down, you can start to reduce the**
 09:50:37 **3 structural integrity of the piping itself.**
 09:50:39 **4 Typically around the flanges and the bolt**
 09:50:44 **5 connections, because of that corrosion, it's hard**
 09:50:46 **6 to get a fit and get a tight fit.**
 09:50:50 **7 Q. Did you find evidence of chronic**
 09:50:52 **8 corrosion to the point that some of these parts**
 09:50:54 **9 cannot be salvaged?**
 09:50:55 **10 A. Oh, absolutely we did, yes.**
 09:50:57 **11 Q. Okay. Let's go to the next photo,**
 09:51:02 **12 D100-19.**
 09:51:02 **13 A. This is hard to see a little bit. This**
 09:51:07 **14 is a close-up of--the metal angle, as you can see,**
 09:51:12 **15 is the pump foundation. And it's sitting on**
 09:51:15 **16 pieces of wood. Just sitting there, not mounted**
 09:51:20 **17 down to the concrete at all.**
 09:51:22 **18 Q. Is it appropriate, per industry**
 09:51:24 **19 standards, to secure a pump to the foundation**
 09:51:28 **20 using wood shims?**
 09:51:31 **21 A. No. The idea--again, like that well pump**
 09:51:35 **22 we show with the anchor bolts down, the best**
 09:51:38 **23 practice and the standard is to again meld these**
 09:51:42 **24 down to concrete bases, float in a nonshrink,**
 09:51:46 **25 nonmetallic grout, level it out and using anchor**
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09:51:49 **1 bolts down in the concrete to fix it.**
 09:51:51 **2 Q. Why is it important to secure these**
 09:51:53 **3 pieces of equipment to the concrete?**
 09:51:54 **4 A. Again, vibration. And if they are**
 09:51:57 **5 allowed to sit there, like I said, all pieces of**
 09:52:02 **6 equipment vibrate, just to different degrees. And**
 09:52:05 **7 as they wear, they vibrate more. You want to**
 09:52:06 **8 minimize the amount of movement and displacement**
 09:52:09 **9 there by doing that concrete base. If it's**
 09:52:11 **10 allowed to move, allowed to sit there, it allows**
 09:52:13 **11 it to deteriorate faster.**
 09:52:15 **12 Q. Okay. Let's look at 100-20.**
 09:52:19 **13 Did you find problems with even the**
 09:52:21 **14 structures of the well houses that you inspected**
 09:52:24 **15 generally? And then we'll talk about this**
 09:52:26 **16 specifically.**
 09:52:27 **17 A. We found--in several of the well houses**
 09:52:30 **18 and pump stations, we found that there were**
 09:52:34 **19 structural deficiencies that needed**
 09:52:39 **20 rehabilitation. And we put that in our cost**
 09:52:41 **21 estimate.**
 09:52:42 **22 Q. Okay. And in particular with the**
 09:52:44 **23 Rattlesnake booster, what did you find as it**
 09:52:46 **24 relates to ventilation and the roof structure?**
 09:52:49 **25 A. Well, there was no fans or cooling that**
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09:52:51 **1 were down there except for that louver that was at**
 09:52:54 **2 the end of the roof. So, again, with all that**
 09:52:58 **3 moisture and all that heat down there, you are**
 09:53:02 **4 creating an environment for corrosion.**
 09:53:05 **5 Q. Did you find evidence of chronic water**
 09:53:07 **6 damage in the roof structure?**
 09:53:10 **7 A. In this case we found some. I don't know**
 09:53:13 **8 if it was chronic, but it was certainly evident**
 09:53:16 **9 there were leaks that were present.**
 09:53:17 **10 Q. Did you find evidence that there had been**
 09:53:19 **11 moisture that had been getting into the roof?**
 09:53:22 **12 A. Yes, we did see that.**
 09:53:23 **13 Q. Okay. And what did you see?**
 09:53:25 **14 A. Well, what we saw was a lot of mold and**
 09:53:30 **15 moisture that's been absorbed into the insulation**
 09:53:33 **16 up there. You can see by the silver point that**
 09:53:36 **17 they had the ventilation or hatch blocked off with**
 09:53:40 **18 just foam insulation.**
 09:53:44 **19 Q. Okay. Let's go to D100-21.**
 09:53:49 **20 A. This is again another picture of the pipe**
 09:53:52 **21 that is corroding, that needs maintenance to be**
 09:53:56 **22 done.**
 09:53:56 **23 Q. Okay. Let's go to the next facility.**
 09:54:00 **24 What are we looking at in D100-22?**
 09:54:05 **25 A. This is the Willowwood Well, Well 18,**
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09:54:08 **1 that we inspected.**
 09:54:10 **2 Q. When you--let's just go to the next**
 09:54:13 **3 photo.**
 09:54:18 **4 A. This is a picture of the well pump.**
 09:54:27 **5 There is really no idea how old this equipment is.**
 09:54:30 **6 This pump was rebuilt from a higher voltage, I**
 09:54:35 **7 think it was 2,400 volts, down to 480. But there**
 09:54:39 **8 is really no indication that--you know, typically**
 09:54:44 **9 this is well beyond its useful life.**
 09:54:46 **10 Q. Okay. What is the estimated age of--**
 09:54:49 **11 A. I believe 75 years, if not longer.**
 09:54:53 **12 Q. Do you want to have motors in your pump**
 09:54:57 **13 houses that are 75 years or older?**
 09:55:00 **14 A. Well, obviously it's keeping them**
 09:55:02 **15 efficient to be able to do that, and operable**
 09:55:04 **16 where they--and ability to keep them running all**
 09:55:07 **17 the time. It's obviously of, you know, of concern**
 09:55:09 **18 in maintaining water service.**
 09:55:11 **19 Q. This photograph also shows steel sheeting**
 09:55:14 **20 over the other component parts. Can you describe**
 09:55:17 **21 that?**
 09:55:18 **22 A. What we saw in a number of wells and**
 09:55:20 **23 booster stations was this metal jacketing--**
 09:55:25 **24 jacketed insulation that was encasing a good**
 09:55:29 **25 portion of the piping.**
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09:55:33 **1** Typically that metal jacketing insulation
 09:55:36 **2** is used there for either, you know, temperature
 09:55:41 **3** concerns to insulate the pipe or corrosion
 09:55:44 **4** protection.

09:55:45 **5** But you have to properly prep the pipe
 09:55:49 **6** and everything else underneath of it to make it
 09:55:51 **7** really worthwhile. If you don't prep the pipe
 09:55:56 **8** ahead of time, what you do is you've created
 09:55:59 **9** actually a worse corrosion condition where you
 09:56:02 **10** focus the water and obviously, since it's not
 09:56:06 **11** airtight, where you create a highly focused and
 09:56:10 **12** concentrated corrosion point underneath that
 09:56:13 **13** jacketing.

09:56:15 **14** **Q.** So can it make matters worse --

09:56:17 **15** **A.** Yes, it can.

09:56:19 **16** **Q.** -- if the pipe isn't properly treated?

09:56:21 **17** **A.** Yes.

09:56:22 **18** **Q.** Now, let's go to the next photo.

09:56:26 **19** **A.** This is just showing the corrosion on the
 09:56:29 **20** blow-off line and valves from the discharge of the
 09:56:36 **21** pump.

09:56:37 **22** **Q.** So in what you could see at the
 09:56:40 **23** Willowwood Well, was there evidence of significant
 09:56:43 **24** corrosion on the physical part?

09:56:45 **25** **A.** Yes.

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09:56:46 **1** **Q.** Let's go to the next photo.

09:56:49 **2** What are we looking at here?

09:56:51 **3** **A.** This is--

09:56:51 **4** MR. CONNER: Your Honor, can we get a
 09:56:53 **5** number identification as we go through these?
 09:56:55 **6** It's hard to see.

09:56:56 **7** MS. PRINZING-JONES: 100-25.

09:57:01 **8** **A.** It's hard to see at that angle.

09:57:03 **9** What we're looking at here again is, this
 09:57:07 **10** is another pump that's not mounted down to the
 09:57:10 **11** foundation. And you are seeing the--how old, in
 09:57:15 **12** terms of the exposed cables for feeding the
 09:57:18 **13** electrical motor. You just don't see that any
 09:57:22 **14** longer. It just shows the age of it.

09:57:25 **15** **Q.** (By Ms. Prinzing-Jones) What do you mean
 09:57:26 **16** when you say the cables? What about the cables
 09:57:28 **17** leads you to believe that this pump is beyond its
 09:57:31 **18** useful life and maybe 75 or more years old?

09:57:34 **19** **A.** Well, you just see the separated exposed
 09:57:37 **20** cables there leaving the conduit box into the
 09:57:40 **21** motor itself. Usually those are enclosed all the
 09:57:43 **22** way into the motor.

09:57:44 **23** **Q.** Okay, all right. Let's go to the next
 09:57:47 **24** photo which is 100-26.

09:57:51 **25** Can you describe what we're looking at
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09:57:53 **1** here?

09:57:53 **2** **A.** Well, it's hard. This is on pump startup
 09:57:56 **3** and shutdown to expel the air and any dirty water
 09:58:02 **4** that's in the well. Wells are then pumped to
 09:58:08 **5** waste on startup and shutdown.

09:58:10 **6** This is the discharge line that goes out
 09:58:12 **7** the backside of the well house, and you can see
 09:58:16 **8** it's severely corroded. There were leaks that
 09:58:21 **9** were sprayed when we did have this facility run,
 09:58:22 **10** and there was water spray from this pipe. But you
 09:58:27 **11** can see where it goes. It goes out into an open
 09:58:30 **12** waterway.

09:58:31 **13** **Q.** Okay. Let's go to the next photo.

09:58:34 **14** **A.** Again, this is an extension of that pipe.

09:58:36 **15** There is a flat valve at the end and it just blows
 09:58:40 **16** into the irrigation ditch.

09:58:42 **17** **Q.** Okay. And if you change the--

09:58:49 **18** **A.** This is another picture of it. The
 09:58:51 **19** problem with this is they were certainly having
 09:58:54 **20** problems with erosion of the embankment. They
 09:58:58 **21** used the fence and rocks and things to try and
 09:59:02 **22** hold the embankment back here because of the
 09:59:06 **23** spray. You are putting out, you know, quite a lot
 09:59:10 **24** of water and it runs for about three to five
 09:59:14 **25** minutes at, you know, a couple, you know, thousand

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09:59:18 **1** **GPM.**

09:59:21 **2** **Q.** Okay. Let's go to the next photo. Would
 09:59:24 **3** you change the orientation of that one, too.
 09:59:28 **4** What do we see here?

09:59:29 **5** **A.** Again, this was the discharge piping of
 09:59:31 **6** the well. This is--we couldn't really inspect it
 09:59:34 **7** because it was all covered up by the metal
 09:59:36 **8** jacketing. So we had asked then, for one of the
 09:59:43 **9** facilities, to have the metal jacketing removed so
 09:59:46 **10** we could inspect the pipe to see what it looked
 09:59:49 **11** like.

09:59:49 **12** **Q.** Okay, we'll get to that later.

09:59:51 **13** **A.** Yeah.

09:59:52 **14** **Q.** All right, let's go to the next site.

09:59:54 **15** What are we looking at--what site are we
 09:59:56 **16** looking at starting at 100-29?

10:00:00 **17** **A.** This is Well 10, the Hilda Well.

10:00:02 **18** **Q.** All right. Let's go to the next photo.

10:00:05 **19** **A.** You can see this is a metal building and
 10:00:08 **20** the addition of the chlorine building that's been
 10:00:12 **21** tacked on to the side of the pump building.

10:00:16 **22** **Q.** Okay. So when you mentioned earlier that
 10:00:17 **23** there had been late modifications of these
 10:00:21 **24** chemical feed buildings, does that white building
 10:00:26 **25** give an example of that?

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10:00:28 **1 A. Yes.**
 10:00:28 **2 Q. Okay. Let's go to the next photo.**
 10:00:30 **3 A. They have two storage tanks in the**
 10:00:33 **4 chemical building here and one chemical metering**
 10:00:38 **5 pump that's here.**
 10:00:40 **6 Q. Can you change the orientation of that?**
 10:00:42 **7 I know it's hard to see from the opposite**
 10:00:44 **8 angle, but what else is notable from this**
 10:00:48 **9 photograph?**
 10:00:48 **10 A. Well, there was evidence of corrosion,**
 10:00:51 **11 spills, and corrosion on the walls and on the**
 10:00:54 **12 floor that were here.**
 10:00:55 **13 The other thing that's notable about this**
 10:00:57 **14 is that the spill containment area wasn't large**
 10:01:00 **15 enough to hold the contents of the tanks.**
 10:01:03 **16 Q. Okay. All right, let's go to the next**
 10:01:07 **17 photograph, 100-32.**
 10:01:09 **18 A. Again, this is hard to see the way it's**
 10:01:13 **19 orientated.**
 10:01:14 **20 This is the discharge pump piping of this**
 10:01:18 **21 well. You can see how corroded it is and how they**
 10:01:22 **22 are connected together.**
 10:01:23 **23 One thing of note is--and we saw this at**
 10:01:26 **24 several locations--where they have connected in**
 10:01:29 **25 galvanized pipe connections into ductile iron or**
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10:01:34 **1 steel pipe. These are dissimilar mesh metals and**
 10:01:37 **2 it creates a galvanic action that accelerates**
 10:01:43 **3 corrosion. You can't put those type of materials**
 10:01:45 **4 together. And we saw that at several locations,**
 10:01:49 **5 pump stations and wells, as we made our**
 10:01:51 **6 inspections. This is just one example of them.**
 10:01:54 **7 Q. Let's spend a moment on this.**
 10:01:56 **8 So what is the problem with using these**
 10:01:59 **9 types of metals together?**
 10:02:01 **10 A. Well, it's like in chemistry you put an**
 10:02:05 **11 acid and a base together and you actually have,**
 10:02:07 **12 you know, a chemical reaction.**
 10:02:09 **13 You actually have dissimilar metals with**
 10:02:12 **14 the galvanized metal coating coming in contact**
 10:02:16 **15 with the steel and it creates a corrosive**
 10:02:19 **16 environment.**
 10:02:20 **17 Q. Does that cause corrosion to happen**
 10:02:22 **18 faster and get worse?**
 10:02:23 **19 A. Yes, absolutely it does.**
 10:02:25 **20 Q. Okay. Let's go to the next photograph.**
 10:02:29 **21 What are we looking at in 100-33?**
 10:02:32 **22 A. This is just showing the condition that**
 10:02:34 **23 the piping has, you know, started to reach a point**
 10:02:38 **24 where it needs to be rehabilitated. Material is**
 10:02:41 **25 actually flaking off of the pipe. It would be**
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10:02:45 **1 difficult to really rehabilitate this pipe. You**
 10:02:49 **2 can see that there has been leakage from the**
 10:02:51 **3 chemical feed line that's come down there into the**
 10:02:55 **4 well.**
 10:02:56 **5 Q. Okay. Let's look at the next location.**
 10:02:59 **6 What are we looking at here?**
 10:03:02 **7 A. This is the Lower Elk Ridge Booster, B2.**
 10:03:08 **8 Q. This is D100-35. What's the problem**
 10:03:15 **9 here?**
 10:03:15 **10 A. You can see the gray motor at the top of**
 10:03:18 **11 the picture. What was interesting about this, the**
 10:03:22 **12 reason we highlighted this, is they obviously have**
 10:03:26 **13 a problem at the coupling area. They eventually**
 10:03:29 **14 cut away a good bit of the material of the**
 10:03:37 **15 connecting piece to the pump, and you can see**
 10:03:40 **16 where they just ground it away, cut it away.**
 10:03:43 **17 So obviously they needed to get--that**
 10:03:45 **18 there's some type of problem that they needed to**
 10:03:48 **19 get access on a regular basis and not--they would**
 10:03:52 **20 actually have to take this--disassemble it to get**
 10:03:54 **21 to it. So this was evidence of some type of**
 10:03:56 **22 maintenance problem or mechanical problem they**
 10:03:59 **23 were having.**
 10:03:59 **24 Q. Was there evidence of corrosion around**
 10:04:01 **25 this location that indicated to you that it was a**
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10:04:03 **1 chronic problem?**
 10:04:05 **2 A. There was a good amount of corrosion on**
 10:04:07 **3 that particular piece, as well as on the floor and**
 10:04:09 **4 other components within that station.**
 10:04:11 **5 Q. Okay. Let's go to the next photograph.**
 10:04:18 **6 A. Again, this is hard to see orientated**
 10:04:24 **7 sideways here.**
 10:04:25 **8 But you can see they have installed some**
 10:04:28 **9 new pumps and valves, isolation valves. They**
 10:04:33 **10 still have the old pump control valve that's**
 10:04:35 **11 there.**
 10:04:35 **12 But what was surprising was that none of**
 10:04:40 **13 it had been painted or prepped or anything done to**
 10:04:45 **14 it. They left it originally as they got it from**
 10:04:49 **15 the factory. So even though they are replacing**
 10:04:51 **16 equipment, they are not protecting it to prolong**
 10:04:54 **17 the life.**
 10:04:55 **18 Q. And what are the parts in this photograph**
 10:04:57 **19 that should be painted for protection of the**
 10:04:59 **20 asset?**
 10:05:00 **21 A. Well, obviously the orange is the pump**
 10:05:02 **22 itself. Up behind it is an isolation valve which**
 10:05:06 **23 is black, which is, you know, a valve that should**
 10:05:09 **24 be painted, as well as the little discharge pipe**
 10:05:12 **25 as well. The valve, you can see, has not been**
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10:05:15 **1** maintained for quite some time.
 10:05:18 **2** **Q.** And when you are looking--you say the
 10:05:21 **3** valve, what are we looking at here?
 10:05:24 **4** **A.** The piece that's down below. No. Right
 10:05:35 **5** there. That's the pump control valve.
 10:05:37 **6** **Q.** And what was notable about that?
 10:05:40 **7** **A.** Just the amount of corrosion and
 10:05:43 **8** deterioration on the valve body.
 10:05:46 **9** **Q.** Okay. Let's go to the next photograph.
 10:05:51 **10** Can you just zoom in on it.
 10:06:00 **11** **A.** What you can see is that particular piece
 10:06:03 **12** of pipe, they replaced the valve and other
 10:06:07 **13** components. But that pipe that's connecting the
 10:06:12 **14** fabricated piece that they have connected to the
 10:06:17 **15** discharge of the pump control valve to the
 10:06:19 **16** isolation valve was severely corroded, to the
 10:06:23 **17** point where we thought that there was almost
 10:06:26 **18** potential imminent failure in that pipe. They had
 10:06:30 **19** replaced other things, but they hadn't replaced
 10:06:32 **20** that.
 10:06:32 **21** **Q.** You thought there was potential imminent
 10:06:34 **22** failure in that piece?
 10:06:36 **23** **A.** Yes, yes.
 10:06:36 **24** **Q.** Okay. Can you save a component when it's
 10:06:41 **25** become that corroded over time?

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10:06:43 **1** **A.** Well, if you start to try to sandblast it
 10:06:45 **2** and start to clean it up and trying to get down to
 10:06:47 **3** the bare metal, you are taking again away almost
 10:06:50 **4** all of the structural integrity of that pipe under
 10:06:53 **5** pressure. So I would think that--you reach a
 10:06:56 **6** certain point where you can't actually maintain it
 10:06:58 **7** any longer. And that's pretty much reached that
 10:07:01 **8** point.
 10:07:02 **9** **Q.** Can you zoom out, Tina.
 10:07:04 **10** Behind where the gentleman is standing,
 10:07:06 **11** was there also a problem identified at this
 10:07:09 **12** location?
 10:07:09 **13** **A.** This was another location where they had
 10:07:11 **14** installed galvanized pipe connecting to ductile
 10:07:17 **15** iron pipe where you had two dissimilar metals.
 10:07:20 **16** **Q.** Would that cause accelerated corrosion?
 10:07:23 **17** **A.** Accelerated corrosion, yes.
 10:07:25 **18** **Q.** Let's go to the next photo.
 10:07:28 **19** **A.** It's just another picture of that piece
 10:07:30 **20** that was severely corroded.
 10:07:31 **21** **Q.** And that's 100-38. Okay.
 10:07:34 **22** Let's go to the next location. What is
 10:07:38 **23** shown at 100-39?
 10:07:42 **24** **A.** This is B23, the Upper Prospect Booster
 10:07:46 **25** Station.

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10:07:47 **1** **Q.** Okay. Let's go to that photo.
 10:07:51 **2** **A.** The concern about this was the irregular
 10:07:56 **3** installation of this pump. There is no concrete
 10:08:01 **4** foundation at all. It's actually sitting up in
 10:08:04 **5** the air. They use metal braces on the piping
 10:08:09 **6** flanges to hold up the pump.
 10:08:14 **7** That is really--it's one thing about
 10:08:19 **8** putting them on wood pieces or just sitting on the
 10:08:22 **9** concrete. But to have that mounted up in the air
 10:08:25 **10** and putting all the stress and everything into the
 10:08:27 **11** piping itself, so--that's really an unusual type
 10:08:33 **12** of installation, to say the least.
 10:08:35 **13** **Q.** Okay. Let's look at the next photograph,
 10:08:39 **14** 100-41.
 10:08:40 **15** **A.** There is the metal brace that's
 10:08:42 **16** connecting them to the flange and the piping. You
 10:08:44 **17** can see how far the pump is actually sitting up
 10:08:47 **18** above the floor.
 10:08:48 **19** **Q.** All right. The next photograph.
 10:08:52 **20** **A.** This is the brace from the other side.
 10:08:54 **21** **Q.** That's 100-42.
 10:08:55 **22** And the next photograph.
 10:08:57 **23** **A.** This is the distance that this is sitting
 10:09:00 **24** up above the floor, so it's not sitting on
 10:09:02 **25** anything at all.

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10:09:03 **1** **Q.** And that's 100-43.
 10:09:07 **2** Will this also cause excessive vibration
 10:09:10 **3** and wear and tear on the equipment if the motor is
 10:09:12 **4** installed like this?
 10:09:14 **5** **A.** Absolutely. I mean, over time you are
 10:09:16 **6** going to create problems with the longevity of the
 10:09:20 **7** life of the pump.
 10:09:21 **8** **Q.** Okay. If you go to the next photograph
 10:09:26 **9** at the Upper Prospect area, was this also a
 10:09:29 **10** location where the pipe had been wrapped in steel
 10:09:32 **11** sheeting?
 10:09:32 **12** **A.** Yeah. This was the location when we
 10:09:35 **13** first came out that we really couldn't look at all
 10:09:38 **14** the piping we looked at. This is the way the
 10:09:41 **15** metal jacketing covered it so we couldn't inspect
 10:09:44 **16** it. This was the facility that we had asked to
 10:09:46 **17** have the jacketing removed so we could inspect the
 10:09:49 **18** piping underneath it.
 10:09:50 **19** **Q.** Okay. Let's go to the next photo, which
 10:09:53 **20** is 100-45.
 10:09:55 **21** **A.** This is another picture of the insulation
 10:09:58 **22** jacket.
 10:10:00 **23** **Q.** 100-46?
 10:10:02 **24** **A.** Same thing. Just an additional picture
 10:10:04 **25** of that panel jacket.

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- 10:10:07 **1 Q.** 100-47?
- 10:10:09 **2 A.** Yes. This is what it looked like before.
- 10:10:11 **3 You can see the condition of the piping and**
- 10:10:13 **4 everything else on the other pictures before the**
- 10:10:15 **5 jacketing.**
- 10:10:16 **6 Q.** Let's go to 148.
- 10:10:19 **7 A.** Here is what it looks like with the
- 10:10:21 **8 jacketing off.**
- 10:10:21 **9 Q.** And what were the problems identified?
- 10:10:23 **10 A.** Well, what we saw was a significant
- 10:10:26 **11 amount of corrosion. And, as I mentioned earlier,**
- 10:10:30 **12 that the pipe had not been prepped at all for--in**
- 10:10:34 **13 terms of getting rid of all the corrosion that was**
- 10:10:36 **14 there, painting it, priming it and all that**
- 10:10:39 **15 beforehand. So they have created an environment**
- 10:10:42 **16 where they are accelerating the corrosion of the**
- 10:10:44 **17 components under the jacketing.**
- 10:10:48 **18 Q.** Okay. Go to D100-49.
- 10:10:51 **19 A.** This is just a close-up of the amount of
- 10:10:54 **20 corrosion that we saw on the piping and the valves**
- 10:10:59 **21 and the flanges on the equipment there.**
- 10:11:00 **22 Q.** Given your observations of what was under
- 10:11:04 **23 the steel sheeting, is it within industry standard**
- 10:11:08 **24 to prepare pipe like this and then cover it with**
- 10:11:12 **25 metal sheeting?**

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- 10:11:13 **1 A.** Not at all. Industry standard is to prep
- 10:11:17 **2 that pipe, paint it, coat it, before you put--if**
- 10:11:20 **3 you needed to put metal jacketing on.**
- 10:11:23 **4 Q.** Let's go to the next location. What are
- 10:11:26 **5 we looking at here in D100-50?**
- 10:11:29 **6 A.** This is Well 3, the South Avenue well.
- 10:11:33 **7 Q.** All right. Let's go to that photograph.
- 10:11:34 **8 What do we see in 100-51?**
- 10:11:40 **9 A.** What we see here is the corrosion.
- 10:11:43 **10 Again, this is--we saw a lot of pipes, both at**
- 10:11:46 **11 wells and pump stations, as we've been seeing here**
- 10:11:49 **12 through the pictures of corroded pipe which shows**
- 10:11:55 **13 deferred maintenance in terms of these facilities.**
- 10:11:56 **14 There is a good bit, amount, of leakage**
- 10:11:58 **15 that's occurred and there is a lot of corrosion on**
- 10:12:01 **16 the floor, the concrete floor beneath.**
- 10:12:03 **17 Q.** Given the status of the flooring under
- 10:12:06 **18 this corroded pipe, do you believe that this issue**
- 10:12:08 **19 has been chronic?**
- 10:12:09 **20 A.** It appears it's been going on for some
- 10:12:12 **21 time, yes.**
- 10:12:13 **22 Q.** Okay. Let's go to the next photograph.
- 10:12:14 **23 A.** As you can see, this is a good picture of
- 10:12:17 **24 the piping that's here. You can see the material**
- 10:12:20 **25 is actually beginning to flake off and**

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- 10:12:24 **1 reaching--obviously this is a piece of pipe that**
- 10:12:27 **2 could not be rehabilitated. It's reached the**
- 10:12:31 **3 point where it's becoming structurally unsound.**
- 10:12:34 **4 Q.** Okay. And that's D100-52.
- 10:12:37 **5 Let's go to the next photograph, 100-53.**
- 10:12:41 **6 What do we see here?**
- 10:12:43 **7 A.** Well, this is a picture within the
- 10:12:45 **8 chemical building that was just attached to the**
- 10:12:47 **9 side of it. They are obviously having problems**
- 10:12:50 **10 with spills.**
- 10:12:51 **11 The white you see is the fan up there,**
- 10:12:54 **12 and dripping off of it is the sodium hydrochlorate**
- 10:12:57 **13 chemical that had sprayed up on the entire wall**
- 10:13:03 **14 and the fans and conduit, and was corroding the**
- 10:13:09 **15 HVAC equipment, the walls, and other components**
- 10:13:12 **16 within it. So obviously they had a problem with**
- 10:13:16 **17 spill--a couple of spills in that facility.**
- 10:13:20 **18 Q.** Let's go to the next photograph, 100-54.
- 10:13:23 **19 A.** This is just a picture behind the wall of
- 10:13:26 **20 that tank where all that spray. Below is where**
- 10:13:30 **21 the wall is actually corroded and the chemical is**
- 10:13:32 **22 eating through the fiberboard there.**
- 10:13:36 **23 Q.** And, I mean, what's going on here? What
- 10:13:39 **24 would cause this to happen?**
- 10:13:40 **25 A.** Well, they actually have either a failure
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- 10:13:44 **1 of one of the discharge lines and the pump is**
- 10:13:47 **2 spraying water out of there, or they had a problem**
- 10:13:49 **3 in terms of filling those tanks during the fill**
- 10:13:52 **4 operation. Something occurred that was throwing**
- 10:13:55 **5 chemicals up onto the wall.**
- 10:13:58 **6 Q.** Let's go to the next photograph.
- 10:14:00 **7 A.** This is the door to the chemical
- 10:14:03 **8 building. Because of the HVAC--we saw this at**
- 10:14:08 **9 numerous locations where, because of the vapors,**
- 10:14:13 **10 the corrosive vapors of the materials, you can see**
- 10:14:16 **11 how it's corroded the inside of the door.**
- 10:14:19 **12 So it's really a safety hazard from a**
- 10:14:22 **13 standpoint of chemical odors and that they don't**
- 10:14:24 **14 have proper ventilation. But you can see how**
- 10:14:27 **15 corrosive it is to the actual structure itself if**
- 10:14:30 **16 they don't properly ventilate it.**
- 10:14:32 **17 Q.** Okay. Now, if we were to take the time
- 10:14:37 **18 today to go through all of the hundreds of**
- 10:14:41 **19 photographs, would we see similar photographs to**
- 10:14:45 **20 those that we've shown to the Court over the last**
- 10:14:49 **21 20 minutes?**
- 10:14:50 **22 A.** Yes. We would see very similar evidence
- 10:14:58 **23 at the--what we call the Mountain Water Company**
- 10:15:01 **24 facilities that they had built and own themselves.**
- 10:15:06 **25 We saw considerable difference, though,**
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10:15:08 **1** in the developer-contributed facilities where they
 10:15:13 **2** were laid out. They didn't have these types of
 10:15:16 **3** problems and were much better--had much higher
 10:15:21 **4** standards in terms of design standards and
 10:15:23 **5** maintenance, that we didn't see this type of
 10:15:26 **6** corrosion and condition of the equipment.
 10:15:27 **7** **Q.** Okay. So you also had an opportunity to
 10:15:29 **8** inspect the developer-contributed locations?
 10:15:33 **9** **A.** Yes.
 10:15:34 **10** **Q.** And, again, tell me how they compared,
 10:15:37 **11** the developer-contributed facilities, compared to
 10:15:40 **12** Mountain Water's own facilities.
 10:15:45 **13** **A.** And typical as we said, Mountain Water
 10:15:48 **14** facilities, particularly the wells and a number of
 10:15:51 **15** the booster stations, were fair to poor, poor.
 10:15:54 **16** The developer-contributed facilities were
 10:15:57 **17** all rated good.
 10:16:02 **18** **Q.** And what do you conclude from that?
 10:16:05 **19** **A.** Well, obviously that they--you know, the
 10:16:09 **20** requirements that they are putting--providing to
 10:16:12 **21** the developer to build and the standards they are
 10:16:14 **22** building to, are much higher than they are
 10:16:16 **23** maintaining their own facilities at.
 10:16:19 **24** **Q.** Given the overall findings in the
 10:16:24 **25** Mountain Water well facilities, is significant
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10:16:27 **1** capital investment needed to bring the motors, the
 10:16:30 **2** pumps, the well houses, the booster facilities up
 10:16:33 **3** to industry standards?
 10:16:34 **4** **A.** Yes. In terms of the wells themselves,
 10:16:42 **5** we talked about needing a range of about 4 to
 10:16:48 **6** \$7 million just to bring the well facilities up
 10:16:52 **7** to, you know, reasonable standards, industry
 10:16:54 **8** standards.
 10:16:56 **9** **Q.** Did you find overall evidence of
 10:16:58 **10** significant deferred maintenance within the
 10:17:02 **11** Mountain Water facilities as compared to the
 10:17:04 **12** developer facilities?
 10:17:06 **13** **A.** It was very evident that things were all
 10:17:09 **14** painted and clean. And there was proper
 10:17:12 **15** clearances, in terms of OSHA requirements, around
 10:17:15 **16** panels. It was very evident which facilities were
 10:17:19 **17** developer-contributed versus the Mountain Water
 10:17:24 **18** Company, you know, installed facilities.
 10:17:25 **19** **Q.** And in those facilities, the Mountain
 10:17:28 **20** Water facilities, did you find evidence of chronic
 10:17:30 **21** deferred maintenance?
 10:17:31 **22** **A.** Yes, we did.
 10:17:33 **23** **Q.** Now, is that a criticism of the Mountain
 10:17:35 **24** Water employees?
 10:17:35 **25** **A.** No. You know, based on what we saw out
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10:17:38 **1** there, the employees have done a remarkable job of
 10:17:43 **2** maintaining the operation of these facilities,
 10:17:47 **3** given obviously its limited resources, funding,
 10:17:54 **4** both capital and maintenance funding, to properly
 10:17:56 **5** maintain and--prolong and maintain the life of
 10:18:00 **6** these assets. You know, they are doing everything
 10:18:04 **7** they can. A little bit of a Band-Aid in some
 10:18:08 **8** cases, but they are doing a great job in just
 10:18:11 **9** keeping it going.
 10:18:12 **10** **Q.** What are the risks to customers if
 10:18:14 **11** significant capital investment is not put into the
 10:18:17 **12** wells and pumps in terms of these facilities?
 10:18:22 **13** **A.** Well, obviously one of the things from
 10:18:25 **14** the wells is that they have built a lot of extra
 10:18:27 **15** wells and have excess capacity. But starting to
 10:18:31 **16** go down the path of where they are going to start
 10:18:34 **17** to have unexpected failures, outages, and things
 10:18:39 **18** that they can't predict in terms of failure of
 10:18:45 **19** equipment.
 10:18:46 **20** **Q.** Now, you mentioned that there's excess
 10:18:49 **21** wells.
 10:18:50 **22** **A.** Yeah. They have approximately seven--70,
 10:18:55 **23** excuse me, million gallons per day of pumping
 10:18:59 **24** capacity; or around, even with their largest well
 10:19:02 **25** not in service, it's about 65 million gallons per
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10:19:05 **1** day.
 10:19:06 **2** They actually have a maximum day demand
 10:19:14 **3** of roughly only about 35 to 40 mgd. They don't
 10:19:19 **4** need to have almost double the amount of well
 10:19:22 **5** capacity for their operational need.
 10:19:25 **6** And of that maximum day demand, over 50
 10:19:30 **7** percent of the water that they are producing from
 10:19:31 **8** the wells is going to leakage, back into the
 10:19:34 **9** ground.
 10:19:34 **10** **Q.** What is the consequence of having too
 10:19:36 **11** many wells and that amount of leakage to
 10:19:40 **12** customers?
 10:19:40 **13** **A.** Well, obviously they have had to
 10:19:44 **14** build--to have all that leakage, they have got to
 10:19:47 **15** build more wells, they need to be able to pump it.
 10:19:50 **16** There are the additional operating costs.
 10:19:52 **17** So what they have done is they have
 10:19:53 **18** invested and put into capital and into rate base
 10:19:57 **19** millions of dollars' worth of additional
 10:19:59 **20** facilities just to pump water for leakage. That's
 10:20:04 **21** not just--only a portion of this. There's the
 10:20:08 **22** profit they earn on the rate of return on that
 10:20:11 **23** capital. Plus, you know, over \$600,000 is being
 10:20:15 **24** spent of pumping, you know, water. Just
 10:20:19 **25** electrical costs of pumping water that's going
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10:20:21 **1** back into the ground, in addition to all the
 10:20:25 **2** maintenance costs to maintain these facilities.
 10:20:28 **3** So it's costing the ratepayer a great
 10:20:32 **4** deal of excess costs to maintain the facility to
 10:20:35 **5** pump water that's just for, you know, going back
 10:20:40 **6** into the ground.
 10:20:40 **7** **Q.** If the leakage were to be fixed in the
 10:20:42 **8** system, would Mountain Water need all those wells?
 10:20:46 **9** **A.** No, they wouldn't. They could cut back
 10:20:50 **10** in terms of number of wells and what they would
 10:20:52 **11** need to be able to meet demand.
 10:20:54 **12** **Q.** And would that reduce costs?
 10:20:56 **13** **A.** Oh, absolutely. You wouldn't have to
 10:20:58 **14** pump as much water, you wouldn't have to maintain
 10:21:01 **15** water. And most likely they would end up with
 10:21:03 **16** some stranded investment where they wouldn't need
 10:21:06 **17** the wells to be used and useful, to be able to
 10:21:09 **18** take those out of service.
 10:21:11 **19** **Q.** If you had a well that you no longer
 10:21:13 **20** needed to be used or useful, could that reduce
 10:21:16 **21** rate base?
 10:21:17 **22** **A.** If it's not fully depreciated, yes.
 10:21:20 **23** **Q.** Would that in turn reduce rates for
 10:21:22 **24** customers?
 10:21:22 **25** **A.** Yes. They wouldn't have to earn a return
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10:21:25 **1** on that portion of rate base.
 10:21:27 **2** **Q.** Let's talk for a minute about the tanks
 10:21:30 **3** or the storage that Mountain Water maintains.
 10:21:33 **4** Do they have sufficient storage, in your
 10:21:36 **5** opinion?
 10:21:37 **6** **A.** Well, barely. They only have about 10
 10:21:43 **7** million gallons' worth of storage in their system.
 10:21:46 **8** They--which is actually, for the amount of maximum
 10:21:51 **9** day demand and operational demand, that's actually
 10:21:56 **10** very low. They are relying on their wells for
 10:22:01 **11** storage and to meet fire flow needs.
 10:22:04 **12** **Q.** What do you mean they are relying on
 10:22:07 **13** storage to meet fire flow needs?
 10:22:08 **14** **A.** Typically systems are set up to have
 10:22:13 **15** volume in their tanks; so when a fire occurs, they
 10:22:15 **16** would be able to meet fire protection in terms of
 10:22:18 **17** the amount of gallons per minute for a higher rate
 10:22:22 **18** at the hydrants and the pressure. There is that
 10:22:25 **19** volume of water that's available to fight the
 10:22:27 **20** fire. And they have to have the piping to convey
 10:22:30 **21** it to the hydrants.
 10:22:31 **22** If they don't have all of that storage in
 10:22:33 **23** the tanks, then during a fire they have to have
 10:22:36 **24** the ability to turn wells on to be able to meet
 10:22:39 **25** that same fire flow demand.
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10:22:41 **1** **Q.** Okay. Let's talk for a minute about
 10:22:43 **2** those developer-built assets. Can you describe
 10:22:47 **3** how the developer-added assets flows into rate
 10:22:51 **4** base?
 10:22:51 **5** **A.** Well, actually it doesn't flow into rate
 10:22:55 **6** base at all. It is part of their utility plant
 10:22:59 **7** out there. But they--if it's fully contributed,
 10:23:05 **8** they are not--they have not invested anything, so
 10:23:09 **9** they can't earn on it.
 10:23:11 **10** However, they do have agreements with the
 10:23:14 **11** developer that they will pay back the developer
 10:23:19 **12** over 40 years. So 1/40th of the value of that
 10:23:24 **13** facility is contributed, will go to rate base on
 10:23:28 **14** an annual basis.
 10:23:30 **15** **Q.** So every year when Mountain Water has to
 10:23:33 **16** pay back the developer, can they put that into
 10:23:35 **17** rate base and thus pass that on to ratepayers?
 10:23:40 **18** **A.** The amount they refund back, yes, they
 10:23:42 **19** can do that. They also get depreciation on that
 10:23:45 **20** as well.
 10:23:45 **21** **Q.** Okay, all right. And that's having put
 10:23:47 **22** zero investment into that new--
 10:23:50 **23** **A.** Well, they invested. They paid money
 10:23:53 **24** back to the developer. But the concern is if they
 10:23:59 **25** still will be paying the developer back at 1/40th
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10:24:03 **1** and their existing ratepayers are going to be
 10:24:05 **2** paying that, even if a single home isn't built and
 10:24:07 **3** even if there's--a single dollar of additional
 10:24:10 **4** revenue is not received, then the existing
 10:24:12 **5** ratepayers end up bearing the burden of them
 10:24:15 **6** paying the developer back.
 10:24:19 **7** **Q.** Okay. Let's talk about--we mentioned the
 10:24:23 **8** energy--you mentioned the energy optimization
 10:24:25 **9** studies for the boosters and the wells. Let's
 10:24:28 **10** look at that briefly.
 10:24:30 **11** MS. PRINZING-JONES: This has already
 10:24:31 **12** been admitted, Your Honor. I would like to pull
 10:24:33 **13** up 1248, first page first.
 10:24:42 **14** **Q.** (By Ms. Prinzing-Jones) What do we have
 10:24:43 **15** here?
 10:24:45 **16** **A.** This was the Energy Resource Management
 10:24:48 **17** report. This is for the booster station and pump
 10:24:51 **18** tests where they went around and did all the pump
 10:24:54 **19** tests to determine the efficiencies of all the
 10:24:57 **20** pumping, motors and pumps that were out there.
 10:25:02 **21** **Q.** Let's look at Page 8 then and you'll have
 10:25:05 **22** to change the orientation of that. If you can
 10:25:10 **23** highlight pump efficiency.
 10:25:15 **24** **A.** That's hard to read.
 10:25:25 **25** **Q.** Why don't you open this up in your book.
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10:25:29 **1** Actually, let me just save you the time. I'll
 10:25:31 **2** hand it to you.
 10:25:33 **3** MS. PRINZING-JONES: May I approach?
 10:25:35 **4** **Q.** (By Ms. Prinzing-Jones) I'm handing you
 10:25:38 **5** Exhibit 148, Page 8, which is the booster pump
 10:25:41 **6** test.
 10:25:42 **7** Can you describe what the efficiency
 10:25:43 **8** ratings show about the booster pumps in that water
 10:25:48 **9** system?
 10:25:48 **10** **A.** I guess I need to get my glasses fixed.
 10:25:55 **11** What they really show in this column is
 10:25:58 **12** the overall pump efficiency based on the tests.
 10:26:02 **13** And we see, you know, pump efficiencies in the
 10:26:05 **14** boosters that are ranging everywhere from as low
 10:26:09 **15** as in the 30 percent range, up to, you know, in
 10:26:15 **16** the 70 percent range in terms of efficiency.
 10:26:18 **17** **Q.** Okay. Now, let's do the same for the
 10:26:21 **18** well pumps.
 10:26:23 **19** MS. PRINZING-JONES: Your Honor, may I
 10:26:24 **20** approach again?
 10:26:25 **21** THE COURT: You may.
 10:26:27 **22** **Q.** (By Ms. Prinzing-Jones) I'm showing you
 10:26:27 **23** what's been previously admitted as Exhibit 249.
 10:26:30 **24** If you can also go to Page 8.
 10:26:37 **25** Can you describe what the efficiency
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10:26:45 **1** ratings for the well pumps showed by Mountain
 10:26:51 **2** Water's own energy optimization study?
 10:26:53 **3** **A.** Yeah. What we're really seeing is that
 10:26:56 **4** the pump efficiencies again are down in the--as
 10:27:00 **5** low as 40 percent, 40, 43 percent range, averaging
 10:27:05 **6** in the 50 to 60 percent range of the well pumps.
 10:27:09 **7** They should all be--there's a few that
 10:27:11 **8** are reasonable, but most of them are well below
 10:27:14 **9** what would be reasonable standards for, you know,
 10:27:20 **10** pumps of this size horsepower.
 10:27:23 **11** **Q.** Okay, thank you.
 10:27:24 **12** **A.** These studies essentially confirmed our
 10:27:27 **13** conclusions. And their reports had indicated a
 10:27:29 **14** considerable savings if they upgraded this
 10:27:32 **15** equipment.
 10:27:34 **16** **Q.** Let's turn to meters. Can you describe
 10:27:40 **17** what you believe to be the age of the meters that
 10:27:43 **18** exist in Mountain Water's system and whether they
 10:27:46 **19** are of concern.
 10:27:47 **20** **A.** Based on what data we did have in terms
 10:27:52 **21** of the meter age and condition and that it
 10:27:56 **22** appeared that most of the meters had been fully
 10:27:59 **23** depreciated, the average age of the meters are
 10:28:03 **24** probably over 20 years old. And meters typically
 10:28:07 **25** have a life of 15 to 25 years. So the majority of
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10:28:11 **1** their meters have reached or exceeded their useful
 10:28:15 **2** life.
 10:28:15 **3** **Q.** What are the risks when a meter is beyond
 10:28:18 **4** its useful life? What happens?
 10:28:21 **5** **A.** Typically meters slow down over time, so
 10:28:24 **6** they slow down actually in terms of their read.
 10:28:27 **7** So they are underreading over time, so they would
 10:28:29 **8** be undercollecting revenue from those. But what
 10:28:35 **9** it really indicates is that the water usage
 10:28:39 **10** measured is not accurate.
 10:28:41 **11** **Q.** All right. And let's talk about what's
 10:28:43 **12** not metered. Can you pull up 1496, Page 3.
 10:28:53 **13** In your opinion, should the system be
 10:28:55 **14** fully metered?
 10:28:57 **15** **A.** Yeah. Industry standards indicate that,
 10:28:59 **16** you know, really, you know, all consumer
 10:29:04 **17** connections should be metered, be it residential,
 10:29:09 **18** commercial or industrial, just to be able to--for
 10:29:13 **19** conservation, for knowledge in terms of use, to
 10:29:18 **20** better operate the system, knowing how those
 10:29:21 **21** demands are there.
 10:29:22 **22** MR. CONNER: 1496, is that what you said?
 10:29:28 **23** MS. PRINZING-JONES: Yes.
 10:29:29 **24** MR. CONNER: Excuse me. 1496-03?
 10:29:36 **25** MS. PRINZING-JONES: Yeah. We took--
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10:29:37 **1** pursuant to the Court's Order, we just took all
 10:29:39 **2** the text out and left the chart. So if you go
 10:29:42 **3** to--and we submitted a revised 1496, which is just
 10:29:50 **4** the chart.
 10:29:51 **5** **Q.** (By Ms. Prinzing-Jones) So Page 3, can
 10:29:53 **6** you identify what you were able to conclude in
 10:29:55 **7** terms of the amount of water usage in Mountain
 10:29:58 **8** Water's unmetered customers?
 10:29:59 **9** **A.** Well, what the first chart at the top
 10:30:02 **10** really shows is the percentage of metered
 10:30:07 **11** connections and unmetered connections over time.
 10:30:14 **12** They have been increasing the amount. So,
 10:30:16 **13** roughly, 81 percent, as of 2013, of all their
 10:30:23 **14** customers are metered, and 19 percent are
 10:30:25 **15** unmetered.
 10:30:26 **16** However, in terms of the amount of water
 10:30:30 **17** that is actually measured based on its production,
 10:30:35 **18** only about 40 percent of the water actually that's
 10:30:38 **19** produced from the well is actually being measured
 10:30:41 **20** through the meters.
 10:30:43 **21** The rest of the nonmetered use and
 10:30:47 **22** leakage really indicates both, and confirms the
 10:30:51 **23** amount of leakage in the system, as well as the
 10:30:55 **24** unmetered uses out there.
 10:30:57 **25** So, yeah, there's--yeah, they are
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10:31:01 **1** actually producing more water that's going into

10:31:06 **2** the ground than they are actually selling to their

10:31:08 **3** customers.

10:31:09 **4** **Q.** Is metering important in order to

10:31:11 **5** identify and take care of leaks?

10:31:12 **6** **A.** Obviously, yeah. The more data you have,

10:31:15 **7** in terms of meters and locations that are out

10:31:18 **8** there, it's better to be able to locate where

10:31:21 **9** those high usages are so that you can focus in and

10:31:28 **10** determine where the leaks are.

10:31:28 **11** **Q.** From the customer's standpoint, does

10:31:30 **12** metering also assist in conservation matters?

10:31:33 **13** **A.** Yes, it does.

10:31:34 **14** THE COURT: Ms. Jones, would this be a

10:31:36 **15** convenient time to take our morning break?

10:31:39 **16** MS. PRINZING-JONES: Perfect time.

10:31:40 **17** THE COURT: We'll be in recess for

10:31:42 **18** 15 minutes.

10:31:43 **19** (Whereupon, court was in recess at

10:44:07 **20** 10:31 a.m., reconvened at 10:44 a.m.)

10:44:07 **21** THE COURT: Again, we're back on the

10:44:10 **22** record after our recess in *City of Missoula versus*

10:44:13 **23** *Mountain Water, et al.*

10:44:14 **24** Mr. Close, you understand you are still

10:44:16 **25** under oath?

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10:44:17 **1** THE WITNESS: Yes.

10:44:18 **2** THE COURT: You may continue.

10:44:19 **3** MS. PRINZING-JONES: Thank you.

10:44:21 **4** **Q.** (By Ms. Prinzing-Jones) Before the break

10:44:22 **5** we were talking about metering and the fact that

10:44:27 **6** there are aged meters in the system and they need

10:44:29 **7** to fully meter those--those customers who don't

10:44:34 **8** have meters.

10:44:35 **9** Did HDR provide a cost estimate related

10:44:40 **10** to fully metering the system and bringing meters

10:44:43 **11** up to industry standards?

10:44:45 **12** **A.** Yes, we did.

10:44:48 **13** **Q.** What is the cost of fully metering and

10:44:51 **14** bringing the old meters up to industry standards?

10:44:53 **15** **A.** We provided a range of costs from \$16

10:44:56 **16** million to just under \$20 million.

10:45:02 **17** **Q.** Just for meters?

10:45:03 **18** **A.** Just for meters. That included

10:45:05 **19** installation.

10:45:06 **20** **Q.** Okay. Let's turn to service lines.

10:45:11 **21** MS. PRINZING-JONES: Your Honor, I would

10:45:13 **22** like to show Mountain Water's Exhibit 2092, which

10:45:17 **23** I believe is a demonstrative exhibit.

10:45:27 **24** **Q.** (By Ms. Prinzing-Jones) Can you explain

10:45:28 **25** to the Court what Mountain Water knows or does not

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10:45:30 **1** know about its service lines?

10:45:36 **2** **A.** Well, obviously what we have here are the

10:45:40 **3** number of service lines by age. They have a great

10:45:44 **4** deal of their service lines that are greater than

10:45:48 **5** 40 years.

10:45:51 **6** The hard part, the thing that really

10:45:55 **7** jumps out at you, is the amount of unknown service

10:45:58 **8** lines in terms of installation date.

10:46:00 **9** **Q.** Okay. And if you look at the note on

10:46:03 **10** this chart, what is the assumption as to the

10:46:06 **11** unknown category as to the age of service lines?

10:46:10 **12** **A.** That most of the unknown service lines

10:46:13 **13** are anticipated to be 50 years or older.

10:46:17 **14** **Q.** Okay. Let's go to Defense Exhibit 2093.

10:46:26 **15** Using Mountain Water's exhibit, what does

10:46:29 **16** Mountain know or what don't they know about the

10:46:32 **17** material type in a high percentage of the service

10:46:35 **18** lines?

10:46:37 **19** **A.** Well, what they have shown here is the

10:46:39 **20** type of materials of these service lines that they

10:46:42 **21** know of. Of the ones that they know of, the

10:46:46 **22** majority of their services are galvanized. They

10:46:51 **23** have just very little copper and plastic. They do

10:46:54 **24** have some polyethylene in their system. But the

10:46:58 **25** majority of the material of their service lines

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10:47:03 **1** are galvanized. As I indicated, unknown materials

10:47:06 **2** are assumed to be galvanized.

10:47:09 **3** So really over 75 percent, three-quarters,

10:47:12 **4** of their services are galvanized and have

10:47:17 **5** exceeded, really, their useful life.

10:47:19 **6** **Q.** Okay. Did you find any studies to

10:47:26 **7** support the proposition that 50 percent of the

10:47:33 **8** water leaking out of the system is because of

10:47:36 **9** service lines?

10:47:38 **10** **A.** No. As a matter of fact, we didn't find

10:47:42 **11** any evidence to back up that assumption in any of

10:47:46 **12** the documents, to be able to do that. As we'll

10:47:49 **13** talk about, I think, future, they have

10:47:52 **14** approximately over four and a half billion gallons

10:47:57 **15** of water loss per year.

10:47:59 **16** If you assume that half of that would

10:48:02 **17** come from the services, over two--you know, 2

10:48:07 **18** point--and a quarter billion gallons of water

10:48:10 **19** coming out of the service lines, it would be

10:48:12 **20** pretty--almost impossible to get that type of

10:48:16 **21** production out of the number of service lines that

10:48:19 **22** they have to be able to do that. So I can't see

10:48:22 **23** any evidence to be able to support that

10:48:26 **24** assumption.

10:48:26 **25** **Q.** Okay. But given the age and the

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10:48:31 **1** material, are service lines a problem and concern
 10:48:34 **2** in our water system here in Missoula?
 10:48:37 **3** **A. Yes. I would believe that there's--not**
 10:48:42 **4 to indicate there is no leakage from the service**
 10:48:45 **5 lines. They do, you know, have leakage that's out**
 10:48:47 **6 there. It is going to be a continuously growing**
 10:48:50 **7 problem as the galvanized services continue to**
 10:48:54 **8 corrode and they need to be replaced.**
 10:48:57 **9 Q.** Did HDR provide a cost estimate to bring
 10:49:00 **10** service lines up to industry standards?
 10:49:02 **11 A. Yes, we did.**
 10:49:04 **12 Q.** And what is the cost just related to the
 10:49:07 **13** service lines?
 10:49:14 **14 A. We again provided a range of roughly \$20**
 10:49:18 **15 million to \$30 million.**
 10:49:23 **16 Q.** Let's turn to the dams. I want to talk
 10:49:27 **17** to you about both the remote Rattlesnake dams and
 10:49:31 **18** the intake dams.
 10:49:33 **19** Did HDR conduct an analysis of both?
 10:49:38 **20 A. Yes, we did.**
 10:49:39 **21 Q.** Let's talk about the remote dams first.
 10:49:42 **22** MR. CONNER: Your Honor, if I might raise
 10:49:44 **23** an objection as far as foundation, as well as this
 10:49:49 **24** witness's experience in regard to the dams.
 10:49:53 **25** In his deposition he indicated he had no
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10:49:55 **1** input on the dams analysis. They named another
 10:49:59 **2** expert in their witness list, Scott Brand with
 10:50:03 **3** HDR. He's the geotechnical engineer that
 10:50:07 **4** Mr. Close testified to earlier had the expertise
 10:50:09 **5** to come in and do the inspections. So that's the
 10:50:12 **6** witness that should testify with respect to the
 10:50:14 **7** dams, not Mr. Close.
 10:50:15 **8** THE COURT: Ms. Jones.
 10:50:17 **9** MS. PRINZING-JONES: HDR had a dam expert
 10:50:21 **10** as a member of its team and Mr. Brand provided his
 10:50:25 **11** findings and conclusions to the HDR team and
 10:50:28 **12** Mr. Craig Close. As an expert engineer, Mr. Close
 10:50:32 **13** is qualified and allowed to rely on the opinions
 10:50:35 **14** of other experts on his team, and he can provide
 10:50:38 **15** that testimony to the Court.
 10:50:40 **16** THE COURT: So I'm going to overrule your
 10:50:42 **17** objection. I think he's entitled to offer it from
 10:50:45 **18** his own opinion based on what he learned from
 10:50:52 **19** others.
 10:50:52 **20** MR. CONNER: Thank you, Your Honor.
 10:50:54 **21 Q.** (By Ms. Prinzing-Jones) Can you please
 10:50:55 **22** summarize the findings and conclusions related to
 10:50:57 **23** the Rattlesnake dams, those remote dams.
 10:51:01 **24 A. The Rattlesnake or the remote?**
 10:51:03 **25 Q.** Excuse me, the remote lake dams.
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10:51:06 **1 A. The remote lake dams. Yeah, we found**
 10:51:09 **2 evidence in terms of the risks, in terms of slope**
 10:51:14 **3 stability, concerns about that. Obviously**
 10:51:16 **4 concerns that, when we saw them, they were all at**
 10:51:21 **5 low pool. So in terms of the concerns about**
 10:51:23 **6 leakage, erosion and stability, to be able to**
 10:51:27 **7 convey peak runoff loads was certainly a concern**
 10:51:31 **8 during runoff.**
 10:51:32 **9 We saw a great deal of amount of erosion**
 10:51:36 **10 of the embankments and along the spillways, and a**
 10:51:38 **11 great deal of animal burrows within the**
 10:51:41 **12 embankments themselves.**
 10:51:44 **13 Q.** Now, seasonally when those areas fill up,
 10:51:48 **14** what are the risks presented given the safety
 10:51:51 **15** concerns identified by HDR?
 10:51:54 **16 A. Obviously the concern is that under peak**
 10:51:58 **17 flows that you could have a failure. Because**
 10:52:04 **18 there are significant hazardous dams, with the**
 10:52:06 **19 exception of the Carter dam, the concern is to the**
 10:52:10 **20 impact downstream.**
 10:52:11 **21 Although there is really no indication of**
 10:52:14 **22 imminent, you know, danger to human, you know,**
 10:52:19 **23 injury or bodily harm, there is considerable**
 10:52:23 **24 damage to--nonrecoverable environmental damage to**
 10:52:28 **25 both the vegetation and particularly to the trout**
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10:52:32 **1 fisheries habitat.**
 10:52:33 **2 Q.** Okay. Is that a significant risk,
 10:52:35 **3** according to the Forest Service?
 10:52:37 **4 A. Yes, it is.**
 10:52:38 **5 Q.** All right. Now, let's spend some time
 10:52:40 **6** talking about the intake dam.
 10:52:43 **7 A. Okay.**
 10:52:44 **8 Q.** What were HDR's findings related to the
 10:52:47 **9** intake dam?
 10:52:48 **10 A. What we found were that we saw cracks in**
 10:52:54 **11 the dam face, deterioration of the embankments.**
 10:52:58 **12 We saw leakage and seepage coming through the dam.**
 10:53:02 **13 We also saw erosion of the abutments that were**
 10:53:07 **14 there. So we saw considerable deterioration of**
 10:53:10 **15 the dam structure itself.**
 10:53:13 **16** MS. PRINZING-JONES: Your Honor, at this
 10:53:14 **17** time I would like to show our demonstrative
 10:53:17 **18** Exhibit No. 1, which are photographs of the intake
 10:53:20 **19** dam. They are also part of the exhibit already
 10:53:22 **20** admitted.
 10:53:23 **21** THE COURT: All right.
 10:53:29 **22 Q.** (By Ms. Prinzing-Jones) Craig, looking
 10:53:31 **23** at the City's Demonstrative 1-001, can you please
 10:53:36 **24** describe the problems identified at the intake
 10:53:40 **25** dam.
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10:53:41 **1 A. Obviously what we see, as we've**
 10:53:43 **2 highlighted here, is along the top of the dam here**
 10:53:47 **3 you can see a longitudinal crack that goes all the**
 10:53:51 **4 way across the top of the structure.**
 10:53:52 **5 Also to the left of that longitudinal**
 10:53:55 **6 crack there is a vertical crack that comes all the**
 10:53:58 **7 way down to the opening under the dam.**
 10:54:00 **8 The divider column between the two**
 10:54:05 **9 openings or channels is actually deteriorated to**
 10:54:08 **10 the point where it's almost completely gone.**
 10:54:11 **11 Q. Okay. Let's go to the next photograph,**
 10:54:13 **12 which is No. 3.**
 10:54:17 **13 A. Yeah. Along the adjoining wall up there**
 10:54:20 **14 you can see to the left that there is a vertical**
 10:54:22 **15 crack that runs upward in the concrete.**
 10:54:25 **16 There is also longitudinal cracking**
 10:54:27 **17 that's running along the face.**
 10:54:30 **18 You are seeing seepage along the**
 10:54:32 **19 interface and at the weephole down below.**
 10:54:35 **20 So there is a lot of leakage that's**
 10:54:37 **21 coming through the dam, so there's naturally**
 10:54:40 **22 concerns about structural integrity here.**
 10:54:44 **23 Q. Let's go to D1-5.**
 10:54:47 **24 A. Obviously they have had problems before**
 10:54:50 **25 repair with a steel plate where there is actually**
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10:54:52 **1 seepage coming through the dam. You can see**
 10:54:56 **2 leakage coming through the face of it at this**
 10:54:58 **3 time.**
 10:54:59 **4 Q. Okay. And let's go to D1-06.**
 10:55:01 **5 A. This is the other dam. You can see along**
 10:55:05 **6 the top of it from the downstream side, that the**
 10:55:07 **7 concrete is severely deteriorated along the top of**
 10:55:13 **8 the dam.**
 10:55:14 **9 Q. Did you also review the Rattlesnake**
 10:55:16 **10 Wilderness Dam Inspection Report prepared for**
 10:55:20 **11 Mountain Water?**
 10:55:21 **12 A. Yes.**
 10:55:23 **13 Q. And let's talk about the classification**
 10:55:25 **14 for a moment. I mean, how are those dams**
 10:55:28 **15 classified even within Mountain Water's own**
 10:55:31 **16 inspection reports?**
 10:55:32 **17 A. Well, they are classified as having--the**
 10:55:36 **18 reports that we reviewed basically confirmed the**
 10:55:40 **19 findings we had, that there was considerable**
 10:55:42 **20 amount of deferred, you know, maintenance on them.**
 10:55:46 **21 There was concerns about slope stability, the**
 10:55:51 **22 spillway erosion, and embankment--you know, issues**
 10:55:55 **23 with the embankment.**
 10:55:57 **24 They had essentially confirmed all the**
 10:56:00 **25 same findings, but they actually put a higher cost**
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10:56:03 **1 on the actual repairs of \$3 million of upgrading**
 10:56:09 **2 those, and had some of the dams at a higher**
 10:56:12 **3 priority than which we had them rated.**
 10:56:14 **4 Q. Okay.**
 10:56:16 **5 MS. PRINZING-JONES: Now, at this time,**
 10:56:17 **6 Your Honor, I would move to admit Exhibit 251,**
 10:56:20 **7 which is the 2011 Rattlesnake Dam Inspection**
 10:56:24 **8 Report. Exhibit 14--excuse me. 1251.**
 10:56:29 **9 Exhibit 1451, which is the 2012**
 10:56:33 **10 Rattlesnake Dam Inspection Report.**
 10:56:36 **11 Exhibit 404, which is the 2013 dam--**
 10:56:41 **12 Rattlesnake Dam Inspection Report.**
 10:56:42 **13 And Exhibit 2457, which is the 2014**
 10:56:47 **14 Rattlesnake Dam Inspection Report.**
 10:56:49 **15 THE COURT: Any objection?**
 10:56:52 **16 MR. CONNER: No, Your Honor. But I think**
 10:56:54 **17 for the record it's not necessarily the**
 10:56:56 **18 Rattlesnake dams. It's the Wilderness dams.**
 10:57:01 **19 Covers all the Wilderness dams.**
 10:57:02 **20 THE COURT: So 2457, is that right?**
 10:57:06 **21 MS. PRINZING-JONES: 1251.**
 10:57:14 **22 THE COURT: 1251.**
 10:57:08 **23 MS. PRINZING-JONES: 1451.**
 10:57:14 **24 THE COURT: 1451.**
 10:57:11 **25 MS. PRINZING-JONES: 404.**
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10:57:14 **1 THE COURT: 404.**
 10:57:16 **2 MS. PRINZING-JONES: 2457.**
 10:57:18 **3 THE COURT: Those are all admitted.**
 10:57:21 **4 MS. PRINZING-JONES: Thank you, Your**
 10:57:22 **5 Honor.**
 10:57:22 **6 EXHIBITS:**
 10:57:23 **7 (Exhibit Nos. 1251, 1451, 404, 2457 received**
 10:57:23 **8 into evidence.)**
 10:57:23 **9 Q. (By Ms. Prinzing-Jones) When you look at**
 10:57:25 **10 the Rattlesnake Wilderness Dam Reports, were there**
 10:57:31 **11 tables provided indicating recommended**
 10:57:33 **12 improvements to the dams?**
 10:57:35 **13 A. Yes, there were.**
 10:57:37 **14 Q. Tina, can you bring up 1251, Page 57.**
 10:57:57 **15 Can you highlight just the McKinley one, the first**
 10:58:02 **16 three. There you go.**
 10:58:04 **17 Does the McKinley Lake provide an example**
 10:58:10 **18 of the type of deferred maintenance that you saw**
 10:58:12 **19 generally within the dam inspection reports?**
 10:58:15 **20 A. Yes. For a number of years in terms, I**
 10:58:20 **21 think, from 2012 through 2014, I believe those are**
 10:58:24 **22 the years, they indicated that to construct the**
 10:58:28 **23 spillway repairs and enlarge the spillway**
 10:58:31 **24 capacity, that was indicated here, I guess, back**
 10:58:36 **25 in 2012.**
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10:58:37 **1 Q.** And this is actually 2011.

10:58:40 **2 A.** Or the 2011 report, excuse me.

10:58:42 **3 Q.** Did you see indications in subsequent

10:58:44 **4** inspection reports that the--as an example, the

10:58:48 **5** recommended maintenance on McKinley Lake was

10:58:51 **6** pushed year after year?

10:58:53 **7 A.** Yes. For three consecutive years we saw

10:58:56 **8** that that same repair had been recommended to be

10:59:00 **9** done and was still there evident in the reports.

10:59:05 **10 Q.** In the 2011 report, what year--

10:59:08 **11** If you go back, Tina.

10:59:10 **12** --what year was it recommended that the

10:59:12 **13** spillway capacity be enlarged? Which would be the

10:59:17 **14** top column.

10:59:21 **15 A.** Well, to be enlarged--it was supposed to

10:59:24 **16** be completed by the end of 2013.

10:59:27 **17 Q.** If we look at the 2013 report, which is

10:59:31 **18** Exhibit 404, Page 57, had this repair been

10:59:46 **19** deferred until 2014? If you look at the first.

10:59:54 **20 A.** Yeah. They continued to see that the

10:59:57 **21** repairs needed to be made for the spillway into a

11:00:01 **22** larger spillway.

11:00:03 **23 Q.** And then when we look at the 2014 report,

11:00:07 **24** did this necessary maintenance get continued,

11:00:11 **25** continually deferred--if we look at--this is
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11:00:16 **1** Mountain Water's Exhibit 2457. I'm just going to

11:00:51 **2** hand you this for speed of process.

11:00:54 **3** Can you tell me now when the plan is to

11:00:59 **4** work on McKinley Lake?

11:01:00 **5 A.** Now it's to be completed in 2016.

11:01:07 **6** Additional design spillway repairs in 2017. And

11:01:14 **7** so they are continued to be pushed out a number of

11:01:18 **8** years.

11:01:21 **9 Q.** Did you find this consistent throughout

11:01:24 **10** the Rattlesnake Dam Inspection Reports that

11:01:26 **11** maintenance was continually deferred?

11:01:28 **12 A.** We saw a number of items that had been

11:01:32 **13** deferred on the dams in the different reports,

11:01:37 **14** yes.

11:01:38 **15 Q.** Okay. Did you also review an internal

11:01:42 **16** memoranda provided to Mountain Water Company by

11:01:45 **17** Hydrometrics regarding safety concerns related to

11:01:49 **18** the dams?

11:01:50 **19 A.** Yes.

11:01:53 **20** MS. PRINZING-JONES: Your Honor, I'm

11:01:54 **21** talking about 1510. I move the admission of 1510.

11:02:17 **22** THE COURT: Any objection?

11:02:18 **23** MR. CONNER: No, Your Honor.

11:02:19 **24** THE COURT: Admitted.

11:02:20 **25** EXHIBITS:
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11:02:21 **1** (Exhibit No. 1510 received into evidence.)

11:02:22 **2** MS. PRINZING-JONES: And the tables to

11:02:24 **3** this report, Your Honor, were identified by us as

11:02:27 **4** 1509, 1512, 1513 and 1514. And we would also like

11:02:32 **5** to move the admission of the tables to that same

11:02:35 **6** report.

11:02:35 **7** MR. CONNER: Are they together?

11:02:38 **8** MS. PRINZING-JONES: In total it is 1509,

11:02:43 **9** 1511, 1512, 1513, and 1514. Any objection?

11:02:49 **10** MR. CONNER: No, Your Honor.

11:02:50 **11** THE COURT: They are admitted.

11:02:52 **12** MS. PRINZING-JONES: Thank you, Your

11:02:53 **13** Honor.

11:02:53 **14** EXHIBITS:

11:02:54 **15** (Exhibit No. 1509, 1511, 1512, 1513, 1514

11:02:54 **16** received into evidence.)

11:02:54 **17 Q.** (By Ms. Prinzing-Jones) What is the date

11:02:55 **18** of this memorandum provided to Mountain Water

11:02:58 **19** Company?

11:02:58 **20 A.** October 10th, 2014.

11:03:01 **21 Q.** Were safety concerns identified by

11:03:03 **22** Hydrometrics related to the Rattlesnake Wilderness

11:03:08 **23** dams?

11:03:09 **24 A.** Yes. They highlighted concerns in three

11:03:13 **25** general categories of the embankments, seepage and
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11:03:17 **1** spillways.

11:03:17 **2 Q.** Are these the same general concerns that

11:03:19 **3** had been repeatedly referenced in the annual

11:03:23 **4** Wilderness Dam Inspection Reports?

11:03:25 **5 A.** Yes.

11:03:27 **6 Q.** What are the conclusions of the report by

11:03:32 **7** Hydrometrics?

11:03:33 **8 A.** Well, the conclusions report is that they

11:03:38 **9** have considerable amount of deferred maintenance

11:03:40 **10** that needs to be caught up to bring them up to

11:03:43 **11** safety standards.

11:03:45 **12** And in the tables they refer to

11:03:47 **13** prioritization of the dams and the type of

11:03:51 **14** improvements to be able to do that. And they have

11:03:53 **15** provided a cost estimate then to fix these dams.

11:03:56 **16 Q.** And what was the cost estimate?

11:03:59 **17 A.** Totally, for all the wilderness dams was

11:04:03 **18** \$3 million--roughly \$3 million.

11:04:35 **19 Q.** Did HDR also provide a cost estimate of

11:04:37 **20** fixing the intake dam?

11:04:39 **21 A.** Yes, we did.

11:04:42 **22 Q.** And what was the cost estimate just to

11:04:45 **23** fix the intake dam?

11:04:55 **24** MS. PRINZING-JONES: Your Honor, if I may

11:04:56 **25** approach.
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11:04:57 **1** THE COURT: You may.
 11:05:05 **2** **Q.** (By Ms. Prinzing-Jones) I'm handing you
 11:05:06 **3** what's been marked as Exhibit 1186, Page 1, which
 11:05:12 **4** is a summary of budgetary costs for Mountain Water
 11:05:16 **5** Company dams. We offer this as a demonstrative
 11:05:20 **6** exhibit

11:05:22 **7** THE COURT: Okay.

11:05:24 **8** MS. PRINZING-JONES: Thank you.

11:05:25 **9** **Q.** (By Ms. Prinzing-Jones) If you look at
 11:05:26 **10** the bottom of HDR's estimates, do you see a number
 11:05:32 **11** for--actually at the top--the intake dam?

11:05:39 **12** **A.** Yes. What we estimated for the intake
 11:05:47 **13** dam was in a range of costs of 150 to \$250,000 to
 11:05:56 **14** bring it up to standards.

11:05:57 **15** **Q.** If you look at the second box there where
 11:06:00 **16** it says Intake Dam, what is the estimate there?

11:06:01 **17** **A.** Well, the new intake dam, they actually
 11:06:06 **18** utilize the cost--I mean, the actual facility as a
 11:06:11 **19** water source. You would have to build a new water
 11:06:14 **20** treatment plant to be able to do that.

11:06:16 **21** However, what's not in here are the costs
 11:06:18 **22** to retrofit or rehabilitate the dam up to
 11:06:21 **23** operational standards. The cost estimate of 150
 11:06:26 **24** to 250 was just to bring it up to safety
 11:06:29 **25** standards.

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11:06:30 **1** **Q.** And the \$15 million estimate, what does
 11:06:32 **2** that include?

11:06:32 **3** **A.** That just includes the treatment plant
 11:06:34 **4** itself.

11:06:35 **5** **Q.** Okay, all right. So in order to utilize
 11:06:38 **6** this area would a treatment plant be necessary?

11:06:42 **7** **A.** Yeah, you would absolutely need to
 11:06:45 **8** have--as a surface water source, you would need to
 11:06:47 **9** actually build a treatment plant to be able to
 11:06:51 **10** meet water quality standards.

11:06:53 **11** **Q.** Okay. Now, are you aware of--let's just
 11:06:58 **12** turn to an exhibit here. Can you turn to
 11:07:01 **13** Exhibit 1286.

11:07:15 **14** Can you please identify this for the
 11:07:18 **15** record, Mr. Close.

11:07:19 **16** **A.** This is an inspection report of a
 11:07:21 **17** Sanitary Survey that was performed by Montana
 11:07:26 **18** Department of Environmental Quality.

11:07:27 **19** MS. PRINZING-JONES: Your Honor, we would
 11:07:28 **20** move the admission of Exhibit 1286.

11:07:31 **21** THE COURT: Any objection?

11:07:32 **22** MR. CONNER: No objection, Your Honor.

11:07:33 **23** THE COURT: It's admitted.

11:07:35 **24** EXHIBITS:

11:07:35 **25** (Exhibit No. 1286 received into evidence.)

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11:07:35 **1** **Q.** (By Ms. Prinzing-Jones) Would you please
 11:07:36 **2** describe what a Sanitary Survey inspection is.

11:07:41 **3** **A.** A Sanitary Survey is really to make sure
 11:07:44 **4** of the protection of--the potable water is
 11:07:46 **5** protected from outside contamination; or if any
 11:07:51 **6** particular runoff in terms of contamination
 11:07:56 **7** from--to the environment.

11:07:57 **8** For instance, they are looking to make
 11:08:00 **9** sure that there's no access into water tanks for
 11:08:05 **10** animals and critters and other ways to be able get
 11:08:11 **11** water, you know, contaminated.

11:08:13 **12** They are looking for ability to have
 11:08:18 **13** hatches where runoff water and surface water could
 11:08:21 **14** actually get into vaults and get into water
 11:08:24 **15** sources or seals around wells that water could get
 11:08:27 **16** down back down into the well and contaminate the
 11:08:31 **17** well.

11:08:31 **18** So it's really focused on the protection
 11:08:34 **19** of the water quality from outside, you know,
 11:08:38 **20** sanitary purposes.

11:08:41 **21** **Q.** Is a Sanitary Survey the same as an
 11:08:44 **22** Engineering Condition Assessment?

11:08:47 **23** **A.** Absolutely not. They are not looking at
 11:08:49 **24** the condition, the operation, or assessing the
 11:08:54 **25** equipment in terms of its mechanical ability to

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11:08:58 **1** the installation. The scope of those are entirely
 11:09:00 **2** different.

11:09:01 **3** **Q.** Do you agree that a Sanitary Survey
 11:09:04 **4** should be used as a reliable indicator of the
 11:09:07 **5** actual operations, including system leakage?

11:09:11 **6** **A.** No.

11:09:12 **7** **Q.** Would that be appropriate?

11:09:14 **8** **A.** No.

11:09:16 **9** **Q.** Let's talk then about leakage again.

11:09:27 **10** Given the size of Mountain Water's
 11:09:29 **11** system, is leakage of 50 percent or more
 11:09:36 **12** acceptable?

11:09:37 **13** **A.** No. It's almost unprecedented in terms
 11:09:42 **14** of the size, the amount of water by volume that
 11:09:46 **15** they are losing, for how small in terms of a
 11:09:49 **16** system of only having roughly 319 miles of main.

11:09:56 **17** And so this is really greater than I've
 11:10:01 **18** seen anywhere across the country in different
 11:10:05 **19** studies I've done in terms of the amount of the
 11:10:09 **20** volume.

11:10:09 **21** **Q.** There has been a discussion about a
 11:10:11 **22** Reservoir Fall Study. What is that?

11:10:13 **23** **A.** Essentially what you do is install tanks
 11:10:16 **24** on all the reservoirs. You do it during low
 11:10:19 **25** demand periods so they minimize the amount of

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11:10:23 **1** customer demand and also the number of wells that
 11:10:26 **2** are producing water.
 11:10:27 **3** And you then measure the drawdown of how
 11:10:32 **4** that tank is over a measured period of time. And
 11:10:34 **5** you then deduct out what the anticipated--you
 11:10:38 **6** know, what your calculated measure of well
 11:10:42 **7** production and also the customer usage to
 11:10:44 **8** determine the remaining portion is what's leakage.
 11:10:48 **9** Q. Let's look at Exhibit 1261. Can you
 11:10:56 **10** describe what this is?
 11:11:02 **11** A. What this is, is the estimated leakage
 11:11:06 **12** that they are determining from the Reservoir Fall
 11:11:10 **13** Studies, based on fall study tests they have done
 11:11:16 **14** from 2007 through 2014.
 11:11:21 **15** So based upon that loss, their estimated
 11:11:27 **16** leakage in 2017 is a little over 9,000 gallons per
 11:11:32 **17** minute. And they are estimating in 2014 about
 11:11:41 **18** 7,888 gallons.
 11:11:43 **19** Q. I think you said 2017. Did you mean
 11:11:46 **20** 2007?
 11:11:47 **21** A. Oh, I'm sorry. Yeah, 2007. Sorry.
 11:11:50 **22** Q. Now, you see there was a drop in 2013 to
 11:11:54 **23** 7,720 gallons per minute of water lost in the
 11:11:58 **24** system. Is that acceptable?
 11:12:02 **25** A. We're talking about over 4 billion
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11:12:05 **1** gallons of water lost per year. We're still
 11:12:09 **2** talking about percentages now either approaching
 11:12:13 **3** or exceeding, depending on how much consumption
 11:12:16 **4** was that year, of, you know, roughly 50 percent
 11:12:22 **5** water loss due to leakage.
 11:12:25 **6** Q. Did you say 4 billion?
 11:12:27 **7** A. Billion, with a B.
 11:12:29 **8** Q. Okay. 4 billion gallons of water lost
 11:12:32 **9** per year?
 11:12:33 **10** A. Yes.
 11:12:34 **11** Q. Okay. And it looks like in 2014 the
 11:12:38 **12** amount of water loss is actually getting worse.
 11:12:42 **13** Is that what this indicates?
 11:12:44 **14** A. Yes. From 2013 to 2014, according to
 11:12:50 **15** their fall study, leakage has actually increased
 11:12:53 **16** during that period of time.
 11:12:54 **17** Q. Now, there are some methods to try to
 11:12:57 **18** detect leaks, right?
 11:12:58 **19** A. Yes. Yes, there are.
 11:12:59 **20** Q. All right.
 11:13:00 **21** MS. PRINZING-JONES: Your Honor, I would
 11:13:02 **22** like to admit Exhibit 1260, which is Mountain
 11:13:08 **23** Water Company's PowerPoint presentation,
 11:13:09 **24** *Understanding Non-Revenue Water*, from August 2013.
 11:13:15 **25** MR. CONNER: No objection, Your Honor.
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11:13:17 **1** THE COURT: It's admitted.
 11:13:18 **2** EXHIBITS:
 11:13:19 **3** (Exhibit No. 1260 received into evidence.)
 11:13:19 **4** MS. PRINZING-JONES: And if I didn't
 11:13:21 **5** admit the last one, I would move the admission of
 11:13:24 **6** 1261.
 11:13:25 **7** THE COURT: Any objection to that?
 11:13:26 **8** MR. CONNER: No objection.
 11:13:27 **9** THE COURT: It's admitted.
 11:13:28 **10** EXHIBITS:
 11:13:28 **11** (Exhibit No. 1261 received into evidence.)
 11:13:29 **12** Q. (By Ms. Prinzing-Jones) Let's go to
 11:13:31 **13** Page 6, please. Can you please describe what's
 11:13:39 **14** listed on this PowerPoint slide.
 11:13:45 **15** A. Well, summarizing some of the testing
 11:13:47 **16** they had done. They performed some valve to valve
 11:13:49 **17** testing where they isolate the valves. And they
 11:13:52 **18** test the leaks in between the valves to see what
 11:13:57 **19** loss.
 11:13:57 **20** They have tested 27 miles, which is less
 11:14:01 **21** than 10 percent of their system.
 11:14:07 **22** And they say they leak tested 37 percent
 11:14:10 **23** of priority mains. I don't know what they mean by
 11:14:12 **24** priority mains, how they determined that. There
 11:14:16 **25** is no indication of that. Estimated, you know,
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11:14:18 **1** leaks that are out there.
 11:14:21 **2** What struck me as interesting is that
 11:14:23 **3** they only determined that they would fix four
 11:14:30 **4** leaks. You would think that the amount of leakage
 11:14:34 **5** they have in 27 miles, they would find a whole lot
 11:14:40 **6** more than four leaks.
 11:14:41 **7** Q. Is 27 miles a sufficient amount of
 11:14:43 **8** testing to claim they have identified the source
 11:14:46 **9** of the leaks?
 11:14:46 **10** A. Not at all.
 11:14:48 **11** Q. Let's go to Page 10 of that exhibit.
 11:14:59 **12** What is a Distribution System Improvements Charge
 11:15:03 **13** Tariff?
 11:15:08 **14** A. Well, what they are really looking for is
 11:15:12 **15** an additional charge on the bill just for fixing
 11:15:17 **16** the piping and distribution system improvements,
 11:15:23 **17** just dedicated to break that cost out on their
 11:15:26 **18** bill just for that particular capital investment.
 11:15:31 **19** Q. So that would be a rate increase?
 11:15:33 **20** A. Most likely, yes.
 11:15:34 **21** Q. Just for improving the system?
 11:15:35 **22** A. I would think so. If they are going to
 11:15:37 **23** have to spend the capital to fix that, it would
 11:15:42 **24** require that.
 11:15:43 **25** Q. The last thing I want to talk to you
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11:15:45 **1** about is the AWWA Leakage Index.
 11:15:48 **2** Did you review the documents recently
 11:15:50 **3** produced by Mountain Water indicating what their
 11:15:54 **4** ILI index ratings were using the AWWA audit
 11:16:00 **5** software?
 11:16:01 **6** **A. Yes.**
 11:16:05 **7** MS. PRINZING-JONES: We would like to go
 11:16:07 **8** to 1505, Your Honor.
 11:16:08 **9** THE COURT: Has this been admitted yet?
 11:16:24 **10** MR. SCHNEIDER: 1505?
 11:16:26 **11** MS. PRINZING-JONES: We would move the
 11:16:28 **12** admission of 1505, which is just one year of the
 11:16:33 **13** AWWA leakage studies.
 11:16:35 **14** THE COURT: Any objection?
 11:16:36 **15** MR. CONNER: I need to look at it, Your
 11:16:38 **16** Honor.
 11:16:38 **17** THE COURT: All right.
 11:16:51 **18** MR. CONNER: Which page, Tasha?
 11:17:08 **19** MS. PRINZING-JONES: That's Page 186
 11:17:10 **20** through 199. And we pieced them together, because
 11:17:13 **21** they are difficult to read unless you put them all
 11:17:19 **22** together.
 11:17:28 **23** I'm presuming the time has stopped for
 11:17:28 **24** us?
 11:17:32 **25** THE COURT: It has.
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11:17:33 **1** MS. PRINZING-JONES: Thank you.
 11:17:34 **2** THE COURT: Ms. Jones, what you handed me
 11:17:43 **3** is essentially a duplicate of these pages; is that
 11:17:46 **4** right?
 11:17:46 **5** MS. PRINZING-JONES: It is. We've just
 11:17:48 **6** put them together so you can actually read them.
 11:17:50 **7** THE COURT: Okay.
 11:18:05 **8** MR. CONNER: Your Honor, I think this is
 11:18:07 **9** fine as a demonstrative, but there are a number of
 11:18:11 **10** pages that I don't really think it's appropriate
 11:18:14 **11** for me to sit here and try to go through and match
 11:18:16 **12** it up to this. So I would appreciate it if you
 11:18:21 **13** would just do it as a demonstrative.
 11:18:24 **14** THE COURT: I don't think she's offering
 11:18:26 **15** it as a demonstrative. I think she's asking it be
 11:18:29 **16** admitted for substantive evidence.
 11:18:31 **17** MR. CONNER: I understand that, Your
 11:18:32 **18** Honor. But the way this is in the book--
 11:18:38 **19** THE COURT: It's the way it is in my
 11:18:39 **20** book.
 11:18:39 **21** MR. CONNER: Fair enough, Your Honor. We
 11:18:41 **22** just received this just now, is what I'm saying.
 11:18:45 **23** THE COURT: But you had the other pages
 11:18:47 **24** earlier.
 11:18:47 **25** MR. CONNER: Yes, Your Honor, we do.
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11:18:48 **1** THE COURT: I'll admit it. Do you want
 11:18:50 **2** an objection to that, Mr. Conner?
 11:18:53 **3** MR. CONNER: I would like to register an
 11:18:55 **4** objection, Your Honor, yes.
 11:18:56 **5** THE COURT: Overruled. It's admitted.
 11:18:58 **6** **EXHIBITS:**
 11:18:58 **7** (Exhibit No. 1505 received into evidence.)
 11:18:59 **8** **Q.** (By Ms. Prinzing-Jones) Mr. Close, using
 11:19:01 **9** the table, can you please describe for the court
 11:19:04 **10** how the AWWA ILI Index works. What are the
 11:19:10 **11** comparisons being made?
 11:19:14 **12** **A. The Infrastructure Leakage Index was**
 11:19:19 **13** **developed is a way to be able to compare different**
 11:19:22 **14** **agencies on a number of factors.**
 11:19:26 **15** **What they go through is, under the**
 11:19:29 **16** **grading, the agency goes and self grades them**
 11:19:33 **17** **based up on these different parameters and they**
 11:19:36 **18** **score themselves out there to be able to do that,**
 11:19:38 **19** **to come up with an overall score that's used in**
 11:19:41 **20** **developing the index.**
 11:19:44 **21** **They then--what's important here on this**
 11:19:47 **22** **chart is really to look at where it says Financial**
 11:19:52 **23** **Indicators, Non-Revenue Water As Percent of**
 11:19:55 **24** **Volume. It's the first line under the Grade**
 11:19:58 **25** **portion.**
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11:20:00 **1** **If you look at the results from, I think,**
 11:20:03 **2** **the 21 or 22 indices who participated in this in**
 11:20:09 **3** **2011, the percent of water for this ranged from,**
 11:20:15 **4** **you know, 11 percent up to--or 10 percent up to**
 11:20:22 **5** **around 45 percent for some of the larger systems.**
 11:20:25 **6** **What's indicated--I think what's**
 11:20:27 **7** **interesting to draw from this, is that the higher**
 11:20:29 **8** **leakage systems are considerably much more in**
 11:20:32 **9** **terms of mileage. A lot more joints, a lot more**
 11:20:37 **10** **mains to maintain. Thousands of miles of pipe in**
 11:20:44 **11** **these situations.**
 11:20:45 **12** **What--the goal of the index then is to**
 11:20:48 **13** **really look at the difference between the actual**
 11:20:52 **14** **real leak, the actual leakage, and what is the**
 11:20:55 **15** **unavoidable--or the avoidable leakage. And by**
 11:21:00 **16** **dividing that out, you come up with an index.**
 11:21:03 **17** **The indexes that are shown on this sheet**
 11:21:07 **18** **range from--the ILI Index score ranges from**
 11:21:11 **19** **roughly 1 to--up to around 13, 14 for these**
 11:21:18 **20** **agencies.**
 11:21:18 **21** **When we looked at the forms that Mountain**
 11:21:21 **22** **Water gave us, four years, 2011 through 2013, they**
 11:21:26 **23** **were all 18 to 20 in terms of their index. Plus,**
 11:21:31 **24** **obviously we talked before, the volume, the**
 11:21:36 **25** **percent by volume is greater than 50 percent. So**
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11:21:38 **1** they are exceeding, really, any type of data we've
 11:21:41 **2** seen from other agencies across the country.
 11:21:46 **3** **Q.** Okay. They are exceeding the data both
 11:21:50 **4** on the ILI Index and in the lost water?
 11:21:53 **5** **A.** Yes.
 11:21:54 **6** **Q.** Okay.
 11:21:55 **7** **A.** Both.
 11:21:56 **8** **Q.** Now, let's go ahead and look at what
 11:21:58 **9** Mountain Water's records show about how they fare
 11:22:02 **10** under the AWWA infrastructure leakage and index.
 11:22:07 **11** Let's go to 1505, Page 113.
 11:22:11 **12** MS. PRINZING-JONES: And this was already
 11:22:12 **13** admitted, Your Honor, in Bruce Bender's testimony.
 11:22:20 **14** MR. CONNER: 1505?
 11:22:21 **15** MS. PRINZING-JONES: 1505, Pages 113 and
 11:22:23 **16** 114.
 11:22:29 **17** **Q.** (By Ms. Prinzing-Jones) On non-revenue
 11:22:30 **18** water loss, what is the percentage of leakage
 11:22:32 **19** within Mountain Water's system for the years
 11:22:35 **20** presented?
 11:22:36 **21** **A.** Well, 2010 through 2012, they are showing
 11:22:40 **22** non-revenue water here of 55 percent in 2010, 51
 11:22:47 **23** percent in 2011, and which dropped down to 47
 11:22:52 **24** percent in 2012.
 11:22:53 **25** **Q.** Let's go to the next page, which is
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11:22:55 **1** 1505-114. Can you blow up the entire table.
 11:23:00 **2** What is indicated here?
 11:23:03 **3** **A.** This is a summary of that large
 11:23:05 **4** spreadsheet of all the agencies that participated
 11:23:08 **5** in that.
 11:23:09 **6** So the average non-revenue for percent of
 11:23:12 **7** volume based upon that is 22 percent, which is
 11:23:15 **8** within the industry standards of 20 to 25 percent
 11:23:18 **9** out there.
 11:23:19 **10** Mountain Water Company is over 50
 11:23:21 **11** percent, more than double that. The real losses,
 11:23:25 **12** which is, like I said, the amount of water that is
 11:23:30 **13** considered their ability to actually reduce. If
 11:23:35 **14** it's unavoidable, then, you know, it's not
 11:23:39 **15** considered--rated against them in terms of the
 11:23:43 **16** index. You can see the amount of real losses that
 11:23:47 **17** they have is considerably higher than the average
 11:23:49 **18** that's out there.
 11:23:50 **19** Non-revenue by cost, though, they do very
 11:23:55 **20** well. A lot of the costs that's in the table
 11:24:00 **21** don't represent an investor-owned utility in terms
 11:24:03 **22** of the profit and other items of costs that go in
 11:24:05 **23** there, so that may be a little misleading.
 11:24:08 **24** **Q.** And then the last, what is the
 11:24:11 **25** Infrastructure Leakage Index for Mountain Water?
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11:24:15 **1** **A.** This is getting the--getting out the new
 11:24:17 **2** index to compare agencies against each other,
 11:24:21 **3** which is really looking to the ability to reduce
 11:24:23 **4** the amount of leakage. The average is 3.57 in
 11:24:26 **5** terms of the index. Their average is up 18.
 11:24:29 **6** So you can see by all the measures that
 11:24:31 **7** are out there, they are, by far, off the scale
 11:24:35 **8** from what really, you know, other agencies across
 11:24:39 **9** the country are experiencing in terms of
 11:24:42 **10** reasonable leakage.
 11:24:43 **11** **Q.** In the notes it references that anything
 11:24:46 **12** greater than 8 is of concern. Is that right?
 11:24:50 **13** **A.** In terms of the rating measuring
 11:24:53 **14** conditions, that's correct.
 11:24:55 **15** **Q.** Why?
 11:24:56 **16** **A.** Those are issues that have now reached
 11:24:59 **17** the point where they are considering that action
 11:25:00 **18** needs to be taken within those particular
 11:25:02 **19** parameters; that they have now hit a point where,
 11:25:05 **20** you know, they said improvements need to be made.
 11:25:10 **21** **Q.** What happens--what are the risks if
 11:25:12 **22** action is not taken when your ILI Index is greater
 11:25:17 **23** than 8?
 11:25:18 **24** **A.** Well, obviously what you are getting is
 11:25:23 **25** that they continue to get deterioration of the
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11:25:28 **1** system, water loss. The cost in terms of the
 11:25:30 **2** impacts to the ratepayer are now becoming a
 11:25:33 **3** burden. So they need to be able to, you know,
 11:25:36 **4** take action to remedy the situation.
 11:25:44 **5** MS. PRINZING-JONES: I would like to move
 11:25:45 **6** the admission of 1501-24, Page 24, which is the
 11:25:50 **7** reporting work sheet for the ILI in the year 2010.
 11:25:56 **8** THE COURT: Any objection?
 11:26:00 **9** MR. CONNER: I'll just turn to it, Your
 11:26:02 **10** Honor. 1501, Tasha?
 11:26:23 **11** MS. PRINZING-JONES: 1501, Page 24.
 11:26:25 **12** MR. CONNER: You are not trying to get
 11:26:27 **13** the whole study in, all of this?
 11:26:29 **14** MS. PRINZING-JONES: I'll move the
 11:26:30 **15** admission of the entirety of 1501. I would like
 11:26:33 **16** to discuss with the Court Page 24 in particular.
 11:26:35 **17** THE COURT: So, Mr. Conner, any objection
 11:26:39 **18** to 1501 being admitted?
 11:26:43 **19** MR. CONNER: I think so, Your Honor. I
 11:26:45 **20** would prefer just to use the documents she's
 11:26:47 **21** relying on. There are all other kinds of
 11:26:50 **22** documents in this that I'm not sure this witness
 11:26:53 **23** has the foundation to admit.
 11:26:56 **24** MS. PRINZING-JONES: I can lay the
 11:26:58 **25** foundation for it.
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11:26:59 **1** THE COURT: My understanding is that what
 11:27:00 **2** she wants to do is deal with two pages from 1501.
 11:27:04 **3** MR. CONNER: That's what I'm suggesting,
 11:27:06 **4** Your Honor.
 11:27:06 **5** THE COURT: Page 24 and Page 65. So do
 11:27:09 **6** you have any objection to those two pages being
 11:27:12 **7** admitted?
 11:27:13 **8** MR. CONNER: Page 24, and what's the
 11:27:15 **9** second one?
 11:27:16 **10** MS. PRINZING-JONES: 65.
 11:27:38 **11** MR. CONNER: No objection, Your Honor.
 11:27:40 **12** THE COURT: Very well, they are admitted.
 11:27:42 **13** EXHIBITS:
 11:27:43 **14** (Exhibit Nos. 1501-24, 1501-65 received into
 11:27:43 **15** evidence.)
 11:27:43 **16** **Q.** (By Ms. Prinzing-Jones) Mr. Close, did
 11:27:44 **17** you review the entirety of the AWWA information
 11:27:49 **18** provided recently by Mountain Water Company
 11:27:52 **19** regarding their leakage?
 11:27:53 **20** **A.** Yes.
 11:27:54 **21** **Q.** Did you rely upon the information
 11:27:56 **22** provided in reaching your conclusions in this
 11:27:58 **23** case?
 11:28:00 **24** **A.** Yes. This certainly confirmed the
 11:28:03 **25** information that we had seen in other reports and
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11:28:06 **1** the data, we had concluded that the--as you can
 11:28:11 **2** see on this table, if you blow up the whole
 11:28:14 **3** non-revenue, they show the four and a half billion
 11:28:18 **4** gallons of water.
 11:28:24 **5** See, water losses in the 2010 were
 11:28:28 **6** 4.6 billion gallons.
 11:28:32 **7** **Q.** Okay. And then what is the non-revenue
 11:28:35 **8** water loss percentage based on that? If you can
 11:28:40 **9** go down. Down further. There you go.
 11:28:51 **10** **A.** As you can see, non-revenue percent of
 11:28:54 **11** volume is 56.9 percent.
 11:28:58 **12** **Q.** And then what is the leakage index at the
 11:29:01 **13** very bottom there?
 11:29:04 **14** **A.** 21.--it looks like 28, I'm sorry.
 11:29:09 **15** **Q.** 21.28?
 11:29:11 **16** **A.** Yeah.
 11:29:11 **17** **Q.** Significantly higher than the 8 and the
 11:29:13 **18** average of 3.
 11:29:16 **19** **A.** That's correct.
 11:29:18 **20** **Q.** Okay. Let's look at Page 65 then.
 11:29:21 **21** And if you would look at the top, what
 11:29:28 **22** year are we looking at?
 11:29:30 **23** **A.** This is 2010.
 11:29:32 **24** **Q.** And it was 2010 also for the other work
 11:29:35 **25** sheet; is that right?
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11:29:36 **1** **A.** That is correct.
 11:29:37 **2** **Q.** It looks like another Leakage Index Study
 11:29:40 **3** was made. What was the total amount of water
 11:29:42 **4** being lost out of the system?
 11:29:44 **5** **A.** 4 point--just under 4.2 billion gallons.
 11:29:49 **6** **Q.** Okay. If you go down, what was the
 11:29:51 **7** revenue--percentage of revenue--non-revenue water
 11:29:58 **8** loss and the Leakage Index?
 11:29:59 **9** **A.** The non-revenue water loss was 51.5
 11:30:03 **10** percent and the index is 18.76.
 11:30:07 **11** **Q.** All right. Now, does the system allow
 11:30:10 **12** you to make some choices in how you score
 11:30:16 **13** yourself?
 11:30:16 **14** **A.** Yeah. It's a soft assessment under the
 11:30:18 **15** different categories that are out there that they
 11:30:21 **16** rate themselves. There are guidelines to do that,
 11:30:23 **17** but it is subjective and there's some judgment
 11:30:25 **18** that goes along with it.
 11:30:27 **19** **Q.** Did you make any conclusions regarding
 11:30:29 **20** how Mountain Water assessed itself when using the
 11:30:33 **21** software?
 11:30:34 **22** **A.** In reviewing it, they followed it fairly
 11:30:38 **23** well. There were one or two occasions that I
 11:30:41 **24** thought there was some judgment in their behalf.
 11:30:46 **25** But, in general, I thought they did a reasonable--
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11:30:49 **1** reasonable job.
 11:30:50 **2** **Q.** All right. Let's look at 2011. This is
 11:30:53 **3** 1502, and we would like to discuss and admit
 11:30:57 **4** Pages 37 and 79.
 11:31:01 **5** MR. CONNER: No objection, Your Honor.
 11:31:03 **6** THE COURT: Very well, they are admitted.
 11:31:04 **7** EXHIBITS:
 11:31:05 **8** (Exhibit No. 1502-37 and 1502-79 received into
 11:31:05 **9** evidence.)
 11:31:05 **10** **Q.** (By Ms. Prinzing-Jones) Looking at the
 11:31:11 **11** year 2011, what is the percentage of water loss in
 11:31:17 **12** the Leakage Index listed?
 11:31:20 **13** Well, let's start with, first, how many
 11:31:22 **14** billion gallons of water are being lost in 2011?
 11:31:26 **15** **A.** 4.6 billion.
 11:31:27 **16** **Q.** Did that increase from the year
 11:31:29 **17** previously?
 11:31:30 **18** **A.** Yes.
 11:31:31 **19** **Q.** All right. And if you go down, what is
 11:31:33 **20** the percentage of loss in the ILI Index?
 11:31:37 **21** **A.** Percentage loss is 55.7 percent. And the
 11:31:42 **22** ILI Index is 21.66.
 11:31:45 **23** **Q.** Let's go ahead and jump ahead then to the
 11:31:48 **24** next year, 2012.
 11:31:50 **25** MS. PRINZING-JONES: And that's 1502, and
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11:31:54 **1** we would move the admission of Pages 180 and 222.
 11:31:59 **2** THE COURT: Objection?
 11:31:59 **3** MR. CONNER: No objection, Your Honor.
 11:32:01 **4** THE COURT: Admitted.
 11:32:02 **5** EXHIBITS:
 11:32:02 **6** (Exhibit Nos. 1502-180 and 1502-222 received
 11:32:03 **7** into evidence.)
 11:32:03 **8** **Q.** (By Ms. Prinzing-Jones) Let's look how
 11:32:04 **9** things were going in 2012. Can you tell us how
 11:32:09 **10** many billions of gallons of water were lost in
 11:32:12 **11** 2012?
 11:32:15 **12** **A.** **Water losses look like four and a half**
 11:32:17 **13** **billion gallons.**
 11:32:18 **14** **Q.** Four and a half billion?
 11:32:19 **15** **A.** Uh-huh.
 11:32:20 **16** **Q.** Okay. What is the percentage of water
 11:32:22 **17** lost in the ILI Index in 2012?
 11:32:25 **18** **A.** **It looks like the Water Loss by Percent**
 11:32:29 **19** **of Volume is 53.8 percent, and the ILI Index is**
 11:32:35 **20** **20.47.**
 11:32:37 **21** **Q.** Now let's go to 2013. This is 1504, and
 11:32:42 **22** we're looking at Page 3.
 11:32:45 **23** MS. PRINZING-JONES: We would move the
 11:32:47 **24** admission of 1504, Page 3.
 11:32:48 **25** THE COURT: Objection?
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11:32:49 **1** MR. CONNER: No objection, Your Honor.
 11:32:52 **2** THE COURT: Admitted.
 11:32:53 **3** EXHIBITS:
 11:32:53 **4** (Exhibit No. 1504-3 received into evidence.)
 11:32:54 **5** **Q.** (By Ms. Prinzing-Jones) What is the water
 11:32:57 **6** loss in 2013?
 11:32:59 **7** **A.** **Well, it looks like it's 4.2 billion**
 11:33:02 **8** **gallons.**
 11:33:02 **9** **Q.** All right. And what is the Percentage by
 11:33:05 **10** Volume of Water Loss?
 11:33:07 **11** **A.** **49.4 percent.**
 11:33:08 **12** **Q.** How about the ILI Index?
 11:33:11 **13** **A.** **18.77.**
 11:33:15 **14** **Q.** Now, the remainder of those exhibits,
 11:33:21 **15** Exhibits 1505, 1501, and 15--hold on. Strike
 11:33:28 **16** that.
 11:33:28 **17** 1501, 1502, 1503, 1504 and 1505 contain
 11:33:35 **18** the entirety of the leakage data received by
 11:33:40 **19** Mountain Water Company recently. Did you review
 11:33:43 **20** all of that?
 11:33:44 **21** **A.** **Yes, I did.**
 11:33:45 **22** **Q.** Does that include the underlying data for
 11:33:47 **23** the worksheets we've discussed today?
 11:33:49 **24** **A.** **Yes.**
 11:33:49 **25** **Q.** Did you review it in forming your
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11:33:52 **1** opinions today?
 11:33:53 **2** **A.** **Yes.**
 11:33:53 **3** **Q.** Is it important information in terms of
 11:33:55 **4** the choices and data inputted by Mountain Water?
 11:33:59 **5** **A.** **Yes.**
 11:33:59 **6** MS. PRINZING-JONES: We move the entirety
 11:34:00 **7** of those documents as they support the conclusions
 11:34:03 **8** stated here.
 11:34:04 **9** MR. CONNER: No objection.
 11:34:07 **10** THE COURT: None, you said?
 11:34:10 **11** MR. CONNER: None.
 11:34:10 **12** THE COURT: They are all admitted, the
 11:34:13 **13** entire documents.
 11:34:14 **14** EXHIBITS:
 11:34:14 **15** (Exhibit Nos. 1501-1505 received into
 11:34:15 **16** evidence.)
 11:34:15 **17** **Q.** (By Ms. Prinzing-Jones) In sum,
 11:34:16 **18** Mr. Close, is Mountain Water Company meeting
 11:34:18 **19** industry standards with regard to leakage?
 11:34:23 **20** **A.** **No. They are far exceeding it.**
 11:34:25 **21** **Q.** Their water losses are much above that?
 11:34:27 **22** **A.** **Their water losses are considerably worse**
 11:34:30 **23** **than industry standards.**
 11:34:33 **24** **Q.** Is Mountain Water meeting industry
 11:34:35 **25** standards with relation to its physical
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11:34:39 **1** structures?
 11:34:41 **2** **A.** **No. They are behind in terms of making**
 11:34:45 **3** **improvements to capital investment and to their**
 11:34:49 **4** **critical assets and to the backbone of their**
 11:34:52 **5** **system. Particularly their wells, their mains,**
 11:34:56 **6** **and some of their key booster stations. But**
 11:34:58 **7** **there's obviously need for capital investment to**
 11:35:02 **8** **bring it up to industry standards.**
 11:35:05 **9** **Q.** Is Mountain Water Company meeting its
 11:35:07 **10** industry standards regarding its maintenance
 11:35:10 **11** practices?
 11:35:10 **12** **A.** **Not at all. As you saw on pictures and**
 11:35:13 **13** **things that we reviewed today, there was a**
 11:35:15 **14** **considerable amount of deferred maintenance. In**
 11:35:18 **15** **reducing that amount, routine scheduled program**
 11:35:24 **16** **maintenance that needs to be done.**
 11:35:27 **17** **Q.** Have the owners of Mountain Water
 11:35:29 **18** provided appropriate funding for capital
 11:35:32 **19** improvements?
 11:35:34 **20** **A.** **Based on review of all the documents and**
 11:35:36 **21** **the physical condition of the assets out there, it**
 11:35:39 **22** **appears it's been underfunded.**
 11:35:41 **23** **Q.** Now, you provided a chart totaling all
 11:35:44 **24** the necessary repairs in order to bring the system
 11:35:47 **25** up to industry standards; is that right?
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11:35:50 **1 A. That is correct.**
 11:35:51 **2 MS. PRINZING-JONES:** Your Honor, we would
 11:35:52 **3 like to show D9.**
 11:35:54 **4 THE COURT:** This is demonstrative, is
 11:35:56 **5 that right?**
 11:35:56 **6 MS. PRINZING-JONES:** Yes, it is.
 11:36:02 **7 Q. (By Ms. Prinzing-Jones)** I would like you
 11:36:03 **8 just to give us the totals for the sections.**
 11:36:06 **9 A. Okay.**
 11:36:07 **10 Q.** With respect to the wells of Mountain
 11:36:11 **11 Water, what is the range of capital needed just to**
 11:36:15 **12 bring the wells up to industry standards?**
 11:36:18 **13 A. Roughly \$3.7 million to \$6.9 million.**
 11:36:25 **14 Q.** Okay, going to the next page.
 11:36:27 **15 What is the amount of capital needed to**
 11:36:30 **16 bring the boosters up to industry standards?**
 11:36:33 **17 MR. CONNER:** Your Honor, would it be
 11:36:35 **18 possible if I could get a copy of that? We do not**
 11:36:38 **19 have a copy of D9.**
 11:36:41 **20 MS. PRINZING-JONES:** It was provided in
 11:36:43 **21 discovery, Your Honor.**
 11:36:45 **22 THE COURT:** So we can make an additional
 11:36:48 **23 copy for Mr. Conner.**
 11:36:49 **24 MS. PRINZING-JONES:** Sure, you betcha.
 11:36:51 **25 MR. CONNER:** I would appreciate that,
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11:36:53 **1 because I need to compare it against another one**
 11:36:56 **2 that he made, if it would be possible.**
 11:36:58 **3 Q. (By Ms. Prinzing-Jones)** What is the
 11:36:59 **4 amount of capital improvements needed just to**
 11:37:02 **5 bring the boosters up to industry standards?**
 11:37:04 **6 A. 930,000 to roughly 1.8 million.**
 11:37:09 **7 Q.** Let's go down to the next page. We'll
 11:37:12 **8 skip over some of these.**
 11:37:14 **9 What's the amount of capital improvement**
 11:37:17 **10 needed--let's go to Page 3--for the pipelines, the**
 11:37:24 **11 mains?**
 11:37:25 **12 A. We projected that out to be in a range of**
 11:37:28 **13 a little over 25 million to roughly a little over**
 11:37:33 **14 34 million.**
 11:37:35 **15 Q.** How about the service lines, what is the
 11:37:38 **16 range needed there?**
 11:37:39 **17 A. Just the service lines or is that meters**
 11:37:43 **18 as well?**
 11:37:43 **19 Q.** Service lines and meters. I'm sorry,
 11:37:45 **20 yes.**
 11:37:46 **21 A. The range of service lines and meters is**
 11:37:48 **22 30 million to 40 million.**
 11:37:52 **23 Q.** Mr. Close, based on HDR's complete
 11:37:55 **24 assessment of the present condition of the**
 11:37:58 **25 Mountain Water facilities, what is the total**
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11:38:01 **1 amount of capital investment needed in the system**
 11:38:06 **2 over the next ten years just to bring it up to**
 11:38:09 **3 industry standards?**
 11:38:10 **4 A. We projected that an investment of**
 11:38:13 **5 roughly in the range of 66 million to 95 million**
 11:38:17 **6 would be needed just to really catch up and bring**
 11:38:20 **7 it up to industry standards.**
 11:38:23 **8 Q.** Thank you.
 11:38:26 **9 MR. CONNER:** Could I get the Bates range
 11:38:28 **10 on that, please?**
 11:38:29 **11 MS. PRINZING-JONES:** Sure can. 136908
 11:38:35 **12 through 136910. And I'm happy to just give you my**
 11:38:41 **13 copy of it.**
 11:38:52 **14 MR. CONNER:** Your Honor, that's what I
 11:38:54 **15 thought.**
 11:38:56 **16 With respect to this document and this**
 11:38:59 **17 testimony, your ruling on our--I think it was our**
 11:39:04 **18 motion to exclude their rebuttal reports and new**
 11:39:08 **19 testimony, was that anything that these witnesses,**
 11:39:12 **20 with respect to your Order, were going to present**
 11:39:17 **21 would have to go on in the rebuttal testimony.**
 11:39:20 **22 And Mr. Close was part of that. Your**
 11:39:24 **23 Order specifically indicates that.**
 11:39:26 **24 This is something that came in afterwards,**
 11:39:29 **25 clearly came in afterwards with respect to his**
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11:39:33 **1 testimony, that we just received on March 9th.**
 11:39:36 **2 THE COURT:** So what you are saying is I
 11:39:39 **3 shouldn't have listened to it now, I should wait**
 11:39:42 **4 until rebuttal. Is that what you are saying?**
 11:39:43 **5 MR. CONNER:** That's what it should have
 11:39:45 **6 been, Your Honor. I asked Ms. Jones at the break**
 11:39:48 **7 if there were going to be any other documents.**
 11:39:51 **8 Because there was another chart that that applied**
 11:39:53 **9 to as well, the water loss chart. And I said, you**
 11:39:56 **10 know, I let that go. She said there were no other**
 11:39:59 **11 charts with new testimony after his original**
 11:40:03 **12 report.**
 11:40:04 **13 And that's what this is. So I just need**
 11:40:08 **14 to bring that to the Court's attention and how the**
 11:40:11 **15 Court wants to deal with it as you see fit.**
 11:40:14 **16 MS. PRINZING-JONES:** Your Honor, I'm
 11:40:15 **17 happy to respond.**
 11:40:15 **18 THE COURT:** All right, go ahead.
 11:40:16 **19 MS. PRINZING-JONES:** This is not rebuttal
 11:40:17 **20 testimony. These were merely updates to the**
 11:40:19 **21 estimates provided in his original report. The**
 11:40:21 **22 rebuttal testimony is those opinions that are**
 11:40:24 **23 directly rebutting the testimony of the**
 11:40:27 **24 Defendants' experts.**
 11:40:28 **25 As an example, there was a rate analysis**
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11:40:32 **1** that Mr. Close conducted to identify the amount of
 11:40:36 **2** rate increase that would be required if Algonquin
 11:40:40 **3** was to purchase.
 11:40:41 **4** There was also a direct rebuttal of one
 11:40:44 **5** of their expert's testimony on the advantages and
 11:40:48 **6** conveniences that can be--efficiencies that can be
 11:40:52 **7** enjoyed if the City were to have ownership in
 11:40:56 **8** direct rebuttal. That is the rebuttal testimony
 11:40:58 **9** that was the subject matter of your Order.
 11:41:00 **10** This was simply an update of information
 11:41:03 **11** to his original report which were the cost
 11:41:06 **12** estimates.
 11:41:06 **13** The same type of updates have been
 11:41:09 **14** handled by Mr. Conner's own experts. We just
 11:41:15 **15** received a supplemental report updating the
 11:41:18 **16** numbers by Frank Perdue. We also received a
 11:41:21 **17** supplemental report updating the numbers from
 11:41:24 **18** their valuation expert, Mr. Reilly. All of that
 11:41:28 **19** is just updating these values as we prepare for
 11:41:33 **20** trial. It is not rebuttal testimony. It was
 11:41:35 **21** discussed in his first report and at his
 11:41:40 **22** deposition. The numbers have changed slightly.
 11:41:42 **23** THE COURT: So I'm going to consider this
 11:41:47 **24** as appropriate testimony for case-in-chief, right?
 11:41:51 **25** The other items that you've identified, Ms. Jones,
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11:41:55 **1** are more properly for rebuttal testimony, right?
 11:41:58 **2** MS. PRINZING-JONES: Yes. And we would
 11:42:00 **3** anticipate recalling Mr. Close by telephone, as he
 11:42:03 **4** does live out of the State of Montana, in our
 11:42:06 **5** rebuttal case.
 11:42:07 **6** MR. CONNER: Your Honor, I totally object
 11:42:09 **7** to that, calling a witness in rebuttal by
 11:42:11 **8** telephone. I do not think that's appropriate.
 11:42:14 **9** And we may have documents to show the witness in
 11:42:20 **10** recross. If that's going to be part of this, then
 11:42:22 **11** I think we have to deal with that now.
 11:42:25 **12** We would object having any witness that's
 11:42:27 **13** not live here with respect to their case-in-chief
 11:42:31 **14** and then their rebuttal.
 11:42:33 **15** THE COURT: So I think we can deal with
 11:42:35 **16** that at another time. It may very well be that
 11:42:39 **17** it's needed to have him back in person, Ms. Jones.
 11:42:43 **18** Is that it?
 11:42:45 **19** MS. PRINZING-JONES: Yes.
 11:42:46 **20** THE COURT: So, Mr. Conner, I notice that
 11:42:49 **21** we're like 15 minutes from our normal lunch
 11:42:54 **22** recess. I'm assuming that you would prefer not to
 11:42:56 **23** break up your cross-examination.
 11:42:58 **24** MR. CONNER: I will do what you ask, Your
 11:43:00 **25** Honor. Whatever you would like us to do, but that
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11:43:03 **1** would be nice. But I'm prepared to go forward if
 11:43:07 **2** needed.
 11:43:08 **3** THE COURT: Are you starting out or is
 11:43:10 **4** there a shorter cross that one of the other
 11:43:14 **5** attorneys might be intending to ask that we might
 11:43:17 **6** get done in the 15 minutes?
 11:43:19 **7** MR. CONNER: My suspicion is if one of my
 11:43:23 **8** fine colleagues is going to cross, it's because I
 11:43:26 **9** left something out, which is very possible.
 11:43:28 **10** THE COURT: So let's take our luncheon
 11:43:30 **11** recess. We'll start, instead of our usual 1:30,
 11:43:35 **12** at 1:15.
 11:43:36 **13** Again, Mr. Close, you are not permitted
 11:43:40 **14** to confer with counsel over the luncheon recess.
 11:43:45 **15** Okay?
 11:43:45 **16** We're in recess until 1:15. Thank you.
 11:43:48 **17** (Whereupon, court was in recess at
 01:12:15 **18** 11:43 a.m., reconvened at 1:12 p.m.)
 01:12:23 **19** THE COURT: All right, we're back in
 01:12:25 **20** session in *City of Missoula versus Mountain Water,*
 01:12:27 **21** *et al.*
 01:12:27 **22** Mr. Close, you understand you are still
 01:12:30 **23** under oath?
 01:12:31 **24** THE WITNESS: Yes.
 01:12:31 **25** THE COURT: All right, you may inquire,
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01:12:33 **1** Mr. Conner.
 02:04:28 **2** CROSS-EXAMINATION
 02:04:29 **3** BY MR. CONNER:
 02:04:29 **4** **Q.** Mr. Close, you said you were a
 01:12:37 **5** professional engineer, registered. You didn't say
 01:12:40 **6** what state. You are not registered in the State
 01:12:42 **7** of Montana, are you, sir?
 01:12:43 **8** **A.** No, I'm not.
 01:12:44 **9** **Q.** And you also--you don't live in Montana,
 01:12:47 **10** do you, sir?
 01:12:50 **11** **A.** I'm sorry?
 01:12:50 **12** **Q.** You don't live in Montana, do you?
 01:12:52 **13** **A.** No.
 01:12:53 **14** **Q.** You live in San Diego?
 01:12:54 **15** **A.** That's correct.
 01:12:56 **16** **Q.** Beautiful place. Going to live there for
 01:12:58 **17** a while?
 01:12:58 **18** **A.** I've been there for 27 years.
 01:13:01 **19** **Q.** Are you going to stay there?
 01:13:03 **20** **A.** I'll keep my snow shovel only on the
 01:13:05 **21** wall.
 01:13:05 **22** **Q.** Probably a good thing. Probably a good
 01:13:07 **23** thing.
 01:13:07 **24** Now, your hourly rate to testify here is
 01:13:11 **25** what, sir?
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01:13:12 **1 A. Oh, I believe it's--the answer is I**
 01:13:16 **2 really don't know.**
 01:13:17 **3 Q. In your deposition you indicated your**
 01:13:19 **4 hourly rate was \$300 an hour. Is that still the**
 01:13:21 **5 same?**
 01:13:22 **6 A. No, I believe I was incorrect. My**
 01:13:25 **7 testimony for here is higher. I think it's closer**
 01:13:28 **8 to \$500.**
 01:13:29 **9 Q. So you were here Friday. You are**
 01:13:31 **10 charging that whole time here, Friday, and then**
 01:13:35 **11 over the weekend as well?**
 01:13:36 **12 A. No, not over the weekend.**
 01:13:38 **13 Q. How much has HDR been paid up to this**
 01:13:42 **14 point?**
 01:13:43 **15 A. To be frank, I really don't know.**
 01:13:45 **16 Q. Over a hundred thousand dollars, you**
 01:13:46 **17 think?**
 01:13:47 **18 A. Yes.**
 01:13:47 **19 Q. 200,000?**
 01:13:52 **20 A. Possibly. I don't know.**
 01:13:53 **21 Q. Sure, that's fine.**
 01:13:54 **22 You indicated that you worked with**
 01:13:58 **23 American Water Service Company at one point; is**
 01:14:00 **24 that correct?**
 01:14:00 **25 A. Yes.**
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01:14:01 **1 Q. American Water Service Company is**
 01:14:05 **2 with--is an affiliate or a subsidiary of American**
 01:14:09 **3 Water, isn't it?**
 01:14:09 **4 A. Yes.**
 01:14:09 **5 Q. And I believe John Young is a former boss**
 01:14:14 **6 of yours; is that correct?**
 01:14:15 **7 A. Yes.**
 01:14:16 **8 Q. If I'm not mistaken, John actually hired**
 01:14:19 **9 you at American Water, didn't he?**
 01:14:22 **10 A. Yes.**
 01:14:22 **11 Q. And he is your mentor at American Water,**
 01:14:26 **12 or was?**
 01:14:27 **13 A. Yes.**
 01:14:29 **14 Q. And with respect to American Water**
 01:14:30 **15 Service Company, that company provides services to**
 01:14:33 **16 all of the state operating companies, correct, and**
 01:14:38 **17 international as well?**
 01:14:40 **18 A. Yes. It's broken into regions, at least**
 01:14:43 **19 at the time I was there. It's a little different**
 01:14:45 **20 now. But we would provide services to, in my**
 01:14:48 **21 case, the Western Region.**
 01:14:50 **22 Q. Yeah. In your case, when you said you**
 01:14:52 **23 worked in the Western Region in operations, you**
 01:14:55 **24 were still working for American Water Service**
 01:14:57 **25 Company, weren't you?**
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01:14:58 **1 A. That is correct.**
 01:14:58 **2 Q. So as American Water Service Company,**
 01:15:01 **3 your fees or the time that you incur and your**
 01:15:04 **4 expense is allocated to all of the other companies**
 01:15:08 **5 according to an allocation formula, correct?**
 01:15:11 **6 A. To those four operating companies, that's**
 01:15:13 **7 correct.**
 01:15:13 **8 Q. And that's standard in the industry,**
 01:15:15 **9 isn't it, sir? In the--in the investor-owned**
 01:15:18 **10 industry.**
 01:15:19 **11 A. I don't know if it's standard. It is**
 01:15:21 **12 common. Our situation was a little different than**
 01:15:24 **13 Mountain Water.**
 01:15:25 **14 Q. I didn't say about Mountain Water. I'm**
 01:15:27 **15 asking about American Water.**
 01:15:28 **16 A. Yeah.**
 01:15:29 **17 Q. So with respect to American Water,**
 01:15:31 **18 though, when you have a broader base of operating**
 01:15:33 **19 units, then your cost, the expenses that you help**
 01:15:40 **20 hold at the American Water Service level, are**
 01:15:43 **21 allocated--it costs each of those operating units**
 01:15:46 **22 a little less than it would if they were like,**
 01:15:49 **23 let's just say, two operating units, correct?**
 01:15:52 **24 A. Well, we served as--**
 01:15:53 **25 Q. Can you say yes or no, sir, and then you**
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01:15:56 **1 can explain.**
 01:15:57 **2 A. No.**
 01:15:57 **3 Q. Okay.**
 01:15:58 **4 A. The reason is that we would actually**
 01:16:01 **5 fulfill dual positions. We would fill**
 01:16:06 **6 positions--I was the vice president of engineering**
 01:16:10 **7 in the service company, but I also served that**
 01:16:13 **8 same role in each of the operating companies. We**
 01:16:15 **9 didn't have dual positions to be able to do that.**
 01:16:17 **10 So--**
 01:16:18 **11 Q. I understand. So what that means is you**
 01:16:20 **12 would have direct charges with respect to those**
 01:16:22 **13 operating units that you served directly, and then**
 01:16:25 **14 there would be allocated charges as well, correct?**
 01:16:29 **15 A. Very minor ones, yes.**
 01:16:30 **16 Q. Okay, thank you.**
 01:16:40 **17 Now, with respect to--you gave some**
 01:16:41 **18 ratemaking testimony, didn't you, sir, earlier on**
 01:16:44 **19 on direct. And I think you indicated that in the**
 01:16:46 **20 regulated model you earn a return on investment or**
 01:16:52 **21 did you say--**
 01:16:53 **22 A. Equity. Return on equity.**
 01:16:55 **23 Q. When you say profit that an**
 01:16:59 **24 investor-owned water company makes, as determined**
 01:17:02 **25 by the PSC or regulatory authority, they only make**
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01:17:06 **1** a profit or an authorized rate of return on the
 01:17:09 **2** equity piece, correct?
 01:17:10 **3** **A. Rate base, that's correct.**
 01:17:13 **4** **Q.** On rate base, but it's on the equity
 01:17:15 **5** contribution to that, right? It's not the debt.
 01:17:20 **6** **A. It's not? Excuse me?**
 01:17:21 **7** **Q.** You don't make an authorized rate of
 01:17:25 **8** return on your debt, do you?
 01:17:26 **9** **A. No.**
 01:17:27 **10** **Q.** All right. So--and in the case of an
 01:17:28 **11** investor-owned water utility, there is an
 01:17:31 **12** equity/debt split, isn't there?
 01:17:33 **13** **A. That's correct.**
 01:17:33 **14** **Q.** And it depends on the state. Sometimes
 01:17:36 **15** it can be 50 percent equity, 40 percent debt, or
 01:17:39 **16** it may fluctuate by 10 percent either way, won't
 01:17:43 **17** it?
 01:17:44 **18** **A. The average is 60-40 debt/equity.**
 01:17:47 **19** **Q.** Okay. And so when we say that there is a
 01:17:49 **20** profit, it's only that equity piece, right?
 01:17:52 **21** **A. Correct.**
 01:17:53 **22** **Q.** And isn't it true that an authorized rate
 01:17:56 **23** of return is not a guarantee, is it?
 01:17:59 **24** **A. No.**
 01:18:00 **25** **Q.** It just means that you have the ability
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01:18:02 **1** to earn up to that amount, correct?
 01:18:05 **2** **A. That's correct.**
 01:18:05 **3** **Q.** All right. Now, you've not done an
 01:18:07 **4** analysis of Mountain Water Company's historical
 01:18:12 **5** rate of return that they have actually been able
 01:18:15 **6** to get, have you?
 01:18:16 **7** **A. Not probably past--we looked at the last**
 01:18:18 **8** **three to four years. Not prior to that.**
 01:18:21 **9** **Q.** Right. And the authorized rate of
 01:18:22 **10** return, I think you said, was 9.25, right?
 01:18:25 **11** **A. For the PSC last filing, yes.**
 01:18:29 **12** **Q.** But you don't know from here today what
 01:18:30 **13** they actually earned on their equity, do you?
 01:18:33 **14** **A. Well, in their actual reports I think**
 01:18:35 **15** **it's more like eight and a half percent or**
 01:18:36 **16** **something a little lower than that.**
 01:18:38 **17** **Q.** So it's eight and a half as opposed to
 01:18:41 **18** 9.25, based on your recollection.
 01:18:43 **19** **A. Yes.**
 01:18:46 **20** **Q.** Now, you are not saying, are you, sir,
 01:18:51 **21** that accrued depreciation should always equal
 01:18:53 **22** retirements, are you?
 01:18:55 **23** **A. No.**
 01:18:55 **24** **Q.** Isn't it true that accrued depreciation
 01:18:58 **25** is different. It's a different concept. It's a
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01:19:01 **1** different accounting measure as opposed to
 01:19:05 **2** retirements of utility property, correct?
 01:19:07 **3** **A. That is correct.**
 01:19:08 **4** **Q.** Two totally separate things, correct?
 01:19:10 **5** **A. They are different but related.**
 01:19:12 **6** **Q.** Understood.
 01:19:13 **7** You've not testified at the Montana PSC,
 01:19:19 **8** have you?
 01:19:19 **9** **A. No.**
 01:19:20 **10** **Q.** You've not participated in any rate case
 01:19:22 **11** in Montana, have you?
 01:19:23 **12** **A. No.**
 01:19:24 **13** **Q.** You've not served as a consultant with
 01:19:27 **14** respect to any rate case in Montana, correct?
 01:19:29 **15** **A. No.**
 01:19:30 **16** **Q.** You've not served as a consultant to any
 01:19:32 **17** intervenor in a rate case or any other type of
 01:19:36 **18** regulatory proceeding in Montana, have you?
 01:19:38 **19** **A. No.**
 01:19:40 **20** **Q.** And isn't it true, sir, that you've not
 01:19:42 **21** reviewed the capitalization policy of Mountain
 01:19:47 **22** Water Company as approved by the PSC, have you?
 01:19:49 **23** **A. No.**
 01:19:50 **24** **Q.** And isn't the capitalization policy of
 01:19:53 **25** Mountain Water just like any other regulatory IOU,
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01:19:57 **1** investor-owned utility; that has to be approved at
 01:20:00 **2** the PSC, doesn't it?
 01:20:02 **3** **A. Yes.**
 01:20:12 **4** **Q.** Let's move to your scale that you used as
 01:20:16 **5** far as your condition assessment.
 01:20:18 **6** First, before we go there, you were not
 01:20:20 **7** engaged to provide a condition assessment of the
 01:20:23 **8** underground assets, were you?
 01:20:27 **9** **A. We were--no--yes. We were required to**
 01:20:30 **10** **give a condition assessment on underground assets.**
 01:20:34 **11** **Q.** You were required to give one?
 01:20:35 **12** **A. We were asked to do that as part of our**
 01:20:37 **13** **contract, yes.**
 01:20:40 **14** **Q.** You didn't do any sampling, did you, sir?
 01:20:43 **15** **A. No, we did not.**
 01:20:44 **16** **Q.** You didn't sample any underground assets,
 01:20:46 **17** did you?
 01:20:47 **18** **A. It was purely based upon the data that**
 01:20:49 **19** **was available to us.**
 01:20:50 **20** **Q.** Let's talk about how you do a condition
 01:20:52 **21** assessment. You've done it before, haven't you,
 01:20:55 **22** Craig?
 01:20:55 **23** **A. Yes.**
 01:20:55 **24** **Q.** Isn't it true when you do a condition
 01:20:57 **25** assessment, you want to go in, first try to get an
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01:21:01 **1** inventory, see what's there, right?

01:21:03 **2** **A. Right.**

01:21:03 **3** **Q.** Then you want to talk to the folks with

01:21:05 **4** institutional knowledge so those people can tell

01:21:07 **5** you exactly what they are seeing on a day-to-day

01:21:11 **6** basis and historically, correct?

01:21:12 **7** **A. That would be part of it, but there is**

01:21:14 **8** **more data on that that would be collected.**

01:21:16 **9** **Q.** I'm going to get there.

01:21:18 **10** That's part of the story, though, isn't

01:21:19 **11** it?

01:21:19 **12** **A. That's part of it.**

01:21:20 **13** **Q.** Well, it's important to talk to the

01:21:21 **14** people that know and operate this system so they

01:21:23 **15** can tell you what they found in the ground, right?

01:21:26 **16** **A. It would be nice to be able to correlate**

01:21:28 **17** **that to what they see and experience.**

01:21:33 **18** **Q.** Absolutely. And so in addition to that

01:21:35 **19** you would like to have the maintenance records,

01:21:37 **20** maintenance policies to see what's happened and

01:21:40 **21** that sort of thing, right?

01:21:41 **22** **A. Yes. We asked for all of that, yes.**

01:21:42 **23** **Q.** You didn't get it, did you?

01:21:44 **24** **A. No.**

01:21:44 **25** **Q.** It's a litigation, isn't it?
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01:21:46 **1** **A. Yes.**

01:21:47 **2** **Q.** Your lawyers have to get that and they

01:21:49 **3** sometimes--not your lawyers, the City's lawyers,

01:21:51 **4** they have to take depositions of people out in the

01:21:53 **5** field to give you that information, right?

01:21:55 **6** **A. I presume so.**

01:21:56 **7** **Q.** And that wasn't done so far as you know,

01:21:58 **8** was it?

01:21:59 **9** **A. I've not seen anything.**

01:22:00 **10** **Q.** So you didn't get information on

01:22:01 **11** maintenance records. You didn't have the

01:22:03 **12** opportunity to talk any employees. You did not

01:22:06 **13** get an opportunity to go out and dig any pipe

01:22:08 **14** samples, right?

01:22:09 **15** **A. That's correct.**

01:22:10 **16** **Q.** And isn't it important if you actually

01:22:13 **17** want to find out not only what's in the ground but

01:22:15 **18** how it's operating and what kind of condition it

01:22:18 **19** is today, you really have to get your fingers

01:22:20 **20** dirty, and your feet, and dig a ditch, dig a hole,

01:22:25 **21** dig it up and, in this case, go six feet

01:22:27 **22** underground and sample the pipe, right?

01:22:31 **23** **A. Field data certainly helps to improve**

01:22:33 **24** **that. However, you can get very good analysis**

01:22:36 **25** **based on statistical analysis and history from**
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01:22:39 **1** **other agencies, which we have a lot of data to be**

01:22:43 **2** **able to refer to.**

01:22:43 **3** **Q.** So what you actually did then, you took

01:22:46 **4** system data from other agencies outside the State

01:22:50 **5** of Montana in order to inform your opinion to the

01:22:53 **6** respect of the condition of this pipe, didn't you?

01:22:55 **7** **A. We used that to compare to the data that**

01:22:58 **8** **we did get from Mountain Water Company.**

01:23:00 **9** **Q.** The data that you received from Mountain

01:23:03 **10** Water Company, I believe the main things you

01:23:04 **11** looked at were two reports. I won't say the main

01:23:08 **12** things. But it's Exhibit 0077 and Exhibit 0040.

01:23:16 **13** MR. CONNER: Your Honor, can I just

01:23:17 **14** approach the witness and ask him just to make sure

01:23:20 **15** these are the ones he looked at?

01:23:25 **16** THE COURT: You may.

01:23:27 **17** MR. CONNER: Thank you.

01:23:27 **18** **Q.** (By Mr. Conner) Do you recall, Craig,

01:23:29 **19** that was in your deposition, Exhibit 77?

01:23:30 **20** **A. Yes.**

01:23:30 **21** **Q.** And this is the Financial Analysis and

01:23:32 **22** Proposed Action Plan For Water Loss Mitigation by

01:23:33 **23** Mountain Water Company?

01:23:34 **24** **A. Yes.**

01:23:34 **25** **Q.** You reviewed that and got some data about
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01:23:37 **1** the system out of that, didn't you?

01:23:38 **2** **A. That was some of the data, yes.**

01:23:40 **3** **Q.** There was another report. This is the

01:23:42 **4** DIS report. I think you referenced this in your

01:23:44 **5** direct examination, right?

01:23:45 **6** **A. Correct.**

01:23:46 **7** **Q.** And it's Exhibit 40-001, is the first

01:23:50 **8** page. So these are two reports that the company

01:23:54 **9** had done well before this litigation was filed,

01:23:57 **10** right?

01:23:58 **11** **A. Correct.**

01:23:58 **12** **Q.** So isn't it true, sir, that the company,

01:24:01 **13** based on the records you've seen, these reports,

01:24:03 **14** at least back to 2010 is one of these, the company

01:24:06 **15** had been proactively looking at the leakage issue,

01:24:09 **16** correct?

01:24:10 **17** **A. Correct.**

01:24:10 **18** **Q.** And the company had come up with--you may

01:24:14 **19** not agree with it, but it had come up basically

01:24:17 **20** with a plan of action to try to address the

01:24:20 **21** unaccounted-for water loss, correct?

01:24:22 **22** **A. They were certainly looking at the**

01:24:24 **23** **options. In addition to the data of those two**

01:24:27 **24** **reports, we got a great deal of data from the GIS**

01:24:31 **25** **data.**
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01:24:32 **1 Q.** I didn't ask you that, sir.
 01:24:33 **2 A.** I'm sorry.
 01:24:33 **3 Q.** I asked you, wasn't the company taking
 01:24:35 **4** proactive measures in order to address the leakage
 01:24:40 **5** from the data that you saw in these reports?
 01:24:42 **6 A.** They were certainly studying it. What
 01:24:44 **7** actions they took, I have no idea.
 01:24:46 **8 Q.** You don't know what they have done with
 01:24:48 **9** respect to the decisions they have made in capital
 01:24:51 **10** improvements and that sort of thing going forward
 01:24:52 **11** either, have you?
 01:24:54 **12 A.** We did review the capital plans for those
 01:24:57 **13** years and looked at the amount of main
 01:25:00 **14** replacements that were listed in the capital
 01:25:04 **15** improvements.
 01:25:05 **16 Q.** Okay. Isn't it true, sir, that the pipe
 01:25:09 **17** in this system underground represents anywhere
 01:25:13 **18** from 50 to 60 percent of the total value of this
 01:25:16 **19** system? Total asset value.
 01:25:19 **20 A.** Well, it depends on how much of it's been
 01:25:23 **21** depreciated already, and the age of that.
 01:25:28 **22** Mountain Water has a rate base of about
 01:25:31 **23** \$39 million. I would have to see what the
 01:25:35 **24** depreciation--accumulated depreciation would be on
 01:25:36 **25** the pipe.

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01:25:37 **1 Q.** In your deposition, Page 146, Line 8,
 01:25:41 **2** through Page 146, Line 18--would you pull that up,
 01:25:47 **3** please.
 01:25:49 **4** MS. PRINZING-JONES: What page, I'm
 01:25:51 **5** sorry?
 01:25:52 **6** MR. CONNER: 146, Line 8.
 01:26:00 **7 Q.** (By Mr. Conner) "So there's 50 to 60
 01:26:02 **8** percent of this system that you were not able to
 01:26:03 **9** properly evaluate under a typical condition-based
 01:26:06 **10** assessment?"
 01:26:07 **11** Answer. "We were not able to physically
 01:26:09 **12** inspect those particular assets, that's correct."
 01:26:12 **13** Question. "And that would have--if you
 01:26:14 **14** were able to inspect those assets, that could have
 01:26:16 **15** a remarkable or a significant impact on the
 01:26:18 **16** overall condition assessment of fair to poor that
 01:26:21 **17** you found in this--in your report, correct?"
 01:26:27 **18** Do you recall that?
 01:26:28 **19 A.** No. I recall saying that that's part of
 01:26:30 **20** the system that we weren't able to look at.
 01:26:34 **21 Q.** Right.
 01:26:35 **22 A.** That doesn't indicate anything of the
 01:26:37 **23** value of that.
 01:26:38 **24 Q.** And I misspoke on that.
 01:26:39 **25** But you would say that, anyway, there is
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01:26:42 **1** 50 to 60 percent of this system is actually
 01:26:45 **2** underground.
 01:26:46 **3 A.** Yes, I would agree with that.
 01:26:48 **4 Q.** Okay, thank you. Take that down now.
 01:26:49 **5** And isn't it true, sir, that if the pipe
 01:26:54 **6** in the ground was actually in better condition
 01:26:57 **7** than you found in your review that you testified
 01:27:02 **8** to today, that that could materially impact your
 01:27:05 **9** overall condition assessment of this system.
 01:27:07 **10** Correct?
 01:27:08 **11 A.** Correct.
 01:27:15 **12 Q.** Now, you also indicated in your
 01:27:20 **13** deposition, I believe, on meters. Let's just talk
 01:27:23 **14** about meters for a second.
 01:27:24 **15** The meters in this system, as you know,
 01:27:28 **16** the company usually owns from the pipe main to the
 01:27:32 **17** meter, doesn't it? In most systems.
 01:27:35 **18 A.** In most systems.
 01:27:37 **19 Q.** In the American Water system that's how
 01:27:39 **20** it's set up, right?
 01:27:40 **21 A.** Uh-huh.
 01:27:40 **22 Q.** And it's your understanding that the
 01:27:42 **23** company owns from--the service line from the main
 01:27:43 **24** to the property line, correct?
 01:27:48 **25 A.** At the time of the deposition I thought
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01:27:49 **1** that was the case. I've learned since then that
 01:27:53 **2** the City's gotten legislation--I mean, Mountain
 01:27:57 **3** Water Company has gotten legislation that they
 01:27:59 **4** don't own the service line from the pipe to the
 01:28:02 **5** house.
 01:28:04 **6 Q.** Gotten legislation. Mountain Water's
 01:28:06 **7** gotten legislation?
 01:28:08 **8 A.** Legislation or order or something like
 01:28:12 **9** that.
 01:28:12 **10 Q.** Isn't it true, though, sir--so you do
 01:28:13 **11** know now that Mountain Water only owns the main,
 01:28:15 **12** right?
 01:28:16 **13 A.** Correct.
 01:28:16 **14 Q.** And then the service line to the meter.
 01:28:18 **15** Now, is it your understanding that the
 01:28:20 **16** meters in this system are in a meter pit close to
 01:28:25 **17** the curb like they are in most systems?
 01:28:27 **18 A.** No. That they would be in the house,
 01:28:28 **19** most likely.
 01:28:29 **20 Q.** They are in the house, right?
 01:28:31 **21 A.** Right.
 01:28:31 **22 Q.** The majority of them are, right?
 01:28:33 **23 A.** Right.
 01:28:33 **24 Q.** Mr. Bender testified that he had his
 01:28:35 **25** meter replaced, and his is in the house.
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01:28:38 **1 A. Uh-huh.**
 01:28:39 **2 Q.** And I asked him, I said, *Well, did you*
 01:28:41 **3** *replace your service line?*
 01:28:42 **4** He said, *Well, no, it wasn't leaking.*
 01:28:45 **5** Do you know how deep the service lines
 01:28:47 **6** are here?
 01:28:47 **7 A. Six feet.**
 01:28:48 **8 Q.** Six feet under, right?
 01:28:50 **9** And do you know how quick water drains in
 01:28:52 **10** this system back into the aquifer?
 01:28:55 **11 A. I would have to look at the percolation**
 01:28:58 **12 rates, but--**
 01:28:59 **13 Q.** You don't know that, do you, sir?
 01:29:02 **14 A. I don't know what the percolation rates**
 01:29:04 **15 are, no.**
 01:29:04 **16 Q.** You don't know how quickly the water will
 01:29:07 **17** drain back into the aquifer if there is a leak in
 01:29:09 **18** the pipe, do you?
 01:29:11 **19 A. No. But I also--no.**
 01:29:13 **20 Q.** You don't.
 01:29:14 **21** Now, with respect to Mr. Bender's house,
 01:29:19 **22** he said it was built in 1958. If it was built in
 01:29:25 **23** 1958, then that pipe is how old? Can you do the
 01:29:28 **24** math?
 01:29:28 **25 A. I would say 57 years.**
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01:29:30 **1 Q.** There you go. You would say that that
 01:29:32 **2** was a galvanized pipe, wouldn't you, based on your
 01:29:36 **3** testimony?
 01:29:37 **4 A. Based on what I saw from the data, most**
 01:29:39 **5 likely that would be galvanized pipe.**
 01:29:43 **6 Q.** Although in your report you mentioned
 01:29:45 **7** that, I think on one of the schedules, you gave a
 01:29:48 **8** useful life of pipe of 75 years.
 01:29:50 **9** Galvanized pipe is not going to last
 01:29:52 **10** 75 years, is it?
 01:29:53 **11 A. No. The--**
 01:29:55 **12 Q.** Isn't it true galvanized pipe will last
 01:30:00 **13** between 30 and 40 years?
 01:30:00 **14 A. Yes.**
 01:30:00 **15 Q.** And so Mr. Bender's service line would be
 01:30:04 **16** given a--either a zero or no better than a 1
 01:30:08 **17** rating under your scale, correct?
 01:30:10 **18 A. No. Based on what we do, we would rate**
 01:30:12 **19 it as poor.**
 01:30:13 **20 Q.** As poor?
 01:30:14 **21 A. Yes, a 2.**
 01:30:16 **22 Q.** A two?
 01:30:17 **23 A. Yes.**
 01:30:18 **24 Q.** Although it's well past it's useful life,
 01:30:21 **25** 17 years past its useful life?
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01:30:25 **1 A. It has not yet--unless it's experienced**
 01:30:28 **2 leaks already, then it would be rated a 1.**
 01:30:31 **3 Q.** Now, if a galvanized pipe, let's say a
 01:30:34 **4** one-and-a-half-inch or less than that,
 01:30:37 **5** three-quarter-inch galvanized pipe, it kind of
 01:30:42 **6** looks like an old galvanized service line, doesn't
 01:30:45 **7** it?
 01:30:46 **8 A. From here, the best I can tell, yes.**
 01:30:48 **9 Q.** Do you want me to get closer?
 01:30:50 **10 A. Yeah.**
 01:30:51 **11** MR. CONNER: Your Honor?
 01:30:52 **12** THE COURT: You may.
 01:30:52 **13 Q.** (By Mr. Conner) It looks like a
 01:30:54 **14** galvanized service line well past its useful life,
 01:30:57 **15** isn't it?
 01:30:57 **16 A. It looks like a galvanized service line,**
 01:31:00 **17 yes.**
 01:31:00 **18 Q.** Would you expect a galvanized line to
 01:31:03 **19** look like this if it was, say, 57 years old?
 01:31:06 **20** Potentially?
 01:31:08 **21 A. Potentially.**
 01:31:19 **22 Q.** Now, you've also in your estimate you've
 01:31:21 **23** given the City for capital improvements, you've
 01:31:24 **24** included the cost of replacing all the service
 01:31:27 **25** lines, correct?
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01:31:28 **1 A. No, not all of the service lines. Only**
 01:31:30 **2 the ones we felt were in need at the time or were**
 01:31:35 **3 reaching their useful life.**
 01:31:36 **4 Q.** I believe you indicated on your direct
 01:31:38 **5** exam that 75 percent of the system you think
 01:31:41 **6** probably has galvanized pipe based on the age,
 01:31:46 **7** correct?
 01:31:46 **8 A. Are you saying 75 percent of the system**
 01:31:47 **9 or 75 percent of the services?**
 01:31:49 **10 Q.** Of the services.
 01:31:51 **11 A. Roughly about 75 percent are anticipated.**
 01:31:53 **12 There is--a large number is unknown, but that's**
 01:31:56 **13 anticipated to be galvanized.**
 01:31:59 **14 Q.** Sure, based on what you know--
 01:32:00 **15 A. Based on what data is available.**
 01:32:02 **16 Q.** Sure. So if that's the case, 75 percent
 01:32:04 **17** of the service lines, and--there's right now there
 01:32:06 **18** are 23,500 service lines approximately on
 01:32:10 **19** residential. Just residential. No, that's
 01:32:13 **20** commercial, too, I'm sorry.
 01:32:15 **21 A. Yeah, that's all of them.**
 01:32:16 **22 Q.** But so your budget that you have given
 01:32:18 **23** the City, that they have incorporated into their
 01:32:20 **24** financial plan, includes replacing 75 percent of
 01:32:24 **25** those service lines within the next ten years,
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01:32:27 **1** correct?

01:32:27 **2** **A.** I would have to go back and look and I

01:32:30 **3** can, if you would like. I didn't have all of them

01:32:32 **4** replaced in that time, but a large portion. We

01:32:34 **5** were making a consolidated effort to replace the

01:32:38 **6** majority of them in those ten years.

01:32:40 **7** **Q.** And you are going to replace all the

01:32:42 **8** Kalamein pipe and the invasion pipe, correct?

01:32:45 **9** **A.** Correct.

01:32:45 **10** **Q.** In addition to that, you are going to

01:32:47 **11** replace 75 percent of the cast iron pipe, right?

01:32:50 **12** **A.** I'll have to look at that again.

01:32:52 **13** **Q.** Well, that's what your report says.

01:32:54 **14** **A.** If that's what it says, then I would

01:32:55 **15** agree with that.

01:32:56 **16** **Q.** Okay. And you are assuming that the cast

01:32:59 **17** iron pipe is unlined cast iron pipe when you make

01:33:04 **18** that recommendation, correct?

01:33:05 **19** **A.** Based on the data that was in the GIS

01:33:08 **20** file, it was indicated as unlined cast iron.

01:33:10 **21** **Q.** Okay. Now, if the actual pipe in the

01:33:12 **22** ground indicates that it's lined cast iron, then

01:33:15 **23** that pipe is going to last a lot longer, isn't it?

01:33:19 **24** **A.** Potentially. You would have to look at

01:33:21 **25** it and--

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01:33:22 **1** **Q.** Sure. You've got to know about the

01:33:23 **2** soils, you've got to know about the water, you've

01:33:24 **3** got to know about the installation conditions.

01:33:26 **4** All of those things factor into a condition

01:33:29 **5** assessment, correct?

01:33:30 **6** **A.** Correct.

01:33:36 **7** **Q.** But regardless of the percentage of

01:33:40 **8** services, your report or your recommendation is

01:33:43 **9** the City pay for those services, correct? That's

01:33:47 **10** factored into the 66 million and the 95 million

01:33:52 **11** low to high range, right?

01:33:54 **12** **A.** Yes.

01:34:02 **13** **Q.** Now, you don't know--I think you

01:34:04 **14** testified you don't know how many meters we have

01:34:06 **15** or when our meters were installed, correct?

01:34:09 **16** **A.** That's correct.

01:34:11 **17** **Q.** You know what an AMR meter is, right?

01:34:14 **18** **A.** Oh, yes, I do.

01:34:15 **19** **Q.** And those are meters that you don't have

01:34:16 **20** to go read the meter anymore right?

01:34:19 **21** **A.** It remote reads, that's correct.

01:34:21 **22** **Q.** How many remote read meters do you think

01:34:23 **23** this system has or what did your research show?

01:34:28 **24** **A.** My best recollection, that I thought it

01:34:31 **25** was like around 30 to 40 percent were AMR meters.

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01:34:35 **1** **Q.** The rest of them, then, you actually have

01:34:37 **2** to have a meter reader go up and read the meter at

01:34:40 **3** the house, right?

01:34:41 **4** **A.** Right.

01:34:41 **5** **Q.** And that's what you factored into your

01:34:43 **6** analysis, correct?

01:34:44 **7** **A.** That's correct.

01:34:45 **8** **Q.** So that's why you are saying that every

01:34:48 **9** meter at Mountain Water Company in the next ten

01:34:52 **10** years, that's there, and there are 19,000 of them

01:34:56 **11** now, have to be replaced in the next ten years,

01:34:59 **12** correct?

01:34:59 **13** **A.** Based on what data that we did find--

01:35:02 **14** **Q.** Correct? Yes or no.

01:35:05 **15** **A.** I don't know if I can answer that yes or

01:35:06 **16** no.

01:35:06 **17** **Q.** Okay. Well, I'll tell you what. Try to

01:35:10 **18** answer it and then you can explain your answer.

01:35:12 **19** How about that?

01:35:12 **20** **A.** I would say mostly, yes. To explain the

01:35:17 **21** answer, I would say we looked at in terms of the

01:35:21 **22** meter, the data in terms of what was depreciated,

01:35:24 **23** most of the meters were fully depreciated by the

01:35:28 **24** data that we got. So that it showed it was older

01:35:30 **25** than whatever the service life was input, which we

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01:35:34 **1** assumed to be 20 to 25 years.

01:35:36 **2** **Q.** Right. But you are assuming that only

01:35:38 **3** about 30 percent of the meters are radio-read

01:35:41 **4** meters, correct?

01:35:42 **5** **A.** That's correct.

01:35:43 **6** **Q.** Now, let's take a look at your scale. I

01:35:46 **7** just want to make sure we have your scale correct.

01:35:49 **8** You said you did a scale from zero to 5,

01:35:53 **9** right?

01:35:53 **10** **A.** That is correct.

01:35:54 **11** **Q.** Now, is that the same scale that

01:35:56 **12** Mr. Brand used in his assessment of the dams?

01:36:01 **13** **A.** Yes.

01:36:01 **14** **Q.** And if I'm not mistaken, that assessment

01:36:07 **15** says Condition Assessment Rating Scale. Not zero

01:36:12 **16** to 5. It says 1 to 5. 1 equals immediate

01:36:15 **17** replacement. 5 equals new, not just good.

01:36:19 **18** Correct?

01:36:19 **19** **A.** Correct.

01:36:20 **20** **Q.** So if you got a 3, would that be good?

01:36:22 **21** **A.** That's considered fair.

01:36:24 **22** **Q.** What's good?

01:36:25 **23** **A.** 4.

01:36:26 **24** **Q.** All right. So what's a 2?

01:36:28 **25** **A.** Poor.

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01:36:28 1 Q. And what's a 1?

01:36:30 2 A. **Immediate replacement.**

01:36:32 3 Q. And if it's immediate replacement, does

01:36:34 4 that mean in your mind that there could be a

01:36:36 5 catastrophic failure of that system?

01:36:39 6 A. **That it's at risk for a potential**

01:36:41 7 **catastrophic failure, yes.**

01:36:42 8 Q. Have you determined from your review of

01:36:44 9 the records there have been no catastrophic

01:36:47 10 failures in this system in the past five years

01:36:49 11 anyway, have there?

01:36:50 12 A. **Not that I'm aware, but you never know**

01:36:53 13 **what the future is.**

01:36:54 14 Q. I'm not asking about the future. I'm

01:36:56 15 asking about the past.

01:36:57 16 Going back ten years you didn't see any

01:36:59 17 record of any catastrophic failures, did you?

01:37:01 18 A. **Not in the data that was provided.**

01:37:10 19 Q. Now, with respect to the pipe itself,

01:37:16 20 isn't it true, sir, that HDR did not ask for

01:37:20 21 underground sampling of pipe at the inspection in

01:37:22 22 September when you had your team in Missoula,

01:37:26 23 correct?

01:37:28 24 A. **That's not true. We--you had indicated**

01:37:32 25 **on the call that that would not be allowed. We--**
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01:37:36 1 Q. I said it wouldn't be allowed?

01:37:39 2 A. **Yes, you did.**

01:37:40 3 Q. I said you couldn't sample underneath the

01:37:42 4 ground?

01:37:42 5 A. **Yes, you did.**

01:37:43 6 Q. I did?

01:37:44 7 A. **On a phone call you said this will not**

01:37:46 8 **include any below-ground inspections. And I said**

01:37:50 9 **in the time frame we wouldn't be able to do that,**

01:37:53 10 **although we would want to.**

01:37:54 11 Q. Did you tell the City you wanted to do

01:37:55 12 underground inspections?

01:37:57 13 A. **Yes, we did.**

01:37:57 14 Q. Did the City ever approach us, as far as

01:37:59 15 you know, and ask for underground inspection?

01:38:02 16 A. **I'm not aware of it.**

01:38:05 17 Q. Other than the Hilda sample, you didn't

01:38:10 18 request any type of underground sampling to be

01:38:12 19 done, did you?

01:38:13 20 A. **No, we did not.**

01:38:16 21 Q. And the Hilda sample, that was one where

01:38:20 22 a pipe was being replaced, correct?

01:38:23 23 A. **Yes.**

01:38:23 24 Q. In the ordinary course of business and

01:38:25 25 the City asked for a sample of that pipe to be
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01:38:28 1 sent to you, correct?

01:38:29 2 A. **That's correct.**

01:38:29 3 Q. And it was ultimately sent to you, wasn't

01:38:31 4 it?

01:38:32 5 A. **We assume that that pipe was from that**

01:38:37 6 **location. We don't know that.**

01:38:38 7 Q. Well, it's been proven of record in a

01:38:40 8 discovery hearing, sir, that it was.

01:38:42 9 But the pipe that you received, you

01:38:46 10 viewed that pipe would be about 90 years old,

01:38:49 11 correct?

01:38:50 12 A. **Well, that's--not by what we viewed, but**

01:38:53 13 **it's possible. I would have to go back and look**

01:38:55 14 **at the report.**

01:38:56 15 **What we really anticipated was that it**

01:39:00 16 **was Kalamein pipe that was going to be 90 years**

01:39:04 17 **old. Analysis of the pipe itself--**

01:39:07 18 Q. I'm not going to ask you about the

01:39:09 19 analysis at this point, sir. I have another

01:39:13 20 question for you.

01:39:14 21 A. **Okay.**

01:39:15 22 Q. All right. With respect to that, you

01:39:17 23 sent the pipe to an HDR testing lab, did you not?

01:39:20 24 A. **Yes.**

01:39:20 25 Q. And the pipe--the person it went to was
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01:39:24 1 Jose Pena, correct?

01:39:26 2 A. **Yes.**

01:39:27 3 Q. And he was working with, I believe, a

01:39:29 4 Dr. Bell?

01:39:30 5 A. **Dr. Graham Bell.**

01:39:31 6 Q. And Mr. Bell works for you at HDR?

01:39:35 7 A. **HDR.**

01:39:36 8 Q. And is it--

01:39:38 9 MR. CONNER: Your Honor, I need to

01:39:39 10 introduce these. I need to show this to them.

01:39:42 11 Could we stop the clock just a second while we do

01:39:45 12 this.

01:39:45 13 THE COURT: Why?

01:39:46 14 MR. CONNER: It may take a minute.

01:39:48 15 THE COURT: All right.

01:39:49 16 MR. CONNER: Thank you.

01:40:09 17 MS. PRINZING-JONES: No objection.

01:40:10 18 MR. CONNER: No objection? Good.

01:40:12 19 THE COURT: So do we have a number?

01:40:14 20 MR. CONNER: Yes, Your Honor, it's 25--

01:40:18 21 THE CLERK: 48.

01:40:20 22 MR. CONNER: 2548. Thank you.

01:40:27 23 THE COURT: It's admitted.

01:40:29 24 MR. CONNER: Thank you, Your Honor.

01:40:30 25 **EXHIBITS:**
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01:40:30 **1** (Exhibit No. 2548 marked for identification
 01:40:31 **2** and received into evidence.)
 01:40:31 **3** **Q.** (By Mr. Conner) If you would, Craig, this
 01:40:32 **4** was produced from your files. I need to show it
 01:40:35 **5** to you, don't I? I'll go ahead and get it marked.
 01:41:00 **6** MR. CONNER: Your Honor, do you mind if I
 01:41:05 **7** stand up here?
 01:41:06 **8** THE COURT: No, that's fine.
 01:41:07 **9** **Q.** (By Mr. Conner) 2548, Craig, take a
 01:41:09 **10** quick look at this. This is City production
 01:41:11 **11** 129911, correct?
 01:41:14 **12** **A. Yes.**
 01:41:15 **13** **Q.** And you understand that you produced
 01:41:16 **14** these documents?
 01:41:17 **15** **A. That's correct.**
 01:41:18 **16** **Q.** All right, sir. If you would, direct
 01:41:23 **17** your attention to the first paragraph. It says,
 01:41:28 **18** *Late last night I copied a few more photos of all*
 01:41:32 **19** *three samples--actually, it's on the screen. It's*
 01:41:35 **20** *admitted. Can you pull it up?*
 01:41:44 **21** *Late last night I copied a few more*
 01:41:46 **22** *photos of all three samples after more careful*
 01:41:49 **23** *analysis of their respective outer and inner*
 01:41:52 **24** *surfaces. I saved on in the same folders but*
 01:41:56 **25** *under yesterday's date. Let me know if you have*
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01:41:59 **1** *any trouble finding them. Right?*
 01:42:01 **2** Then they say, *The north and west pipe*
 01:42:05 **3** *samples do not show any signs of metal loss.*
 01:42:05 **4** Correct?
 01:42:05 **5** **A. That's correct.**
 01:42:06 **6** **Q.** *As for the south sample, there is a small*
 01:42:08 **7** *amount of uniform corrosion and pitting in some*
 01:42:11 **8** *areas but overall the pipe is in good condition.*
 01:42:14 **9** Correct?
 01:42:14 **10** **A. That's what it says, yes.**
 01:42:16 **11** **Q.** Isn't it true, sir, that the records show
 01:42:18 **12** this pipe had been in the ground 90 years?
 01:42:21 **13** **A. We don't have any record of that.**
 01:42:23 **14** **Q.** You don't, okay. Isn't it true that the
 01:42:25 **15** records of the company showed this was Kalamein
 01:42:28 **16** pipe?
 01:42:28 **17** **A. It showed it was Kalamein pipe, but it**
 01:42:31 **18** **wasn't Kalamein pipe.**
 01:42:32 **19** **Q.** That's fine. It was being replaced,
 01:42:35 **20** though. The whole section of that line was being
 01:42:36 **21** replaced, wasn't it?
 01:42:38 **22** **A. Yes.**
 01:42:39 **23** **Q.** All right. Let's take a look on up at
 01:42:41 **24** the top. And this is--this is an e-mail back to
 01:42:51 **25** Jose. And he says, *I'll add these details while*
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01:42:55 **1** *waiting for Kathryn to get back to us in regards*
 01:42:58 **2** *to Dr. Bell's questions. Dr. Bell also verified*
 01:43:01 **3** *that the samples are in pretty good condition and*
 01:43:04 **4** *the leaks could be the result of joint failure.*
 01:43:06 **5** Saw that?
 01:43:07 **6** **A. Yes.**
 01:43:07 **7** **Q.** Let's go to the next e-mail.
 01:43:12 **8** **A. May I make a comment about this e-mail?**
 01:43:14 **9** **Q.** No, sir. There is not a question
 01:43:17 **10** pending.
 01:43:17 **11** **A. Okay.**
 01:43:31 **12** MR. CONNER: Any objection to this?
 01:43:48 **13** MS. PRINZING-JONES: Just a minute. Is
 01:43:50 **14** there another page?
 01:43:50 **15** MR. CONNER: Not in this exhibit.
 01:43:53 **16** MS. PRINZING-JONES: You are just looking
 01:43:54 **17** at the top? We would like the second page.
 01:43:59 **18** MR. CONNER: You can do that on redirect,
 01:44:02 **19** ma'am.
 01:44:02 **20** MS. PRINZING-JONES: Do you have the
 01:44:03 **21** second page?
 01:44:03 **22** MR. CONNER: This is all I have right
 01:44:05 **23** now.
 01:44:05 **24** MS. PRINZING-JONES: We object because
 01:44:06 **25** it's an incomplete exhibit, because it's an e-mail
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01:44:10 **1** chain and there appears to be an e-mail both
 01:44:13 **2** before and after this. Without the context of
 01:44:15 **3** this e-mail I would be unable to question the
 01:44:18 **4** witness about it.
 01:44:18 **5** THE COURT: So are you saying, Ms. Jones,
 01:44:20 **6** that under the rule of completeness you think it's
 01:44:24 **7** appropriate to have all of it in at the same time?
 01:44:27 **8** MS. PRINZING-JONES: Yes, Your Honor.
 01:44:28 **9** THE COURT: Your response, Mr. Conner?
 01:44:30 **10** MR. CONNER: Yes, Your Honor. I think
 01:44:31 **11** what we're doing here is simply showing--the only
 01:44:34 **12** e-mail I'm interested in is the one at the top.
 01:44:37 **13** And this is their production. And so
 01:44:39 **14** they can--on redirect examination we'll be glad to
 01:44:43 **15** do that. I don't have the rest of it with me at
 01:44:45 **16** this time, Your Honor.
 01:44:45 **17** THE COURT: Well, I think that they are
 01:44:48 **18** entitled under the rule of completeness at this
 01:44:51 **19** time to have the entire context presented. So
 01:44:57 **20** perhaps one of your many associates can find you
 01:45:02 **21** the additional e-mails.
 01:45:03 **22** MR. CONNER: Sure. I would be glad to do
 01:45:06 **23** that, Your Honor. Could we take a short break to
 01:45:09 **24** do that?
 01:45:09 **25** MS. DESOTO: I'll take care of it.
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01:45:11 **1** THE COURT: Thank you, Katie.
 01:46:21 **2** MR. CONNER: We're having to go to the
 01:46:23 **3** production, Your Honor, but I think we can get it.
 01:46:25 **4** THE COURT: Did you want this marked,
 01:46:26 **5** Mr. Conner?
 01:46:27 **6** MR. CONNER: It will be the next exhibit
 01:46:31 **7** number.
 01:46:34 **8** THE CLERK: 2549.
 01:46:36 **9** MS. PRINZING-JONES: What was it?
 01:46:38 **10** THE COURT: 2549.
 01:46:39 **11** EXHIBITS:
 01:46:40 **12** (Exhibit No. 2549 marked for identification.)
 01:46:48 **13** MS. PRINZING-JONES: Your Honor, perhaps
 01:46:49 **14** we could move on and come back to this point since
 01:46:52 **15** this witness is scheduled--
 01:46:54 **16** MR. CONNER: It will just take another
 01:46:57 **17** minute, Your Honor.
 01:46:57 **18** MS. PRINZING-JONES: --to fly out of town
 01:46:59 **19** this afternoon.
 01:46:59 **20** THE COURT: I'm sorry?
 01:47:00 **21** MS. PRINZING-JONES: This witness is
 01:47:00 **22** scheduled for a flight and we're trying to get him
 01:47:03 **23** out on that flight if possible.
 01:47:04 **24** THE COURT: We'll do our best, but I
 01:47:06 **25** think it's appropriate to handle it all at once
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01:47:08 **1** right here.
 01:48:14 **2** MS. PRINZING-JONES: So it looks like the
 01:48:15 **3** first e-mail that he presented is the one before,
 01:48:21 **4** so we just need the one after.
 01:48:23 **5** MS. DESOTO: Tasha, which supplement was
 01:48:26 **6** it in?
 01:48:27 **7** MS. PRINZING-JONES: I don't know. The
 01:48:28 **8** first one was the one before.
 01:48:29 **9** MS. DESOTO: I'm wondering, you know--
 01:48:39 **10** THE COURT: So it looks like 2548 is City
 01:48:43 **11** 129911, and that this new one is 129912.
 01:48:50 **12** MR. CONNER: I think that's the chain,
 01:48:51 **13** Your Honor.
 01:48:52 **14** THE COURT: We do have the chain here.
 01:48:53 **15** MS. PRINZING-JONES: Except we just need
 01:48:55 **16** the one after.
 01:48:56 **17** THE COURT: So we would need 13.
 01:48:58 **18** MS. PRINZING-JONES: Yes, potentially.
 01:49:00 **19** You know how e-mail chains start at the bottom and
 01:49:03 **20** they go up.
 01:49:23 **21** Okay, we've located it. I'm just reading
 01:49:25 **22** it now. Katie, I found it. I'm reading it right
 01:50:10 **23** now.
 01:50:18 **24** Okay, it actually goes to 18. And with
 01:50:25 **25** now having reviewed that, I don't have an
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01:50:26 **1** objection to this.
 01:50:27 **2** THE COURT: All right.
 01:50:27 **3** MS. PRINZING-JONES: It seems like since
 01:50:29 **4** they are connected, we should mark them as one
 01:50:34 **5** exhibit because they are part of the chain.
 01:50:34 **6** MR. CONNER: Well, they have already been
 01:50:36 **7** marked separately, Your Honor.
 01:50:36 **8** THE COURT: I'm going to leave them as
 01:50:38 **9** separate.
 01:50:39 **10** All right, so go ahead, Mr. Conner.
 01:50:42 **11** **Q.** (By Mr. Conner) By the time that you had
 01:50:43 **12** received the Hilda pipe samples, the three
 01:50:45 **13** samples, correct, isn't it true that you had
 01:50:48 **14** already given the City the recommendation that all
 01:50:51 **15** the Kalamein pipe needed to be replaced in the
 01:50:55 **16** next ten years?
 01:50:56 **17** **A. Correct.**
 01:50:57 **18** **Q.** Take a look at 2549, please, sir. And
 01:51:00 **19** it's admitted, so we can pull it up on the screen.
 01:51:08 **20** Jose is writing to Dr. Bell--or,
 01:51:15 **21** actually, this is to Jose, it looks like.
 01:51:18 **22** *After reviewing the lab data I have a*
 01:51:20 **23** *question for you and also wanted to point out how*
 01:51:22 **24** *Craig Close wants us to spin the text. Knowing*
 01:51:25 **25** *that, you may be able to highlight some of the*
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01:51:28 **1** *photos or measurements to help me.*
 01:51:33 **2** By this point in time, Mr. Close, is it
 01:51:35 **3** true that you had already had a decision made on
 01:51:37 **4** what you were going to do and had already
 01:51:39 **5** recommended to the City, and that you were
 01:51:41 **6** encouraging Mr. Pena to spin the text?
 01:51:47 **7** **A. No, actually. This is the first I've**
 01:51:50 **8** **seen it and I did not ask him.**
 01:51:52 **9** **What I was asking, and the concern that**
 01:51:54 **10** **we had over Kalamein pipe, was that it was in**
 01:51:57 **11** **worse shape than we thought and should the**
 01:52:00 **12** **recommendation be to accelerate the replacement of**
 01:52:05 **13** **a main sooner than ten years. So I wanted to know**
 01:52:10 **14** **if it was worse than we thought.**
 01:52:13 **15** **Q.** Sure. And the pipe that you actually had
 01:52:15 **16** sent to them and they looked at was not worse than
 01:52:18 **17** you thought, correct?
 01:52:20 **18** **A. It wasn't Kalamein pipe.**
 01:52:22 **19** **Q.** I'm not asking that, sir.
 01:52:23 **20** The pipe that you had sent to them was
 01:52:25 **21** not worse than you expected, was it?
 01:52:27 **22** **A. No. But that's irrelevant.**
 01:52:29 **23** **Q.** I'm just asking you about that pipe, sir.
 01:52:31 **24** And your idea as reflected in this e-mail
 01:52:34 **25** further on down, it says, *Craig's idea. HDR has*
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01:52:38 **1** *already indicated to the City that all of this*
 01:52:41 **2** *pipng should be replaced over the next ten years.*
 01:52:43 **3** *The question we want to confirm by comparison to*
 01:52:46 **4** *this sample, is whether all of the 15 miles of*
 01:52:49 **5** *Kalamein piping has already exceeded its expected*
 01:52:52 **6** *useful life to support our recommendation and if*
 01:52:56 **7** *the piping needs to be replaced even sooner.*
 01:52:58 **8** *Based on the data received from Mountain Water,*
 01:53:01 **9** *all of the Kalamein pipe was installed in the*
 01:53:04 **10** *1910s or 1920s.*
 01:53:07 **11** Correct?
 01:53:08 **12** **A. Correct.**
 01:53:09 **13** **Q.** So whatever that pipe was, the pipe that
 01:53:12 **14** you received was in much better condition than you
 01:53:14 **15** ever expected, correct? Correct? Yes or no, sir.
 01:53:24 **16** **A. I would have to answer that as no.**
 01:53:26 **17** **Q.** It wasn't in as good as you expected?
 01:53:28 **18** **A. For the type of material that it actually**
 01:53:32 **19** **was, it was not in as good a condition as we would**
 01:53:38 **20** **have hoped. Over 50 percent of the loss of the**
 01:53:40 **21** **wall had already been exceeded.**
 01:53:44 **22** **Q.** Okay. So was it in immediate need or
 01:53:49 **23** risk of catastrophic failure?
 01:53:51 **24** **A. No. But we did not recommend that that**
 01:53:56 **25** **pipe and that material be replaced in ten years.**
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01:53:58 **1** **Q.** You wouldn't recommend that?
 01:54:02 **2** **A. No, and we didn't.**
 01:54:02 **3** **Q.** Okay, fair enough.
 01:54:04 **4** You've worked in San Diego awhile,
 01:54:07 **5** haven't you, sir?
 01:54:08 **6** **A. Yes, sir.**
 01:54:08 **7** **Q.** And HDR has programs. One of those
 01:54:11 **8** programs is Bid to Goal, correct?
 01:54:15 **9** **A. That was a previous program, yes.**
 01:54:17 **10** **Q.** It's a previous program. And that's a
 01:54:19 **11** program where you go in and really do an
 01:54:21 **12** assessment of a system, let's say a wastewater
 01:54:25 **13** and/or water system, as was done in San Diego by
 01:54:29 **14** HDR, correct?
 01:54:29 **15** **A. That's correct.**
 01:54:30 **16** **Q.** And you set goals for the system
 01:54:33 **17** operators and the people working within all these
 01:54:37 **18** divisions. A very in-depth process, isn't it?
 01:54:39 **19** **A. We don't set goals, no. The employees**
 01:54:41 **20** **set goals.**
 01:54:42 **21** **Q.** The employees set goals. But then you
 01:54:43 **22** benchmark those goals against what other IOUs and
 01:54:48 **23** GOUs are doing, correct?
 01:54:49 **24** **A. We benchmark those against other--not**
 01:54:52 **25** **just investors, but other public-owned.**
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01:54:54 **1** **Q.** That's what I said.
 01:54:55 **2** **A. I'm sorry.**
 01:54:58 **3** **Q.** IOU and GOU.
 01:54:58 **4** **A. I didn't hear that.**
 01:54:58 **5** **Q.** And you come up with goals to achieve,
 01:55:01 **6** right?
 01:55:01 **7** **A. The employees set the goals, not us.**
 01:55:03 **8** **Q.** I said you, but the plan is to come up
 01:55:07 **9** with goals to achieve to?
 01:55:08 **10** **A. That's correct.**
 01:55:09 **11** **Q.** And then you help implement them, right?
 01:55:12 **12** **A. Actually, no. We help monitor and**
 01:55:14 **13** **everything else. They go forward and they**
 01:55:16 **14** **implement the changes they need to meet those**
 01:55:19 **15** **goals.**
 01:55:19 **16** **Q.** Very good. You also do optimization
 01:55:21 **17** studies, right?
 01:55:22 **18** **A. That is correct.**
 01:55:23 **19** **Q.** Now, the City of Missoula never asked you
 01:55:26 **20** or HDR to do an optimization study or bid-to-goal
 01:55:32 **21** for any sort of replacement of the wastewater
 01:55:34 **22** system?
 01:55:34 **23** **A. No.**
 01:55:35 **24** **Q.** They also didn't ask you to do that with
 01:55:37 **25** respect to the water system?
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01:55:38 **1** **A. No.**
 01:55:39 **2** **Q.** You could do that, though, couldn't you?
 01:55:41 **3** **A. Yes.**
 01:55:43 **4** **Q.** With respect to--pull up Exhibit 158,
 01:55:46 **5** please.
 01:55:55 **6** And this has already been introduced,
 01:55:58 **7** Mr. Close. And it's an RFP to retain consulting
 01:56:02 **8** engineering for review of the Mountain Water
 01:56:04 **9** system. This was in February of 2013.
 01:56:08 **10** You don't ever recall receiving an RFP
 01:56:11 **11** from them, do you?
 01:56:12 **12** **A. No.**
 01:56:13 **13** **Q.** All right. Let's go to Page 158-004.
 01:56:25 **14** And the top part, highlight that.
 01:56:28 **15** One of the things that this RFP or
 01:56:32 **16** response was supposed to be for, was to assess the
 01:56:34 **17** ability of Mountain Water Company staff to provide
 01:56:35 **18** overall management and operations under a
 01:56:38 **19** publicly-owned operation without support from its
 01:56:41 **20** parent company.
 01:56:42 **21** Do you see that?
 01:56:43 **22** **A. Yes.**
 01:56:43 **23** **Q.** That's something that you could do, isn't
 01:56:46 **24** it, or HDR could do.
 01:56:47 **25** **A. Yes.**
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01:56:48 **1** **Q.** You were not asked to do that, were you?
 01:56:50 **2** **A. No.**
 01:56:51 **3** **Q.** You can take it down.
 01:56:53 **4** With respect to your experience in San
 01:57:00 **5** Diego, it's my understanding that San Diego had a
 01:57:04 **6** totally separate water system, totally separate
 01:57:07 **7** department. And they had a totally separate
 01:57:09 **8** wastewater department. Different employees,
 01:57:11 **9** different administration, different billing. The
 01:57:14 **10** whole nine yards, correct?
 01:57:16 **11** **A. That's correct.**
 01:57:16 **12** **Q.** And it was your job--or not yours, but
 01:57:21 **13** HDR assisted in integrating those two departments,
 01:57:24 **14** correct?
 01:57:24 **15** **A. Yes.**
 01:57:24 **16** **Q.** And that resulted in tremendous savings,
 01:57:26 **17** didn't it?
 01:57:27 **18** **A. Yes.**
 01:57:28 **19** **Q.** It also resulted in 187 employees being
 01:57:33 **20** RIF'd or moved out of the organization, correct?
 01:57:36 **21** **A. That is not correct.**
 01:57:36 **22** **Q.** It's not correct?
 01:57:37 **23** **A. No.**
 01:57:52 **24** **Q.** Isn't it true, sir, that over a five-year
 01:57:54 **25** period--over the five-year program, which was led
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01:57:58 **1** by HDR, reduced staff by more than 190 positions
 01:58:03 **2** and saved \$387 million.
 01:58:06 **3** **A. Yes. I need to--**
 01:58:07 **4** **Q.** Is that true?
 01:58:08 **5** **A. Yes, but I need to explain.**
 01:58:09 **6** **Q.** You can explain on redirect.
 01:58:11 **7** That's true, though, wasn't it, sir?
 01:58:13 **8** MS. PRINZING-JONES: Your Honor, under
 01:58:14 **9** the rule of completeness he ought to be able to
 01:58:16 **10** explain right now.
 01:58:17 **11** THE COURT: No, I think this is more
 01:58:19 **12** appropriate for redirect.
 01:58:20 **13** MR. CONNER: Thank you, Your Honor.
 01:58:20 **14** MR. SCHNEIDER: I think you meant
 01:58:20 **15** redirect.
 01:58:29 **16** **Q.** (By Mr. Conner) You indicated--
 01:58:34 **17** MR. CONNER: Did I say cross here?
 01:58:36 **18** MR. SCHNEIDER: You said recross, I
 01:58:39 **19** think.
 01:58:39 **20** **Q.** (By Mr. Conner) I want to be correct.
 01:58:46 **21** We're getting close, Mr. Close.
 01:58:49 **22** **A. Thank you. I don't think I've ever heard**
 01:58:50 **23** **that before.**
 01:58:51 **24** **Q.** I bet you haven't.
 01:58:52 **25** Let's talk about the dams just a second.
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01:58:57 **1** Isn't it true, sir, that HDR is recommending that
 01:58:59 **2** the dams be retired?
 01:59:01 **3** **A. Yes.**
 01:59:02 **4** **Q.** And isn't it true, sir, that there is
 01:59:06 **5** excess groundwater supply for the operation of the
 01:59:08 **6** water system, and the water supply from the
 01:59:10 **7** Rattlesnake Watershed area is not necessary for
 01:59:12 **8** that operation?
 01:59:13 **9** **A. Correct.**
 01:59:16 **10** **Q.** And isn't it true, sir, that you are
 01:59:17 **11** recommending that the dams be notched,
 01:59:19 **12** stabilization of the embankment, stream
 01:59:22 **13** restoration in order for this to go forward?
 01:59:26 **14** **A. That is correct.**
 01:59:26 **15** **Q.** That's your position.
 01:59:26 **16** **A. That's correct.**
 01:59:31 **17** **Q.** Now, Mr. Brand is a geotechnical
 01:59:33 **18** engineer, isn't he?
 01:59:34 **19** **A. Yes, with a specialty in dam safety.**
 01:59:36 **20** **Q.** And he's a specialist, right? That's why
 01:59:38 **21** you called him in.
 01:59:40 **22** **A. That's correct.**
 01:59:40 **23** **Q.** And he has full credentials to testify in
 01:59:43 **24** regard to--or to prepare the report that you
 01:59:46 **25** testified to, correct?
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01:59:47 **1** **A. Correct.**
 01:59:47 **2** **Q.** And you need somebody with those kind of
 01:59:49 **3** credentials in order to make that type of
 01:59:51 **4** evaluation, don't you?
 01:59:52 **5** **A. Correct.**
 01:59:56 **6** **Q.** With respect to the DEQ report, sir, you
 02:00:02 **7** testified, I think, that the DEQ reports really
 02:00:06 **8** are more or less--I won't say, I'm just
 02:00:09 **9** paraphrasing here--not a superficial survey, but
 02:00:12 **10** it's clearly not a survey that you could really
 02:00:15 **11** put credence in with respect to the condition of
 02:00:17 **12** the system? Is that what you are referring to?
 02:00:20 **13** **A. A Sanitary Survey is not a condition**
 02:00:22 **14** **assessment of the system.**
 02:00:23 **15** **Q.** I understand that, sir.
 02:00:26 **16** Do you know what or how the Department of
 02:00:29 **17** Environmental Quality in Montana, do you know what
 02:00:31 **18** procedures they follow in performing their
 02:00:32 **19** assessments? Yes or no.
 02:00:35 **20** **A. No.**
 02:00:36 **21** **Q.** Isn't it true, sir, that you didn't
 02:00:39 **22** review these DEQ reports and assessments in
 02:00:43 **23** preparing your first report?
 02:00:45 **24** **A. No, I did not in my first report, that is**
 02:00:49 **25** **correct.**
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02:00:49 **1 Q.** And let's pull up Exhibit 1284, please.
 02:00:57 **2** It's my understanding from your
 02:00:59 **3** testimony, sir, that what they are really trying
 02:01:02 **4** to find out if--they want to make sure there are
 02:01:04 **5** no critters getting into the water, right?
 02:01:07 **6 A. Protecting the potable water quality,**
 02:01:09 **7 that's correct.**
 02:01:10 **8 Q.** Well, you mentioned critters, right?
 02:01:12 **9 A. Yeah. There's critters getting in.**
 02:01:14 **10 Q.** All right, that's something I know about
 02:01:16 **11** in Tennessee. We have quite a few little
 02:01:18 **12** critters.
 02:01:19 **13** Let's go, if we would, to Page 09. And
 02:01:27 **14** let's go to the top part first and the first
 02:01:30 **15** paragraph. This is kind of explaining the report,
 02:01:34 **16** I believe.
 02:01:35 **17** "The State, or an authorized agent, must
 02:01:37 **18** conduct Sanitary Surveys for all public water
 02:01:40 **19** supply systems in Montana. DEQ believes that
 02:01:43 **20** periodic Sanitary Surveys, along with appropriate
 02:01:45 **21** corrective actions, are indispensable for assuring
 02:01:49 **22** the long-term quality and safety of drinking
 02:01:52 **23** water. When properly conducted, Sanitary Surveys
 02:01:54 **24** can provide important information on a water
 02:01:58 **25** system's design, operations, and can identify
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02:02:00 **1** minor and significant deficiencies for correction
 02:02:03 **2** before they become major problems."
 02:02:05 **3** That's what they view this process is
 02:02:09 **4** for. Would you agree with that based on this
 02:02:10 **5** statement?
 02:02:11 **6 A. Yes.**
 02:02:11 **7 Q.** Let's go down to the other highlighted
 02:02:13 **8** portion.
 02:02:14 **9** MS. PRINZING-JONES: Your Honor, this
 02:02:15 **10** exhibit hasn't been admitted yet.
 02:02:17 **11** MR. CONNER: Oh, I'm sorry, Your Honor.
 02:02:19 **12** I move for admission. It's one of their exhibits.
 02:02:22 **13** I apologize.
 02:02:22 **14** THE COURT: Any objection?
 02:02:23 **15** MS. PRINZING-JONES: No.
 02:02:24 **16** THE COURT: It's admitted now.
 02:02:26 **17** MR. CONNER: Thank you, Your Honor. I'm
 02:02:28 **18** sorry about that.
 02:02:29 **19 EXHIBITS:**
 02:02:29 **20** (Exhibit No. 1284 received into evidence.)
 02:02:29 **21 Q.** (By Mr. Conner) This indicates what they
 02:02:31 **22** are to look at, doesn't it, Craig?
 02:02:33 **23 A. Yes.**
 02:02:34 **24 Q. EPA and ASDWA--do you know what that**
 02:02:38 **25** stands for?
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02:02:39 **1 A. I know what EPA stands for. I don't**
 02:02:42 **2 recall what ASDWA. I would have to look.**
 02:02:46 **3 Q.** That's fine. --*guidance identifies eight*
 02:02:48 **4** *broad components that should be covered in a*
 02:02:50 **5** *Sanitary Survey. Using these eight broad*
 02:02:53 **6** *components as a guide, minor and significant*
 02:02:55 **7** *deficiencies should be described in the letter to*
 02:02:59 **8** *the system owners. They look at the source. They*
 02:03:01 **9** *look at the treatment, distribution system,*
 02:03:02 **10** *finished water storage, pumps, facilities,*
 02:03:05 **11** *controls. Monitoring and reporting data*
 02:03:07 **12** *verification, system management and operation,*
 02:03:10 **13** *operator compliance with state requirements.*
 02:03:13 **14** So you weren't aware that's what being
 02:03:16 **15** looked at, were you?
 02:03:18 **16 A. No, I was aware.**
 02:03:20 **17 Q.** Oh, okay. They also found no other
 02:03:22 **18** significant deficiencies noted during this
 02:03:25 **19** inspection, correct?
 02:03:25 **20 A. Yes. From a Sanitary Survey perspective**
 02:03:28 **21** **and not condition of equipment. Only for**
 02:03:32 **22** **protection of--protecting the water quality.**
 02:03:34 **23 Q.** Right, sir. I understand your opinion of
 02:03:36 **24** this survey. That's your opinion of this survey.
 02:03:38 **25** I know that, that's what you testified to,
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02:03:40 **1** correct?
 02:03:40 **2 A. Correct.**
 02:03:48 **3** MR. CONNER: Thank you, Your Honor, you
 02:03:49 **4** can take that down.
 02:03:54 **5** No further questions, Your Honor.
 02:03:55 **6** THE COURT: All right, thank you.
 02:03:56 **7** Any questions from any other counsel?
 02:04:00 **8** MR. MERCER: Nothing from Carlyle, Your
 02:04:01 **9** Honor.
 02:04:02 **10** MR. ZADICK: No, Your Honor.
 02:04:03 **11** THE COURT: All right. Thank you.
 02:04:04 **12** Any redirect, Ms. Jones?
 02:04:08 **13** MS. PRINZING-JONES: Thank you.
 02:04:13 **14** MR. CONNER: Your Honor, it's going to
 02:04:15 **15** take a little time to get all my stuff. Can I sit
 02:04:19 **16** up here? Because I might have a little cross, is
 02:04:22 **17** that okay?
 02:04:23 **18** THE COURT: That's fine.
 02:04:28 **19** REDIRECT EXAMINATION
 02:04:29 **20** BY MS. PRINZING-JONES:
 02:04:29 **21 Q.** Hello.
 02:04:42 **22 A. Hi there.**
 02:04:43 **23 Q.** You were asked questions about the
 02:04:44 **24** efficiencies enjoyed by the City of San Diego when
 02:04:49 **25** they integrated their water utility with their
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02:04:52 **1** wastewater utility. Do you recall that?

02:04:54 **2** **A. Yes.**

02:04:54 **3** **Q.** And you were asked whether there was a

02:05:00 **4** RIF required of employees. In other words, did

02:05:02 **5** the employees get fired?

02:05:04 **6** **A. No.**

02:05:05 **7** **Q.** What happened?

02:05:06 **8** **A. The employees made all the**

02:05:09 **9** **recommendations as to the reduction of positions.**

02:05:14 **10** **The majority of those were open positions for**

02:05:16 **11** **quite some time because of their financial**

02:05:19 **12** **problems and there were some retirements.**

02:05:24 **13** **All of the reductions in staff were fully**

02:05:27 **14** **recommended by the staff themselves and approved**

02:05:29 **15** **by the union. It did not come from HDR or the**

02:05:33 **16** **management of the City of San Diego. It was**

02:05:38 **17** **purely at their own direction.**

02:05:40 **18** **Q.** And did that happen over time through

02:05:43 **19** **natural attrition, retirements, things of that**

02:05:46 **20** **nature?**

02:05:46 **21** **A. Yes.**

02:05:47 **22** **Q.** Anybody get fired?

02:05:48 **23** **A. No.**

02:05:49 **24** **Q.** Now, you were asked questions about your

02:05:54 **25** **request to test Kalamein pipe. Do you recall**
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02:05:57 **1** that?

02:05:58 **2** **A. Yes.**

02:05:59 **3** **Q.** Okay. What was your concerns

02:06:02 **4** specifically related to Kalamein pipe that may be

02:06:04 **5** in the ground here in Missoula?

02:06:06 **6** **A. Well, the concern in terms of doing the**

02:06:08 **7** **research for Kalamein pipe--which when we did our**

02:06:13 **8** **initial report we had not done that research.**

02:06:16 **9** **The concern was that in 19--I mean, 1884**

02:06:20 **10** **it was recommended by AWWA to stop using Kalamein**

02:06:25 **11** **pipe for concerns that it was not intended for**

02:06:29 **12** **potable use.**

02:06:30 **13** **The concern was that the high lead**

02:06:33 **14** **content in Kalamein pipe was noticed that it was**

02:06:36 **15** **leaching, out of the pipe itself, material into**

02:06:40 **16** **the water supply, which is probably one of the**

02:06:42 **17** **reasons that it was stopped being produced in**

02:06:44 **18** **1920s. It was made for boiler systems, not for**

02:06:49 **19** **potable water systems.**

02:06:51 **20** **So we wanted to know more about the**

02:06:53 **21** **corrosion, particularly internal corrosion of**

02:06:56 **22** **Kalamein pipe, to see what the leak--potential**

02:07:00 **23** **leakage of lead into the system.**

02:07:02 **24** **Additionally, it concerned me that when**

02:07:07 **25** **we found out we didn't have that material, it**
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02:07:09 **1** **really indicated that Mountain Water really didn't**

02:07:12 **2** **know what pipe they had in the ground. It was**

02:07:16 **3** **indicated it's Kalamein pipe, 90 years old. We**

02:07:19 **4** **thought that was a good one to look at because of**

02:07:21 **5** **the unknown factors, there's very little**

02:07:24 **6** **literature on Kalamein pipe in terms of service**

02:07:27 **7** **life.**

02:07:27 **8** **So it was quite a surprise to us when we**

02:07:31 **9** **did the analysis of the pipe, that it wasn't**

02:07:33 **10** **Kalamein pipe. It brings in the question, do they**

02:07:36 **11** **know what pipe and what material is in their**

02:07:39 **12** **system at all?**

02:07:40 **13** **Q.** Now, did we receive representations from

02:07:43 **14** **Mountain Water Company that they were removing**

02:07:45 **15** **Kalamein pipe from the Hilda project?**

02:07:50 **16** **A. I don't recall that. I believe yes.**

02:07:54 **17** **Q.** Did the GIS of Mountain Water's own

02:07:58 **18** **records show that that was going to be Kalamein**

02:08:00 **19** **pipe?**

02:08:00 **20** **A. That is correct.**

02:08:01 **21** **Q.** The pipe samples that were received from

02:08:03 **22** **Mountain Water, were they labeled Kalamein pipe?**

02:08:06 **23** **A. No.**

02:08:06 **24** **Q.** And when you tested them, were they

02:08:08 **25** **Kalamein pipe?**
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02:08:09 **1** **A. No, they were not.**

02:08:17 **2** **Q.** You were asked questions about your time

02:08:19 **3** **with American Water Service Company.**

02:08:21 **4** **A. Yes.**

02:08:22 **5** **Q.** And you mentioned that that was quite

02:08:24 **6** **different from the situation with Mountain Water.**

02:08:27 **7** **A. Yes.**

02:08:27 **8** **Q.** Would you like to explain now what those

02:08:29 **9** **differences are?**

02:08:30 **10** **A. Well, the biggest difference is that we**

02:08:32 **11** **held multiple positions within the organization in**

02:08:37 **12** **comparison to Mountain Water Company. They have**

02:08:40 **13** **separate, you know, vice president of engineering,**

02:08:42 **14** **operations, as well as there are counterparts in**

02:08:47 **15** **Park Water.**

02:08:48 **16** **We served as the same role in both the**

02:08:50 **17** **local company, as well as the service company. So**

02:08:53 **18** **there was really economies of scale and savings**

02:08:56 **19** **that we had that's not really seen in the current**

02:09:00 **20** **situation between Park Water and Mountain Water**

02:09:03 **21** **Company.**

02:09:03 **22** **Q.** When you reviewed the organizational

02:09:05 **23** **structure of Park Water and Mountain Water, did**

02:09:08 **24** **you find there was duplication of services?**

02:09:11 **25** **A. Yes. Very heavy in terms of the**
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02:09:13 **1** management here at the local company. We had
02:09:18 **2** operations in Monterey and other places that were
02:09:20 **3** larger than Mountain Water where we did not have
02:09:22 **4** all the upper management and admin support that
02:09:31 **5** are at Mountain Water Company.

02:09:32 **6** **Q.** You were asked about the return on equity
02:09:35 **7** actually enjoyed by Mountain Water and Park Water.
02:09:38 **8** Do you recall that?

02:09:38 **9** **A.** Mountain Water, yes, uh-huh.

02:09:42 **10** **Q.** Tina, can you bring up demonstrative
02:09:44 **11** Exhibit 1202, Page 2. And the bottom.

02:09:53 **12** You actually did an analysis, did you
02:09:56 **13** not, of the return on equity enjoyed by Mountain
02:09:59 **14** Water? And this would be the profit; am I right
02:10:01 **15** about that?

02:10:02 **16** **A.** Yes, this is the return on equity. This
02:10:04 **17** is the profit. They--for the years 2012
02:10:06 **18** through 2014. As you can see, 2012, it was--the
02:10:14 **19** actual was roughly eight and a half percent, but
02:10:21 **20** it jumped up to 9 percent in 2013 and a little
02:10:25 **21** over 9.24 in 2014.

02:10:36 **22** **Q.** What's the rate of return?

02:10:38 **23** **A.** They are authorized for nine and a
02:10:40 **24** quarter percent.

02:10:42 **25** **Q.** Okay. You were asked about how quickly
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02:12:01 **1** leakage is they are putting chlorinated water down
02:12:03 **2** into the ground. You know, obviously there are
02:12:06 **3** NPDES permits for actually discharge from fire
02:12:09 **4** hydrants and tanks in terms of dechlorination of
02:12:14 **5** any requirements of drainage from this facility.

02:12:18 **6** **So, yes, the concern is over time by that**
02:12:22 **7** **much, that you are putting, you know, chemically**
02:12:26 **8** **treated water into the ground.**

02:12:28 **9** **Q.** What if these soils around these leaking
02:12:32 **10** pipes may be contaminated from other sources?

02:12:35 **11** Does that present a risk to the aquifer as that
02:12:39 **12** water leaks through potentially contaminated soil?

02:12:42 **13** MR. CONNER: Objection, Your Honor.
02:12:43 **14** Assumes facts not in evidence.

02:12:45 **15** MS. PRINZING-JONES: This is directly in
02:12:46 **16** response to his questioning, Your Honor.

02:12:48 **17** MR. CONNER: No, it was not. You are
02:12:50 **18** asking about contaminated soils and there has been
02:12:54 **19** no proof that there are contaminated soils around
02:12:57 **20** these pipes. None.

02:13:00 **21** Your Honor, he's also testified that he
02:13:02 **22** didn't do any underground testing. He has no
02:13:05 **23** knowledge of the soil conditions to make any kind
02:13:09 **24** of estimation with respect to this system.

02:13:12 **25** MS. PRINZING-JONES: Your Honor, he asked
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02:10:52 **1** the water from the leaking pipes drains back into
02:10:54 **2** the aquifer, but were not allowed to explain.

02:10:56 **3** Can you explain now what the important
02:10:58 **4** issues are there?

02:11:00 **5** **A.** Obviously the concern is, you know, what
02:11:03 **6** happens when leaks occur, regardless of the
02:11:07 **7** material. There is a mound of water that builds
02:11:10 **8** up around pipes and--that drains down. It doesn't
02:11:14 **9** just flush like a toilet and it's gone. It builds
02:11:17 **10** up under the hydrostatic pressure and slowly seeps
02:11:23 **11** down into the ground.

02:11:24 **12** The amount of water they are talking
02:11:26 **13** about from the service lines would actually--if
02:11:28 **14** they were trying to determine it, would actually
02:11:29 **15** come to the surface and be able to see that. The
02:11:32 **16** size of the leak it would take to produce that
02:11:35 **17** much water from service lines would have to become
02:11:37 **18** evident. It would be impossible for it to
02:11:42 **19** actually drain that fast.

02:11:43 **20** **Q.** When you have leakage to the degree that
02:11:46 **21** we know exists in Mountain Water's system, does
02:11:52 **22** that actually cause harm, including environmental
02:11:54 **23** concerns, in addition to the fact that all of that
02:11:57 **24** water is simply lost out of the system?

02:11:59 **25** **A.** Well, obviously the concern of all of the
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02:13:13 **1** about the percolation, what happens when the water
02:13:15 **2** comes out and it just drains right back into the
02:13:17 **3** aquifer. These are all directly responsive to
02:13:20 **4** that line of questioning.

02:13:21 **5** THE COURT: So I'm going to overrule your
02:13:22 **6** objection, Mr. Conner.

02:13:24 **7** MR. CONNER: Thank you, Your Honor.

02:13:26 **8** **A.** The concern is that other surface things,
02:13:31 **9** runoff from yards and streets and everything else,
02:13:34 **10** hydrocarbons and things, they actually leach down
02:13:38 **11** in the ground. By having the presence of all that
02:13:41 **12** extra water, can then convey those contaminants
02:13:44 **13** down into the ground.

02:13:47 **14** **Q.** (By Ms. Prinzing-Jones) Last question.
02:13:54 **15** You were asked about the risk of
02:13:58 **16** catastrophic failures in this system.

02:14:00 **17** Can you please explain what the risks are
02:14:03 **18** related to catastrophic failures given the age,
02:14:06 **19** leakage and material type of the Mountain Water
02:14:09 **20** system?

02:14:09 **21** **A.** Obviously a lot of the pipe that's in the
02:14:13 **22** system, based upon age, historical trends and
02:14:17 **23** information from around the country for these
02:14:19 **24** types of pipes, have really shown that a lot of
02:14:24 **25** these pipes have exceeded their useful life.

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02:14:27 **1** The concern is that you have a major main
 02:14:30 **2** break, rupture, that could blow out a road, damage
 02:14:34 **3** property, injure people that's out there. You
 02:14:38 **4** never know when that break is going to occur.
 02:14:40 **5** Yeah, maybe it hasn't happened within ten
 02:14:43 **6** years. But there's been ten years of continued
 02:14:46 **7** deterioration of that system. Another one or two
 02:14:48 **8** or three years could cause that. Just because it
 02:14:53 **9** hasn't happened doesn't eliminate the risk.
 02:14:56 **10** **Q.** Given the state of the system, do you
 02:14:59 **11** believe that risk to be high?
 02:15:00 **12** **A.** Yes.
 02:15:01 **13** **Q.** No further questions.
 02:15:01 **14** THE COURT: Thank you.
 02:15:03 **15** Mr. Conner, additional questions?
 02:15:05 **16** MR. CONNER: Sure.
 02:15:06 **17** RECROSS-EXAMINATION
 02:15:06 **18** BY MR. CONNER:
 02:15:06 **19** **Q.** With respect to American Water Service
 02:15:09 **20** Company, John Young was president of that company,
 02:15:12 **21** wasn't he?
 02:15:13 **22** **A.** Yes, after I left.
 02:15:14 **23** **Q.** And are you saying that--he also worked
 02:15:17 **24** as head of a region. Wasn't his entire salary
 02:15:22 **25** allocated down to the operating units?
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02:15:24 **1** **A.** John never worked in any of the operating
 02:15:26 **2** companies.
 02:15:26 **3** **Q.** Right.
 02:15:27 **4** **A.** And, yes, they were all--his time was all
 02:15:31 **5** charged out through the operating. A lot of it,
 02:15:35 **6** though, was spent also to corporate that did not
 02:15:37 **7** get allocated.
 02:15:38 **8** **Q.** I understand that, sir. But his time was
 02:15:40 **9** allocated. And there are other employees of
 02:15:42 **10** American Water Service Company, who didn't work in
 02:15:45 **11** the operating units directly, that their time was
 02:15:48 **12** also allocated, correct?
 02:15:50 **13** **A.** Not all of their time.
 02:15:51 **14** **Q.** Correct?
 02:15:52 **15** **A.** Correct.
 02:15:53 **16** **Q.** Thank you.
 02:15:56 **17** You just made a comment in regard to
 02:15:59 **18** management of the local office here, of the local
 02:16:03 **19** company here, Mountain Water, versus Park Water.
 02:16:05 **20** But you just told me, sir, earlier you
 02:16:08 **21** did not do a management assessment of the Mountain
 02:16:10 **22** Water employees and the staff here to determine
 02:16:13 **23** what would be necessary for them to work on their
 02:16:15 **24** own without any help from home office. Correct?
 02:16:19 **25** **A.** We looked at the organizational charts of
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02:16:21 **1** both. We did not do an optimization study.
 02:16:25 **2** **Q.** Right. You didn't do an optimization
 02:16:27 **3** study. So--and you need to do an optimization
 02:16:31 **4** study to learn if, in fact, they can operate
 02:16:34 **5** without any help from Park Water. Correct?
 02:16:36 **6** **A.** No, I don't agree with that.
 02:16:38 **7** **Q.** All right. I didn't think you would.
 02:16:40 **8** You didn't find any OSHA violations, did
 02:16:42 **9** you?
 02:16:43 **10** **A.** Yes, we did.
 02:16:44 **11** **Q.** Did you? With respect to those issues
 02:16:46 **12** that you raised?
 02:16:47 **13** **A.** Yes.
 02:16:48 **14** **Q.** How many?
 02:16:49 **15** **A.** I would have to go back and look at our
 02:16:51 **16** notes.
 02:16:51 **17** **Q.** It wasn't in your report, was it?
 02:16:53 **18** **A.** No.
 02:16:57 **19** **Q.** With respect to the total, because you
 02:16:59 **20** say catastrophic failure, you've given the City a
 02:17:03 **21** 66 to \$95 million cost estimate that should be
 02:17:08 **22** spent in this system over the next ten years,
 02:17:10 **23** right?
 02:17:11 **24** **A.** Correct.
 02:17:11 **25** **Q.** And they need to take that into
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02:17:13 **1** consideration, don't they, Mr. Close, if they are
 02:17:15 **2** going to try to buy this system, right?
 02:17:18 **3** **A.** That's correct.
 02:17:18 **4** **Q.** And if they do try to buy the system,
 02:17:24 **5** much will depend on how much they have to pay.
 02:17:28 **6** MS. PRINZING-JONES: Objection, beyond
 02:17:29 **7** the scope.
 02:17:29 **8** **Q.** (By Mr. Conner) If they pay the offered
 02:17:30 **9** amount--
 02:17:30 **10** THE COURT: I'm sorry?
 02:17:30 **11** MS. PRINZING-JONES: Beyond the scope.
 02:17:32 **12** THE COURT: No, that's overruled.
 02:17:34 **13** MR. CONNER: Thank you, Your Honor.
 02:17:36 **14** **Q.** (By Mr. Conner) If they have to pay the
 02:17:37 **15** offer amount that the City said of 50 million and
 02:17:40 **16** you add your low of 66 to the high of 95, that
 02:17:44 **17** range is 116 million and 145 million over time,
 02:17:47 **18** correct?
 02:17:48 **19** **A.** Yes. We did an analysis--rate analysis--
 02:17:52 **20** **Q.** I'm just asking you, sir. I'm not asking
 02:17:54 **21** about rates. I'm asking this number applied to
 02:17:57 **22** these numbers. Okay?
 02:17:58 **23** **A.** Uh-huh.
 02:17:59 **24** **Q.** 77 million, which is in the City's new
 02:18:02 **25** plan, basically, for what it might cost, that gets
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02:18:04 **1** you to 143 million when you figure your capital
 02:18:08 **2** costs, and 172 million if you figure the high.
 02:18:11 **3** Correct?
 02:18:11 **4** **A. Yes.**
 02:18:12 **5** **Q.** And then if this \$140 million figure is
 02:18:16 **6** the value of this system, that number jumps from
 02:18:20 **7** 200 to 206 million under the low, and 235 million
 02:18:25 **8** under the high, correct?
 02:18:25 **9** **A. Yes. But you are discounting the**
 02:18:27 **10 additional revenue and savings throughout that**
 02:18:30 **11 pays for that.**
 02:18:31 **12** **Q.** I'm not discounting anything, sir. I'm
 02:18:33 **13** just applying the numbers.
 02:18:34 **14** MR. CONNER: No further questions, Your
 02:18:35 **15** Honor.
 02:18:35 **16** MS. PRINZING-JONES: Your Honor, he just
 02:18:36 **17** asked this witness about his rebuttal opinions on
 02:18:39 **18** the rate analysis that he did.
 02:18:41 **19** MR. CONNER: I did not.
 02:18:42 **20** MS. PRINZING-JONES: By doing that--yes,
 02:18:42 **21** that comes directly from this witness's pro forma
 02:18:45 **22** rate analysis.
 02:18:46 **23** And by doing that, he has opened the door
 02:18:48 **24** to us providing that testimony now on the rate
 02:18:51 **25** analysis conducted by HDR.
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02:18:56 **1** THE COURT: So I'm not going to allow it
 02:18:58 **2** now. I still think it's appropriate rebuttal
 02:19:01 **3** evidence.
 02:19:03 **4** May this witness be excused for now?
 02:19:06 **5** MS. PRINZING-JONES: Yes.
 02:19:07 **6** THE COURT: All right, Mr. Close, you are
 02:19:08 **7** free to go now, but you are subject to recall for
 02:19:11 **8** rebuttal.
 02:19:12 **9** THE WITNESS: Okay, so I should run and
 02:19:14 **10** get going here, okay?
 02:19:17 **11** THE COURT: So stay in touch with your
 02:19:19 **12** attorneys regarding whether you are needed to be
 02:19:21 **13** back.
 02:19:22 **14** THE WITNESS: Thank you, Your Honor.
 02:19:23 **15** THE COURT: Additional witnesses for the
 02:19:34 **16** City?
 02:19:34 **17** MR. SCHNEIDER: City calls Bryon von
 02:19:42 **18** Lossberg.
 02:19:42 **19** Thereupon,
 02:19:42 **20** BRYON VON LOSSBERG,
 02:19:42 **21** having been first duly sworn to tell the truth,
 02:20:18 **22** testified upon his oath as follows:
 02:20:18 **23** THE COURT: So, Mr. von Lossberg, get
 02:20:21 **24** yourself as comfortable as possible. Make sure we
 02:20:23 **25** can hear you.
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02:20:24 **1** Please state your full name, spell your
 02:20:26 **2** last name.
 02:20:27 **3** THE WITNESS: Bryon von Lossberg. Last
 02:20:29 **4** name V as in Victor, O-N. With a space,
 02:20:38 **5** L-O-S-S-B-E-R-G.
 02:20:39 **6** THE COURT: Thank you, you may inquire.
 02:20:57 **7** DIRECT EXAMINATION
 02:20:59 **8** BY MR. SCHNEIDER:
 02:20:59 **9** **Q.** My first question was going to be, would
 02:21:01 **10** you like a bottle of water?
 02:21:02 **11** **A. Yes.**
 02:21:03 **12** **Q.** Where do you live and how long have you
 02:21:05 **13** lived there?
 02:21:05 **14** **A. We live over on the north side, 522**
 02:21:08 **15** **Howell Street, right near the Head Start School.**
 02:21:10 **16** **We moved there three years ago right the week that**
 02:21:13 **17** **my daughter was born.**
 02:21:15 **18** **Q.** And that would be in Missoula?
 02:21:16 **19** **A. In Missoula.**
 02:21:19 **20** **Q.** Where did you go to college?
 02:21:21 **21** **A. I went to Stanford University in the Bay**
 02:21:25 **22** **area of California.**
 02:21:25 **23** **Q.** What did you study?
 02:21:27 **24** **A. I studied lots of things. Got a**
 02:21:30 **25** **degree--mechanical engineering degree, Bachelor of**
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02:21:32 **1** **Science.**
 02:21:32 **2** **Q.** What year?
 02:21:33 **3** **A. 1990.**
 02:21:34 **4** **Q.** And did you later obtain any advanced
 02:21:37 **5** degrees or graduate degrees?
 02:21:39 **6** **A. I did. I have a master's of science in**
 02:21:42 **7** **environmental studies from the University of**
 02:21:43 **8** **Montana here in Missoula.**
 02:21:46 **9** **Q.** I would like to ask you some of the
 02:21:49 **10** positions you've held in your life. Let's start
 02:21:52 **11** with right out of college. Did you get a job?
 02:21:55 **12** **A. I did.**
 02:21:55 **13** **Q.** Where was the job?
 02:21:56 **14** **A. I worked for the Jet Propulsion**
 02:21:59 **15** **Laboratory. It's a NASA laboratory down in**
 02:22:02 **16** **southern California, very close to where I grew**
 02:22:04 **17** **up. I was an engineering designer and engineering**
 02:22:06 **18** **project manager on unmanned space missions.**
 02:22:10 **19** **Q.** And that's in Pasadena?
 02:22:12 **20** **A. In Pasadena.**
 02:22:14 **21** **Q.** Did that work entail any responsibilities
 02:22:16 **22** to design for unmanned space exploration?
 02:22:19 **23** **A. It did. I'm very proud. The last**
 02:22:22 **24** **project I got to work on was the 1997 Mars**
 02:22:27 **25** **Pathfinder project.**
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02:22:30 **1 Q.** So that really is rocket science, right?

02:22:32 **2 A.** It was rocket science.

02:22:34 **3 Q.** Did you ever work in Silicon Valley?

02:22:36 **4 A.** I did.

02:22:36 **5 Q.** Where did you work, what did you do?

02:22:38 **6 A.** I worked for a company called Applied

02:22:41 **7 Materials. They are a capital–semiconductor**

02:22:45 **8 capital equipment supplier. They build very large**

02:22:47 **9 multi-million dollar semiconductor wafer**

02:22:51 **10 processing machines that they sell and supply to**

02:22:53 **11 the likes of Intel and Motorola.**

02:22:55 **12 Q.** What was your individual responsibility

02:22:57 **13 for Applied Materials?**

02:23:01 **14 A.** I held a range of responsibilities, range

02:23:08 **15 of positions. I started out as a product manager.**

02:23:11 **16 Became an engineering manager. Had a group of**

02:23:13 **17 engineers in the Bay area, Japan and Austin,**

02:23:20 **18 Texas.**

02:23:20 **19 And then the last position I held was on**

02:23:23 **20 the Intel account team. I provided—I was a**

02:23:25 **21 technical engineering expert on the Intel account**

02:23:31 **22 team. Once the Intel account team sold equipment,**

02:23:35 **23 I helped make sure that it was performing to**

02:23:37 **24 specification.**

02:23:39 **25 Q.** So you were involved in determining
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02:23:42 **1** whether performance—how the product was

02:23:45 **2** performing?

02:23:46 **3 A.** Correct. We would often have

02:23:48 **4** requirements that the equipment would have to

02:23:50 **5** perform to meet certain specifications over a

02:23:52 **6** period of time, and I was involved in making sure

02:23:54 **7** that happened.

02:23:55 **8 Q.** Before you left California and moved to

02:23:58 **9** Missoula, were you involved in any volunteer work?

02:24:01 **10 A.** Yes, a lot of work. After I left Applied

02:24:06 **11 Materials I moved up to the Lake Tahoe area in**

02:24:09 **12 California and volunteered for several nonprofit**

02:24:12 **13 organizations, doing environmental and**

02:24:13 **14 conservation work.**

02:24:16 **15 Q.** Did that experience involving

02:24:18 **16** environmental and conservation work have anything

02:24:22 **17** to do with your decision to return to school to

02:24:25 **18** study, at the graduate level, environmental

02:24:28 **19** studies?

02:24:29 **20 A.** Yes. It was instrumental to that

02:24:31 **21** decision. I had kind of made a left turn career

02:24:36 **22** wise and was devoting more time to the

02:24:40 **23** conservation efforts. And figured if I was going

02:24:42 **24** to continue in that effort and in that direction,

02:24:46 **25** supplementing my mechanical engineering degree
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02:24:49 **1** with something along those lines would probably be

02:24:52 **2** wise.

02:24:52 **3 Q.** Let me then turn to another subject, and

02:24:55 **4** that is very general question.

02:24:57 **5** Have you ever been elected to the City

02:24:59 **6** Council?

02:25:00 **7 A.** Yes.

02:25:00 **8 Q.** When did that happen?

02:25:01 **9 A.** I was elected in 2013, November, and

02:25:05 **10** started serving at the beginning of 2014.

02:25:08 **11 Q.** Before you were elected, did you ever

02:25:13 **12** attend City Council meetings here in Missoula?

02:25:15 **13 A.** I did.

02:25:15 **14 Q.** Why?

02:25:16 **15 A.** For a number of reasons, one of which was

02:25:18 **16** that I had spent the better part of about two

02:25:21 **17** years working on the City's Energy Conservation

02:25:26 **18** and Climate Action Plan. It was a very large team

02:25:27 **19** of people.

02:25:29 **20** Involved with that I led—was on the

02:25:32 **21** leadership team and led a specific area having to

02:25:35 **22** do with renewable energy opportunities for the

02:25:37 **23** City. And we presented that report in hopes of

02:25:41 **24** the City adopting that report, and so I spoke and

02:25:43 **25** attended that City Council meeting. I also
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02:25:47 **1** started attending both committee meetings and City

02:25:51 **2** Council meetings in advance of being

02:25:54 **3** elected—during the last part of 2013, to, you

02:25:58 **4** know, get up to speed on issues and just be more

02:26:01 **5** involved in those activities.

02:26:03 **6 Q.** So I suppose I should ask you, have you

02:26:05 **7** continued to attend City Council meetings once on

02:26:08 **8** the Council?

02:26:09 **9 A.** I have.

02:26:10 **10 Q.** Mr. von Lossberg, is it true that during

02:26:14 **11** your campaign your opponent ceased campaigning and

02:26:25 **12** ended up endorsing you?

02:26:27 **13 A.** He did.

02:26:28 **14 Q.** How much time do you spend on City

02:26:30 **15** Council work on average per week?

02:26:33 **16 A.** It ranges, I would say, anywhere from

02:26:35 **17** half time to about three-quarters time on average,

02:26:39 **18** depending on sort of the issues that week and that

02:26:42 **19** month.

02:26:43 **20 Q.** Have you involved yourself in acquiring

02:26:48 **21** information, reading materials and thinking about

02:26:54 **22** this question of whether the City of Missoula

02:26:57 **23** should acquire the Missoula water system?

02:27:00 **24 A.** Yeah, to a great extent. I'm a—I am

02:27:03 **25** prone to doing a lot of research on issues, and so
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02:27:06 **1 I have done a lot of research on this particular**
 02:27:08 **2 topic.**
 02:27:09 **3 Q.** If you can, would you please describe to
 02:27:15 **4 the Court why you feel that it's worth your time**
 02:27:17 **5 to study these issues in the position you have.**
 02:27:21 **6 What do you consider to be your responsibilities**
 02:27:24 **7 with regard to this question?**
 02:27:28 **8 A. I think that starts with my**
 02:27:30 **9 responsibility as a City Council member per our**
 02:27:34 **10 Charter. I'm responsible--the Council is a**
 02:27:36 **11 legislative body. It's a policy-making body in**
 02:27:39 **12 local government, and we obviously also review and**
 02:27:42 **13 adopt the budget.**
 02:27:44 **14 But I have a specific responsibility to**
 02:27:46 **15 the health and security and welfare of my**
 02:27:49 **16 constituents under the Charter. And given that**
 02:27:54 **17 responsibility, it's very important to me to, you**
 02:27:57 **18 know, be as knowledgeable as I can be about the**
 02:28:00 **19 issues in front of the Council.**
 02:28:03 **20 Q.** Have you entertained input from
 02:28:05 **21 constituents over the last year or two?**
 02:28:08 **22 A. Absolutely.**
 02:28:09 **23 Q.** On this issue?
 02:28:09 **24 A. Absolutely.**
 02:28:10 **25 Q.** And have you spoken and participated in
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02:28:13 **1 public meetings and so forth?**
 02:28:15 **2 A. Yes.**
 02:28:17 **3 Q.** Did you participate in a deposition where
 02:28:20 **4 counsel for Defendants had an opportunity to**
 02:28:23 **5 question you about this case?**
 02:28:25 **6 A. Yes.**
 02:28:26 **7 Q.** And that occurred in January of this
 02:28:28 **8 year?**
 02:28:29 **9 A. I believe that's the case.**
 02:28:32 **10 Q.** Based on the information you have and
 02:28:35 **11 whatever research and thinking you've done on your**
 02:28:38 **12 own, how would you describe why, if it is true,**
 02:28:44 **13 that you believe the City should acquire the**
 02:28:46 **14 system?**
 02:28:47 **15 A. I have spoken about this matter many**
 02:28:51 **16 times and I keep coming back to sort of the same**
 02:28:54 **17 three key areas. I do strongly support municipal**
 02:28:59 **18 ownership of the water system.**
 02:29:01 **19 And those three key areas that I have**
 02:29:03 **20 spoken to the most and always come back to, have**
 02:29:06 **21 to do with transparency of the decision-making**
 02:29:11 **22 that's involved with the operation of the system**
 02:29:16 **23 and the capital expenditures that are necessary to**
 02:29:18 **24 sustain the system. I have spoken about bringing**
 02:29:22 **25 the system into compliance with what I see to be**
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02:29:27 **1 best management practices indicators, performance**
 02:29:31 **2 indicators--**
 02:29:32 **3 MS. DESOTO: Objection, Your Honor. He's**
 02:29:34 **4 giving expert testimony. He's not a disclosed**
 02:29:37 **5 expert.**
 02:29:37 **6 THE COURT: No, I don't think this is**
 02:29:39 **7 expert testimony.**
 02:29:41 **8 MS. DESOTO: Thank you, Your Honor.**
 02:29:48 **9 A. And I have also spoken about the needs**
 02:29:54 **10 that everyone seems to recognize for the millions**
 02:29:57 **11 of dollars of capital investment into the system,**
 02:30:00 **12 and to make sure that's done in a way that doesn't**
 02:30:03 **13 break the backs of ratepayers. And so that's my**
 02:30:09 **14 consideration.**
 02:30:09 **15 Q.** (By Mr. Schneider) Do you have any
 02:30:10 **16 understanding as to whether capital will need to**
 02:30:13 **17 be invested in this system no matter who owns it?**
 02:30:17 **18 A. Yes.**
 02:30:17 **19 Q.** What is your understanding?
 02:30:18 **20 MS. DESOTO: Objection, Your Honor. This**
 02:30:20 **21 is expert testimony.**
 02:30:20 **22 THE COURT: No, I think a layperson can**
 02:30:28 **23 have an understanding that money may need to be**
 02:30:31 **24 spent. Right?**
 02:30:34 **25 MS. DESOTO: Thank you, Your Honor.**
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02:30:36 **1 A. Can you repeat the question?**
 02:30:38 **2 Q.** (By Mr. Schneider) Perhaps. Let me add
 02:30:39 **3 one more question before that one.**
 02:30:43 **4 Why don't you give me a yes or no, if you**
 02:30:45 **5 can, to this.**
 02:30:46 **6 Do you have an understanding of whether**
 02:30:47 **7 or not capital will need to be invested,**
 02:30:50 **8 regardless of who owns the water system?**
 02:30:52 **9 A. Yes.**
 02:30:52 **10 Q.** Has that understanding informed your
 02:30:55 **11 evaluation and ultimate decision as to whether or**
 02:30:58 **12 not, as an elected City official, you should**
 02:31:00 **13 support or not support the acquisition?**
 02:31:02 **14 A. Yes.**
 02:31:03 **15 Q.** What is your understanding?
 02:31:04 **16 A. My understanding--and part of this**
 02:31:08 **17 understanding is formed from listening to Mountain**
 02:31:11 **18 Water's chief engineer speak on Public Radio when**
 02:31:15 **19 there was an American Water Works conference here,**
 02:31:17 **20 and talked about the need for capital investments**
 02:31:21 **21 in the system.**
 02:31:22 **22 Part of this is based on Mr. Dove's very**
 02:31:26 **23 clear indication in Public Service Commission**
 02:31:29 **24 testimony that their due diligence had turned up**
 02:31:32 **25 the need for investment in the system due to**
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02:31:35 **1** leakage issues.
02:31:36 **2** And then it's from my own research that
02:31:38 **3** clearly indicates that millions of dollars over
02:31:41 **4** time are going to be necessary to sustain the
02:31:43 **5** system and bring the system into compliance with
02:31:47 **6** best management practices.

02:31:51 **7** **Q.** Does the opportunity to have the City be
02:31:55 **8** involved in long-term planning and approval or
02:31:58 **9** nonapproval of capital expenditures enter into
02:32:03 **10** your calculus?

02:32:04 **11** **A.** Yeah. It's actually another item that
02:32:06 **12** I've mentioned. I've always talked to people
02:32:09 **13** about the fact that this is a system--it's a piece
02:32:11 **14** of infrastructure that has served the community
02:32:15 **15** for decades and needs to serve the community for
02:32:17 **16** decades to come, hopefully centuries to come.

02:32:20 **17** And long-range ownership, long-term
02:32:24 **18** ownership and stability of ownership, in my mind,
02:32:27 **19** clearly goes to best serving the needs of a system
02:32:33 **20** that needs to be in service for that kind of a
02:32:35 **21** time frame.

02:32:36 **22** **Q.** In general, what is your understanding as
02:32:39 **23** to where in particular, if you know, the system
02:32:41 **24** needs replacement/rehabilitation?

02:32:45 **25** **A.** I'm very familiar with the data that's
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02:34:14 **1** on Pine Street, 140 West Pine. And we meet in
02:34:20 **2** committees on Wednesday and we meet in the Council
02:34:23 **3** on Monday evenings and we do that just about every
02:34:26 **4** week. And that's in addition to obviously being
02:34:31 **5** open to my constituents on pretty much a 24/7
02:34:34 **6** basis.

02:34:35 **7** But, principally, the decision-making,
02:34:37 **8** the review of budgets, the review of operations,
02:34:40 **9** all the things that we do on Council with every
02:34:41 **10** other aspect of City operations happens in a
02:34:45 **11** really public and transparent way.

02:34:48 **12** **Q.** If I tell you that today the PSC,
02:34:53 **13** 90 percent of the water customers that it
02:35:01 **14** regulates are the citizens in the Missoula water
02:35:04 **15** system, do you have any view as to whether or not
02:35:06 **16** the absence of the PSC under municipal ownership
02:35:10 **17** would be a benefit or a detriment?

02:35:13 **18** **A.** In my opinion the absence of the PSC
02:35:16 **19** relative to this sort of governance of Missoula's
02:35:20 **20** water system would be a benefit.

02:35:22 **21** **Q.** Why?

02:35:23 **22** **A.** I view the PSC oversight of the system as
02:35:27 **23** being almost entirely reactive in its nature and
02:35:32 **24** not proactive. I am very familiar with what the
02:35:37 **25** PSC here, as well as similar bodies, do in other
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02:32:50 **1** been provided about the system's leakage. And
02:32:54 **2** also I've reviewed years of Mountain Water's
02:32:57 **3** annual reports and looked at the percentage of the
02:33:01 **4** system that is metered. I understand that about
02:33:08 **5** 19 percent of the system remained unmetered at
02:33:12 **6** this point. So the leakage issues, the metering
02:33:14 **7** issues have been issues of particular concern to
02:33:16 **8** me.

02:33:29 **9** **Q.** What particular benefits, if any, do you
02:33:31 **10** see if the City acquires the water system with
02:33:34 **11** respect to those things that you think need to be
02:33:37 **12** done?

02:33:37 **13** **A.** What particular benefits from City
02:33:39 **14** ownership?

02:33:40 **15** **Q.** Yes.

02:33:41 **16** **A.** You would have a long-term owner matched
02:33:44 **17** to a system that needs to serve a community for
02:33:48 **18** the long-term.

02:33:49 **19** You have an entity, the City, with costs
02:33:54 **20** of capital that are lower than the cost of capital
02:33:57 **21** of private ownership.

02:34:02 **22** And you have, I think, the greatest
02:34:06 **23** transparency over decision-making that you could
02:34:08 **24** hope to have. I have spoken on numerous occasions
02:34:12 **25** about the fact that we do our business right over
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02:35:43 **1** states with regards to rates and the way that
02:35:47 **2** our--

02:35:47 **3** MS. DESOTO: Objection. This is expert
02:35:49 **4** testimony, Your Honor.

02:35:50 **5** THE COURT: Sustained.

02:35:54 **6** **Q.** (By Mr. Schneider) Let me ask you a
02:35:56 **7** different question.

02:35:57 **8** PSC has elected commissioners; is that
02:36:00 **9** correct?

02:36:01 **10** **A.** They do. Five.

02:36:02 **11** **Q.** And of those five, are 90 percent of
02:36:04 **12** those from Missoula?

02:36:06 **13** **A.** Are 90 percent of the--no.

02:36:08 **14** **Q.** Commissioners.

02:36:09 **15** **A.** No.

02:36:09 **16** **Q.** What percentage are from Missoula?

02:36:12 **17** **A.** Zero.

02:36:14 **18** **Q.** With respect to insurance, do you see any
02:36:18 **19** detriment or benefit if the City owns the water
02:36:21 **20** system?

02:36:23 **21** **A.** I see a likely benefit in terms of the
02:36:25 **22** opportunity for pooling with our city employee
02:36:32 **23** insurance programs.

02:36:33 **24** **Q.** Are you personally aware whether the City
02:36:35 **25** today has such a pooling arrangement for other
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02:36:38 **1** lines of insurance?

02:36:40 **2** **A. I believe it does.**

02:36:41 **3** **Q.** With respect to--I'm going to skip over

02:36:47 **4** cost savings with respect to tax, if any.

02:36:50 **5** Let's go to conservation or environmental

02:36:52 **6** consequences given that that's one of your areas

02:36:55 **7** of study at the graduate level.

02:36:57 **8** The Court has heard lots of testimony

02:37:00 **9** about treated water leaking into the environment.

02:37:07 **10** Do you see any, what I call, noneconomic

02:37:10 **11** consequences of a leakage rate which has been

02:37:13 **12** described as 50 percent or more?

02:37:15 **13** MS. DESOTO: Objection, Your Honor,

02:37:16 **14** expert testimony. He's not been disclosed as an

02:37:22 **15** expert in water quality or anything like that.

02:37:23 **16** MR. SCHNEIDER: I'll ask a different

02:37:25 **17** question.

02:37:25 **18** THE COURT: Thank you.

02:37:28 **19** **Q.** (By Mr. Schneider) What neighborhood do

02:37:30 **20** you live in?

02:37:31 **21** **A. The north side.**

02:37:32 **22** **Q.** Are there any contaminated sites in your

02:37:34 **23** neighborhood?

02:37:34 **24** **A. Yes. There is a site known as the White**

02:37:37 **25** **Pine Sash site. It's a SuperFund site.**
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02:37:38 **1** **Q.** How far away is that SuperFund site from

02:37:41 **2** your home?

02:37:42 **3** **A. Blocks.**

02:37:43 **4** **Q.** How close, if you know, is that SuperFund

02:37:45 **5** site from water distribution pipes?

02:37:48 **6** **A. They--they are right in proximity to each**

02:37:51 **7** **other.**

02:37:52 **8** **Q.** Is your neighborhood served by Mountain

02:37:54 **9** Water Company distribution pipes?

02:37:56 **10** **A. It is.**

02:37:57 **11** **Q.** I guess you haven't dug up all those

02:37:59 **12** pipes in the neighborhood to see how many are

02:38:01 **13** leaking, have you?

02:38:03 **14** **A. I have not.**

02:38:03 **15** **Q.** If any of them are leaking, do you have

02:38:05 **16** any concern, yes or no--

02:38:07 **17** **A. Yes.**

02:38:08 **18** **Q.** --with respect--generally we get to wait

02:38:10 **19** for the end of the question. I know I'm being a

02:38:14 **20** little long-winded, but bear with me.

02:38:15 **21** Assuming there are leaks in the

02:38:17 **22** distribution pipes in your neighborhood, does the

02:38:19 **23** proximity of those leaks to the SuperFund site

02:38:22 **24** cause you, as a citizen, as an elected leader, any

02:38:26 **25** concern?
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02:38:27 **1** **A. Yes.**

02:38:27 **2** **Q.** What is your concern?

02:38:28 **3** MS. DESOTO: Objection, Your Honor.

02:38:29 **4** Calls for expert testimony regarding water quality

02:38:32 **5** and the effect of a SuperFund site on pipes.

02:38:35 **6** THE COURT: No. As I understood, his

02:38:37 **7** question is does that nearness cause him some

02:38:41 **8** concern. That, I think he gets to say.

02:38:44 **9** MS. DESOTO: I believe he answered that.

02:38:46 **10** And the next question was what were those

02:38:48 **11** concerns? And that's my objection.

02:38:49 **12** THE COURT: I think he can explain those

02:38:51 **13** concerns from his position as a layperson and an

02:38:56 **14** elected official.

02:38:58 **15** **Q.** (By Mr. Schneider) You may answer the

02:38:59 **16** question. What are your concerns?

02:39:03 **17** **A. As a layperson and an elected official, I**

02:39:06 **18** **reviewed all of the public reports about the site.**

02:39:11 **19** **I carried a resolution regarding the White Pine**

02:39:14 **20** **site, so it's a matter I've researched**

02:39:18 **21** **extensively.**

02:39:18 **22** **I know from those reports that the**

02:39:24 **23** **leakage in the water system has dispersed**

02:39:28 **24** **contaminants into perched aquifers above the main**

02:39:33 **25** **aquifer. And I know from those reports that the**
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02:39:36 **1** **main aquifer mixes with those perched aquifers at**

02:39:41 **2** **times during the year, so that would obviously mix**

02:39:44 **3** **those contaminants.**

02:39:46 **4** **And the DEQ's Record of Decision about**

02:39:48 **5** **their plans for this site, again a public document**

02:39:53 **6** **very pertinent to my constituents on the North**

02:39:56 **7** **Side, talks about how that has complicated the**

02:39:58 **8** **matter of removing those contaminants from the**

02:40:02 **9** **soil.**

02:40:02 **10** **So the spread of those contaminants and**

02:40:06 **11** **the costs, the increased costs associated with**

02:40:08 **12** **removing those contaminants, is my concern as an**

02:40:11 **13** **elected official and a representative of that**

02:40:14 **14** **ward, that community.**

02:40:15 **15** **Q.** What committees of the City Council do

02:40:19 **16** you sit on or participate in?

02:40:20 **17** **A. I serve on all of their committees.**

02:40:22 **18** **Q.** All of them?

02:40:24 **19** **A. Yup.**

02:40:24 **20** **Q.** As an elected official with some

02:40:26 **21** oversight responsibility for City planning,

02:40:30 **22** coordination of vital city services, do you see

02:40:33 **23** any benefit or detriment with respect to the

02:40:37 **24** City's growth planning, coordinating vital

02:40:42 **25** services, economies of scale, if the City acquires
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02:40:46 **1** the water system, along with the wastewater
 02:40:49 **2** treatment facility it already owns?
 02:40:51 **3** **A. Yes, I do. I see benefits along those**
 02:40:53 **4 lines to City ownership.**
 02:40:56 **5** **Q.** Let's turn then to the last topic, public
 02:41:05 **6** sentiment.
 02:41:06 **7** I believe you testified earlier that you
 02:41:08 **8** do pay attention to what folks in the City tell
 02:41:12 **9** you in your capacity as a City Council member,
 02:41:15 **10** correct?
 02:41:16 **11** **A. I do.**
 02:41:16 **12** **Q.** You have--you've been aware of activities
 02:41:27 **13** of Mountain Water generating--attempting to
 02:41:30 **14** generate public interest in this issue?
 02:41:33 **15** MS. DESOTO: Objection, leading.
 02:41:35 **16** MR. SCHNEIDER: I'll rephrase it.
 02:41:36 **17** THE COURT: All right.
 02:41:38 **18** **Q.** (By Mr. Schneider) Do you know whether
 02:41:38 **19** there has been any effort to generate public
 02:41:41 **20** interest in this issue?
 02:41:42 **21** **A. I am aware.**
 02:41:43 **22** **Q.** And what types of efforts are you aware
 02:41:45 **23** of?
 02:41:47 **24** **A. I frequently go to the Mountain Water**
 02:41:49 **25** **website. They have a F-A-Q, a FAQ, on their**
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02:41:56 **1** **website. I believe that started in early**
 02:41:58 **2** **November. At the end of that there was very**
 02:42:00 **3** **explicit encouragement to contact City officials**
 02:42:05 **4** **and come to City Council meetings.**
 02:42:22 **5** MR. SCHNEIDER: Could we mark as next in
 02:42:25 **6** order the screenshot of the Mountain Water Company
 02:42:30 **7** Water FAQs website.
 02:42:39 **8** MS. DESOTO: As a demonstrative or as a--
 02:42:41 **9** MR. SCHNEIDER: Well, I think probably to
 02:42:42 **10** be admitted.
 02:42:45 **11** MS. DESOTO: This is as a demonstrative.
 02:42:49 **12** MR. SCHNEIDER: Yeah, I can use this as a
 02:42:51 **13** demonstrative. Let's go first, before we go to
 02:42:55 **14** the demonstrative, let's look at Exhibit 45, if we
 02:42:59 **15** could. It's not yet admitted, as I recall.
 02:43:05 **16** **Q.** (By Mr. Schneider) I'm going to show
 02:43:08 **17** you--can you see it on the screen there?
 02:43:10 **18** **A. This one?**
 02:43:11 **19** **Q.** Yeah. Do you recognize this particular
 02:43:13 **20** e-mail which identifies Mr. Kappes of Mountain
 02:43:21 **21** Water Company as the author?
 02:43:24 **22** **A. I'm just waiting for--**
 02:43:26 **23** MS. DESOTO: Harry, that's not the
 02:43:28 **24** exhibit. Is that a different exhibit?
 02:43:30 **25** MR. SCHNEIDER: Correct. I think when
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02:43:32 **1** you asked about demonstrative or in evidence, I
 02:43:35 **2** decided to go back and lay some foundation.
 02:43:37 **3** So we're at Exhibit 45, not yet admitted.
 02:43:40 **4** It is a November 3, 2014 e-mail. Subject,
 02:43:45 **5** Mountain Water Company. Authored by--
 02:43:49 **6** **Q.** (By Mr. Schneider) Well, if you look at
 02:43:50 **7** the very bottom of the exhibit, can you tell who
 02:43:53 **8** authored it? Or who signed it?
 02:44:01 **9** **A. Oh, yes, I can see it's signed by**
 02:44:06 **10** **Mr. Kappes.**
 02:44:07 **11** **Q.** And who is listed as the sender on the
 02:44:11 **12** e-mail transmission?
 02:44:14 **13** **A. FAQs, faqs@mtnwater.com.**
 02:44:19 **14** **Q.** And is that e-mail address, to your
 02:44:21 **15** knowledge, does that have any connection with the
 02:44:23 **16** Mountain Water FAQs website?
 02:44:26 **17** **A. It certainly seems to be consistent with**
 02:44:29 **18** **the FAQ material on their website.**
 02:44:31 **19** **Q.** Does the Mountain Water FAQ website--
 02:44:39 **20** well, let me back up.
 02:44:40 **21** MR. SCHNEIDER: We would offer Exhibit
 02:44:41 **22** 45.
 02:44:42 **23** THE COURT: Objection?
 02:44:43 **24** MS. DESOTO: No objection, Your Honor.
 02:44:44 **25** THE COURT: Very well, it's admitted.
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02:44:46 **1** EXHIBITS:
 02:44:46 **2** (Exhibit No. 45 received into evidence.)
 02:44:47 **3** **Q.** (By Mr. Schneider) Mr. von Lossberg, this
 02:44:49 **4** e-mail that is now admitted into evidence as
 02:44:51 **5** Exhibit 45 is addressed to Dear Community Member.
 02:44:55 **6** "I know that you may have questions or
 02:44:59 **7** have voiced concerns. We have prepared some
 02:45:01 **8** questions for members of the community."
 02:45:03 **9** And in the third paragraph it says,
 02:45:05 **10** "Also, there is a public comment period this
 02:45:08 **11** evening at the City Council meeting if you would
 02:45:10 **12** like an opportunity to share your perspective."
 02:45:13 **13** It invites members of the community to go
 02:45:17 **14** to the City Council meeting. Was there a City
 02:45:22 **15** Council meeting that night?
 02:45:23 **16** **A. Can we see the date?**
 02:45:24 **17** **Q.** November 3rd, 2014.
 02:45:26 **18** **A. Yes.**
 02:45:26 **19** **Q.** It's a Monday night?
 02:45:29 **20** **A. Yes, there was a Council meeting.**
 02:45:31 **21** **Q.** Then looking at the exhibit marked D11--
 02:45:34 **22** MR. SCHNEIDER: We would offer that as
 02:45:35 **23** well at this time in evidence.
 02:45:37 **24** MS. DESOTO: No objection, Your Honor.
 02:45:38 **25** THE COURT: Very well. D11 is admitted.
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02:45:40 1 So not just demonstrative but substantive exhibit?
 02:45:45 2 MR. SCHNEIDER: In evidence. Shall we
 02:45:46 3 give it a new number? Doesn't matter to me. D11
 02:45:46 4 is admitted?
 02:45:46 5 THE COURT: Uh-huh.
 02:45:46 6 EXHIBITS:
 02:45:55 7 (Exhibit No. D11 received into evidence.)
 02:45:55 8 Q. (By Mr. Schneider) What is Exhibit D11?
 02:45:57 9 A. This is one of the FAQs.
 02:46:02 10 Q. FAQ, standing for what?
 02:46:04 11 A. Frequently Asked Questions, I believe.
 02:46:07 12 Q. And just so everyone's clear. This
 02:46:10 13 particular screenshot is dated at the bottom
 02:46:16 14 3-22-2015. That would be pretty recent, wouldn't
 02:46:19 15 it?
 02:46:19 16 A. Yes.
 02:46:22 17 Q. This e-mail, which is now in evidence as
 02:46:26 18 Exhibit D11, contains a lot of statements. But it
 02:46:31 19 also has some other links on it, doesn't it?
 02:46:43 20 A. Yes.
 02:46:43 21 Q. Okay, let's do this rather quickly. I'm
 02:46:46 22 going to show you what's been marked as D12.
 02:46:52 23 MR. SCHNEIDER: If I may show the
 02:46:53 24 witness, Your Honor?
 02:46:54 25 THE COURT: Yes.
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02:46:55 1 Q. (By Mr. Schneider) And after you've seen
 02:46:56 2 it, you can tell me if you recognize it. Then
 02:47:06 3 after that, we'll offer this into evidence as
 02:47:09 4 well.
 02:47:14 5 Mr. von Lossberg, I also gave you a
 02:47:17 6 notebook which has this under a tab. So do you
 02:47:20 7 recognize D12?
 02:47:21 8 A. I do.
 02:47:22 9 Q. Is this part of the same website?
 02:47:24 10 A. Yes.
 02:47:24 11 Q. Same date?
 02:47:25 12 A. Yes.
 02:47:27 13 MR. SCHNEIDER: And this one we would
 02:47:29 14 offer at this time, Your Honor.
 02:47:30 15 THE COURT: Objection?
 02:47:32 16 MS. DESOTO: No objection.
 02:47:33 17 THE COURT: Very well. It's admitted.
 02:47:34 18 EXHIBITS:
 02:47:35 19 (Exhibit No. D12 received into evidence.)
 02:47:35 20 Q. (By Mr. Schneider) Now, this particular
 02:47:37 21 screenshot is entitled "Make Your Voice Heard,"
 02:47:40 22 correct?
 02:47:40 23 A. Correct.
 02:47:40 24 Q. And then there are links to contact your
 02:47:44 25 City representatives, correct?
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02:47:46 1 A. Correct.
 02:47:46 2 Q. And, in fact, there is actually a link
 02:47:48 3 where you only have to click on it to send an
 02:47:51 4 e-mail to--well, the first one on the list is
 02:47:56 5 yourself.
 02:47:56 6 A. That usually doesn't happen. Yes.
 02:48:00 7 Q. In fact, you could click on all 12
 02:48:02 8 members and send an e-mail, couldn't you?
 02:48:04 9 A. You could.
 02:48:05 10 Q. And the Mayor, correct?
 02:48:07 11 A. I'm looking--
 02:48:10 12 Q. It's at the top. He's the only one above
 02:48:13 13 you.
 02:48:13 14 A. Oh, yeah.
 02:48:14 15 Q. And you also are invited to share this
 02:48:17 16 with your neighbors.
 02:48:18 17 A. Yes.
 02:48:18 18 Q. Third page, you are invited to speak at a
 02:48:22 19 City Council meeting?
 02:48:22 20 A. Yes.
 02:48:23 21 Q. Write a letter to the editor. In fact,
 02:48:26 22 there is a link where you just click it and you
 02:48:28 23 can write a letter to the editor to the
 02:48:30 24 *Missoulian*, correct?
 02:48:30 25 A. Correct.
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02:48:31 1 Q. Or the *Independent*, correct?
 02:48:32 2 A. Correct.
 02:48:33 3 Q. Have you reviewed this before?
 02:48:34 4 A. I've seen it before.
 02:48:36 5 Q. In just a minute I'm going to ask you
 02:48:38 6 what kind of response, if any, you've had from
 02:48:41 7 people who have sent you e-mails.
 02:48:43 8 But before we do that, could we take a
 02:48:45 9 look finally at D13, which is in your notebook.
 02:48:53 10 As you are looking at it, you've seen
 02:48:55 11 advertisements that have been run, haven't you?
 02:48:57 12 A. Yes.
 02:48:58 13 Q. Are these examples of that?
 02:49:00 14 A. Yes.
 02:49:06 15 Q. Do you personally know who's paying for
 02:49:09 16 them?
 02:49:09 17 A. I do not.
 02:49:11 18 MR. SCHNEIDER: I don't see a need to
 02:49:13 19 offer this into evidence. I'll use it as a
 02:49:15 20 demonstrative. The Court has it before the bench.
 02:49:18 21 THE COURT: Any objection, Ms. DeSoto, to
 02:49:23 22 having this used as a demonstrative exhibit?
 02:49:26 23 MS. DESOTO: Yes. It is hearsay, Your
 02:49:27 24 Honor, so we would object even as a demonstrative
 02:49:30 25 exhibit on that basis.
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02:49:33 **1** MR. SCHNEIDER: Every demonstrative
 02:49:35 **2** exhibit is hearsay.
 02:49:35 **3** THE COURT: So I'll allow it as a
 02:49:38 **4** demonstrative exhibit, but not as substantive
 02:49:43 **5** evidence.
 02:49:44 **6** MS. DESOTO: Just to clarify, there is no
 02:49:49 **7** reading from this exhibit, reading it into the
 02:49:51 **8** record?
 02:49:51 **9** THE COURT: I would agree with that.
 02:49:53 **10** MS. DESOTO: Thank you.
 02:49:54 **11** MR. SCHNEIDER: And I would, too.
 02:49:56 **12** **Q.** (By Mr. Schneider) Mr. von Lossberg,
 02:49:57 **13** we're not going to read from this full-page
 02:50:00 **14** advertisement, okay?
 02:50:01 **15** **A.** Okay.
 02:50:01 **16** **Q.** One question is, after this e-mail went
 02:50:05 **17** out from Mr. Kappes to members of the community on
 02:50:08 **18** November 3rd, what were the reactions that night,
 02:50:10 **19** if you recall?
 02:50:11 **20** First of all, were you there?
 02:50:12 **21** **A.** I was there.
 02:50:13 **22** **Q.** What did you recall?
 02:50:14 **23** **A.** I recall we had dealt with our full
 02:50:16 **24** agenda on the City Council items. And one of
 02:50:18 **25** those items was the revision to the ordinance
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02:50:24 **1** having to do with the water system, the
 02:50:27 **2** condemnation proceedings. And so there was a lot
 02:50:31 **3** of public comments, as well as comment from
 02:50:33 **4** Council members, and ultimately a vote.
 02:50:39 **5** **Q.** Did people speak at the public hearing?
 02:50:41 **6** **A.** They did. Many people spoke.
 02:50:44 **7** **Q.** Did you listen to them?
 02:50:45 **8** **A.** I did.
 02:50:46 **9** **Q.** As far as you could tell, did your fellow
 02:50:48 **10** Council members listen to them?
 02:50:50 **11** **A.** As far as I could tell, yes.
 02:50:52 **12** **Q.** Could you give the Court a sense, if you
 02:50:54 **13** would, what was the balance of input pro and con?
 02:50:57 **14** MS. DESOTO: Objection, calls for
 02:50:59 **15** hearsay.
 02:51:04 **16** THE COURT: Mr. Schneider, the objection
 02:51:09 **17** is hearsay.
 02:51:11 **18** MR. SCHNEIDER: Your Honor, we're seeking
 02:51:13 **19** to introduce this not for the truth of the matter
 02:51:16 **20** stated, but with respect to how it informed his
 02:51:18 **21** state of mind.
 02:51:19 **22** I would also say that this is information
 02:51:23 **23** which was asked by defense counsel for three or
 02:51:26 **24** four pages in the deposition. So they--
 02:51:32 **25** THE COURT: So if it's an exception for
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02:51:35 **1** hearsay for state of mind exception, I'll allow
 02:51:38 **2** it.
 02:51:39 **3** **Q.** (By Mr. Schneider) And did that input
 02:51:40 **4** inform you as to what your ultimate sense of the
 02:51:42 **5** issue was?
 02:51:43 **6** **A.** Yes.
 02:51:44 **7** **Q.** Very generally, I'm not looking for
 02:51:47 **8** quotes, what was the sense of the public sentiment
 02:51:50 **9** expressed at that committee--City Council meeting
 02:51:55 **10** that night based on those members who actually
 02:51:58 **11** showed up--excuse me, those citizens who showed up
 02:52:01 **12** and those who spoke?
 02:52:02 **13** **A.** There was very strong and overwhelming
 02:52:05 **14** support for continuing to pursue this activity.
 02:52:08 **15** **Q.** And has that--have there been other
 02:52:11 **16** meetings where public comment was entertained?
 02:52:17 **17** **A.** We entertain public comment at every
 02:52:19 **18** meeting we have.
 02:52:20 **19** **Q.** And has the sense of the input you
 02:52:22 **20** received changed with respect to what you've
 02:52:24 **21** described with respect to the November 3rd, 2014
 02:52:27 **22** meeting?
 02:52:28 **23** **A.** No.
 02:52:28 **24** MR. SCHNEIDER: No further questions,
 02:52:29 **25** Your Honor.
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02:52:29 **1** THE COURT: So, Ms. DeSoto, do you wish
 02:52:32 **2** to question or do you wish to have a break?
 02:52:35 **3** MS. DESOTO: We can take a break, Your
 02:52:37 **4** Honor.
 02:52:37 **5** THE COURT: Okay. Well, let's take
 02:52:39 **6** 15 minutes. Mr. von Lossberg, you can step down
 02:52:43 **7** but you cannot converse with counsel. Okay?
 02:52:46 **8** (Whereupon, court was in recess at
 03:05:37 **9** 2:52 p.m., reconvened at 3:05 p.m.)
 03:05:38 **10** THE COURT: We're back on the record in
 03:05:40 **11** *City of Missoula versus Mountain Water, et al.*
 03:05:42 **12** Same counsel as previously identified are present.
 03:05:46 **13** Mr. von Lossberg, you understand you are
 03:05:48 **14** still under oath?
 03:05:49 **15** THE WITNESS: Yes.
 03:05:50 **16** THE COURT: Ms. DeSoto, do you wish to
 03:05:52 **17** inquire?
 03:05:54 **18** MS. DESOTO: No questions.
 03:05:55 **19** MR. MERCER: No questions.
 03:05:57 **20** MR. ZADICK: No questions.
 03:05:58 **21** THE COURT: Very well, you are excused.
 03:06:02 **22** Any additional witnesses for the City?
 03:06:06 **23** MR. SCHNEIDER: Yes, Your Honor. We
 03:06:08 **24** would call Jim Burchfield.
 03:06:09 **25** As he's making his way forward, we have
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03:06:12 **1** four out-of-town witnesses that are arriving
 03:06:16 **2** tomorrow for Wednesday. We felt that, given the
 03:06:20 **3** length of cross-examination each of the last three
 03:06:22 **4** days last week, we would be lucky to get--
 03:06:27 **5** THE COURT: They can't come until
 03:06:29 **6** Wednesday morning so we're going to quit early?
 03:06:32 **7** MR. SCHNEIDER: We're willing to take any
 03:06:34 **8** of our local people to fill in this afternoon.
 03:06:36 **9** Mr. Burchfield is one. Others are available.
 03:06:42 **10** But Counsel was expecting the out-of-town
 03:06:46 **11** people following Mr. Burchfield. If there's one
 03:06:47 **12** or two that they are willing to have start or
 03:06:50 **13** finish today, they can available. But I don't
 03:06:52 **14** insist on that.
 03:06:54 **15** THE COURT: Mr. Conner?
 03:06:54 **16** MR. CONNER: Your Honor, I've worked all
 03:06:56 **17** weekend on the list that Mr. Schneider gave me.
 03:06:59 **18** I'm prepared to go with anybody on that list. But
 03:07:01 **19** I would prefer--and that's been our agreement.
 03:07:03 **20** And I know Harry is good for his word, so I'm not
 03:07:08 **21** objecting to that.
 03:07:09 **22** MR. SCHNEIDER: That's a well-known fact.
 03:07:11 **23** MR. CONNER: Just as I.
 03:07:14 **24** MR. SCHNEIDER: The only one on the list
 03:07:15 **25** is John Wilson who is available. And if you are
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03:07:17 **1** prepared, I think we can get that done.
 03:07:18 **2** MR. CONNER: He's on the list. I'm fine
 03:07:21 **3** with Mr. Wilson.
 03:07:23 **4** MR. SCHNEIDER: Why don't we do
 03:07:25 **5** Mr. Burchfield and Mr. Wilson, and I expect we
 03:07:27 **6** will be done before the end of the typical trial
 03:07:30 **7** day.
 03:07:31 **8** THE COURT: All right. So I think that
 03:07:32 **9** that makes sense that we would go that direction.
 03:07:34 **10** And if we recess a little bit early today, it may
 03:07:37 **11** very well mean that we're going to have to adjust
 03:07:40 **12** our schedule on the far end to get a full
 03:07:44 **13** 1,800 minutes for each in.
 03:07:48 **14** MR. CONNER: As long as we're able to do
 03:07:50 **15** that on the far end, Your Honor. The far end is
 03:07:53 **16** getting closer every day.
 03:07:54 **17** THE COURT: Yes.
 03:07:54 **18** MR. SCHNEIDER: I know the Court wants to
 03:07:56 **19** be somewhat aware of what's coming. We have
 03:07:58 **20** Dennis Cron from Apple Valley, Kees Corssmit from
 03:08:01 **21** Colorado, David Nielsen from Helena. Is that
 03:08:05 **22** where he lives?
 03:08:06 **23** And we will update this list this evening
 03:08:08 **24** so you'll know who else will be Wednesday, because
 03:08:11 **25** we may actually get through all of them then.
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03:08:14 **1** THE COURT: Okay. Mr. Burchfield, have
 03:08:16 **2** you been sworn yet?
 03:08:17 **3** THE WITNESS: No.
 03:08:17 **4** Thereupon,
 03:08:17 **5** JAMES A. BURCHFIELD,
 03:08:17 **6** having been first duly sworn to tell the truth,
 03:08:25 **7** testified upon his oath as follows:
 03:08:25 **8** THE COURT: If you would take the witness
 03:08:26 **9** stand, please. So try and make yourself as
 03:08:38 **10** comfortable as possible. Adjust the mike so we
 03:08:41 **11** can hear you. If you want some water, let people
 03:08:43 **12** know. I'm sure they will find some for you.
 03:08:46 **13** Please state your full name. Spell your
 03:08:48 **14** last name, please.
 03:08:50 **15** THE WITNESS: I'm James Andrew
 03:08:51 **16** Burchfield. B-U-R-C-H-F-I-E-L-D.
 03:08:55 **17** THE COURT: Thank you. You may inquire.
 03:08:56 **18** DIRECT EXAMINATION
 03:08:57 **19** BY MR. SCHNEIDER:
 03:08:57 **20** **Q.** Good afternoon, Mr. Burchfield. Where do
 03:09:00 **21** you live?
 03:09:01 **22** **A.** I live here in Missoula at 525 Fairview
 03:09:04 **23** Avenue.
 03:09:04 **24** **Q.** What do you do for a living?
 03:09:06 **25** **A.** I'm the dean of the College of Forestry
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03:09:10 **1** and Conservation at the University of Montana.
 03:09:11 **2** **Q.** How long have you been on the faculty of
 03:09:13 **3** the University of Montana?
 03:09:14 **4** **A.** 19 years.
 03:09:17 **5** **Q.** How do you like it so far?
 03:09:18 **6** **A.** It's the best job in the world.
 03:09:21 **7** **Q.** Tell us a little bit, if you would, about
 03:09:23 **8** your educational background.
 03:09:26 **9** **A.** I was educated as a forester at the
 03:09:28 **10** University of Michigan. In 1973 I left and became
 03:09:33 **11** a Peace Corps volunteer in Guatemala. Returned in
 03:09:37 **12** 1977.
 03:09:37 **13** **Q.** What did you do next?
 03:09:39 **14** **A.** I worked for the United States Forest
 03:09:41 **15** Service in multiple locations. When I was in
 03:09:45 **16** Suquamish, Washington I got a master's degree in
 03:09:49 **17** silviculture. I then went back to Ann Arbor and
 03:09:53 **18** got my Ph.D. Worked in Washington, D.C., Walla
 03:09:58 **19** Walla, Washington, and came here in 1996.
 03:09:59 **20** **Q.** You indicated that your Ph.D. was in Ann
 03:10:03 **21** Arbor. I take it that was the University of
 03:10:05 **22** Michigan?
 03:10:06 **23** **A.** That's correct.
 03:10:06 **24** **Q.** With respect to your master's you were
 03:10:07 **25** living in Suquamish?
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03:10:10 **1 A. That's right.**
 03:10:10 **2 Q.** To the extent the Court may not be aware,
 03:10:13 **3** Suquamish is a little town up in the mountains
 03:10:15 **4** outside of Seattle?
 03:10:16 **5 A. That's right.**
 03:10:17 **6 Q.** So did you get the master's at a local
 03:10:19 **7** institution of higher learning in the Seattle
 03:10:21 **8** area?
 03:10:21 **9 A. Yes, I did. At the University of**
 03:10:22 **10 Washington.**
 03:10:23 **11 Q.** Now, other than the University of
 03:10:25 **12** Montana--that's a pretty good school, isn't it?
 03:10:27 **13 A. It is.**
 03:10:28 **14 Q.** You came to Missoula in what year?
 03:10:31 **15 A. 1996.**
 03:10:33 **16 Q.** And did you join the faculty in the
 03:10:36 **17** particular college of which you are now dean right
 03:10:40 **18** away?
 03:10:40 **19 A. Yes, I did. I was the director of the**
 03:10:42 **20 Bolle Center for People and Forests until 2003;**
 03:10:48 **21 associate dean until 2008, and then dean ever**
 03:10:51 **22 since.**
 03:10:53 **23 Q.** Associate Dean?
 03:10:54 **24 A. Yes.**
 03:10:54 **25 Q.** You mentioned the Forest Service. I'm
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03:10:56 **1** not sure you mentioned what you did for the Forest
 03:10:57 **2** Service.
 03:10:57 **3 A. I was a field forester for the Forest**
 03:10:59 **4 Service. I worked in multiple kinds of functions:**
 03:11:02 **5 Silviculturist, tree nurseries, timber sale**
 03:11:06 **6 preparation.**
 03:11:06 **7 Q.** In your teaching and research, what are
 03:11:09 **8** your areas of emphasis or interest?
 03:11:12 **9 A. My teaching and research has been around**
 03:11:14 **10 forest planning, and particularly collaborative**
 03:11:16 **11 decision-making. Engaging people who live close**
 03:11:19 **12 to the forest in decisions about how public lands**
 03:11:22 **13 are utilized.**
 03:11:23 **14 Q.** Does that involve study of public
 03:11:26 **15** resources?
 03:11:27 **16 A. It does. It looks at all the resources.**
 03:11:30 **17 It looks at the forest, wildlife, watersheds,**
 03:11:33 **18 recreation experiences and how people interact**
 03:11:36 **19 with the forest.**
 03:11:38 **20 Q.** In light of that, has your research or
 03:11:41 **21** teaching involved issues of water quality?
 03:11:43 **22 A. Yes, it has.**
 03:11:45 **23 Q.** Endangered species?
 03:11:46 **24 A. Yes, it has.**
 03:11:49 **25 Q.** Dean Burchfield, are you a customer of
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03:11:51 **1** Mountain Water Company?
 03:11:53 **2 A. Yes, I am.**
 03:11:57 **3 Q.** Have you ever attended a City Council
 03:11:59 **4** meeting in Missoula?
 03:12:01 **5 A. I have.**
 03:12:02 **6 Q.** More than once?
 03:12:03 **7 A. Only once.**
 03:12:05 **8 Q.** And why did you attend that one occasion?
 03:12:07 **9 A. I wanted to be able to voice my opinion**
 03:12:10 **10 about the significance of the City of Missoula**
 03:12:14 **11 obtaining the water services here.**
 03:12:16 **12 Q.** Do you recall when that meeting occurred?
 03:12:18 **13 A. I believe it was in November of last**
 03:12:20 **14 year, 2014.**
 03:12:22 **15 Q.** Does November 3rd, 2014, a Monday
 03:12:25 **16** evening, ring a bell?
 03:12:27 **17 A. Yes, it does.**
 03:12:29 **18 Q.** And did other people attend?
 03:12:31 **19 A. Yes. There were quite a few there.**
 03:12:34 **20 Q.** Why were you particularly interested in
 03:12:36 **21** this issue that you just described?
 03:12:40 **22 A. Well, I recognize, not only through my**
 03:12:43 **23 professional work but just as, you know, a common**
 03:12:45 **24 citizen, that water is the indispensable resource.**
 03:12:50 **25 That we need to have access to water to be able to**
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03:12:52 **1 live and to thrive and to sustain ourselves. I'm**
 03:12:55 **2 a gardener and I enjoy watching my vegetables**
 03:12:59 **3 grow, and water is essential to that.**
 03:13:01 **4 So I was very concerned about, since we**
 03:13:03 **5 live in a climate that has periodic droughts and**
 03:13:06 **6 is a semiarid environment, that maintaining**
 03:13:09 **7 effective, efficient use of our water system is**
 03:13:12 **8 important to me as a citizen.**
 03:13:17 **9 Q.** Did you go to that meeting absolutely
 03:13:19 **10** intending to speak?
 03:13:21 **11 A. No. I got there and I wanted to see what**
 03:13:24 **12 was happening. And I saw many people there. And**
 03:13:26 **13 I heard the City Council debating the issue and**
 03:13:31 **14 offered an option for public comment. And I heard**
 03:13:32 **15 other people comment and I felt it was my duty as**
 03:13:35 **16 a citizen to tell the others, my neighbors, what I**
 03:13:37 **17 believed.**
 03:13:37 **18 Q.** Before we get to that, was there a large
 03:13:39 **19** turnout?
 03:13:40 **20 A. Yes. Although I don't know much about**
 03:13:42 **21 the turnout there, it seemed to be pretty full.**
 03:13:44 **22 Q.** Were you personally aware that an e-mail
 03:13:47 **23** had been sent out to members of the community
 03:13:49 **24** urging that they attend?
 03:13:51 **25 A. No, I wasn't.**
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03:13:52 **1 Q.** An e-mail from--would it refresh your
 03:13:55 **2** recollection if it was an e-mail from Mr. Kappes?
 03:13:58 **3 A.** **I don't remember that, no.**
 03:13:59 **4 Q.** That's not why you went?
 03:14:00 **5 A.** **No. I went because I was interested in**
 03:14:03 **6 it and I read about it in the newspaper.**
 03:14:07 **7 Q.** With respect to, I guess, your state of
 03:14:12 **8** mind, did you go there to listen as well as to
 03:14:14 **9** talk?
 03:14:15 **10 A.** **Oh, yes.**
 03:14:16 **11 Q.** And I realize you said you didn't go
 03:14:18 **12** there necessarily to talk. But did you listen
 03:14:21 **13** when you got there?
 03:14:22 **14 A.** **I did, yes.**
 03:14:23 **15 Q.** Did you take into account what you heard
 03:14:24 **16** from other members of the public?
 03:14:26 **17 A.** **Oh, absolutely.**
 03:14:27 **18 Q.** Did you take into account what you heard
 03:14:28 **19** from City Council members who spoke?
 03:14:33 **20 A.** **Yes, I did.**
 03:14:34 **21 Q.** And did there come a time that evening
 03:14:36 **22** when you decided you would speak?
 03:14:39 **23 A.** **Yes. It was, you know, a moment about a**
 03:14:42 **24 quarter of the way through the citizen comment**
 03:14:44 **25 period where I thought it would be appropriate for**
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03:14:47 **1 me to stand up. And I just went to the microphone**
 03:14:49 **2 and spoke.**
 03:14:50 **3 Q.** What did you say?
 03:14:51 **4 A.** **I said basically that the City of**
 03:14:54 **5 Missoula was a place that I called home. And that**
 03:14:57 **6 I believe that having a water system that's**
 03:15:00 **7 efficient and is well delivered to my house is**
 03:15:02 **8 something that's important for me and my children**
 03:15:04 **9 and grandchildren and anyone else who lives here.**
 03:15:07 **10 And I would like to make sure that the entity that**
 03:15:12 **11 delivered water to me is accountable to me. And I**
 03:15:15 **12 feel that the City is accountable to me. There is**
 03:15:17 **13 a political process that I can go through to voice**
 03:15:20 **14 my opinion and make changes if necessary if my**
 03:15:22 **15 interests aren't being met.**
 03:15:24 **16 Q.** Do you have any concern that you would
 03:15:26 **17** not have access to the decision makers with
 03:15:29 **18** respect to rates if the City were to acquire the
 03:15:33 **19** water system?
 03:15:33 **20 A.** **If the City were to acquire, I feel I**
 03:15:35 **21 would have access to those decision makers,**
 03:15:38 **22 because they have to be fair and under the**
 03:15:40 **23 political process of which I have agency and**
 03:15:43 **24 ability to change.**
 03:15:44 **25 Q.** Do you have that same confidence if the
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03:15:46 **1** City doesn't acquire the water system?
 03:15:49 **2 A.** **I don't.**
 03:15:50 **3 Q.** No further questions.
 03:15:50 **4** THE COURT: Cross-examination.
 03:15:55 **5** CROSS-EXAMINATION
 03:15:58 **6** BY MS. DESOTO:
 03:15:58 **7 Q.** Good afternoon, Dean Burchfield. My name
 03:16:04 **8** is Katie DeSoto and I represent Mountain Water
 03:16:06 **9** Company.
 03:16:06 **10** Just to clarify from the beginning. You
 03:16:08 **11** are here in your individual capacity, correct?
 03:16:10 **12 A.** **That's correct.**
 03:16:11 **13 Q.** You don't represent the University of
 03:16:12 **14** Montana in this proceeding in any way?
 03:16:14 **15 A.** **I do not.**
 03:16:15 **16 Q.** And your opinions are your own?
 03:16:17 **17 A.** **They are.**
 03:16:17 **18 Q.** I read the testimony that you gave at the
 03:16:21 **19** City Council meeting and it sounds like one of the
 03:16:24 **20** main concerns you have is price; is that right?
 03:16:27 **21 A.** **Yes, I'm concerned about price.**
 03:16:28 **22 Q.** Do you have any knowledge of whether the
 03:16:29 **23** City plans to lower the rates if it is able to
 03:16:32 **24** take Mountain Water Company?
 03:16:33 **25 A.** **I do not.**
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03:16:37 **1 Q.** And you said you are a Mountain Water
 03:16:42 **2** Company customer?
 03:16:42 **3 A.** **Yes.**
 03:16:43 **4 Q.** You don't have any issues with the
 03:16:44 **5** quality of the water that comes to your house, do
 03:16:46 **6** you?
 03:16:46 **7 A.** **No, I do not.**
 03:16:47 **8 Q.** It's safe water?
 03:16:48 **9 A.** **I believe so.**
 03:16:49 **10 Q.** You don't have any knowledge of whether
 03:16:50 **11** they are taking good care of the aquifer in terms
 03:16:53 **12** of safety, contaminants, and so forth?
 03:16:55 **13 A.** **I have no knowledge of that.**
 03:17:00 **14 Q.** Have you ever communicated with the
 03:17:02 **15** Montana Consumer Counsel?
 03:17:04 **16 A.** **I have not.**
 03:17:05 **17 Q.** Have you ever communicated with anyone,
 03:17:07 **18** for example, a commissioner that represents the
 03:17:09 **19** Missoula region, at the PSC?
 03:17:11 **20 A.** **No, I haven't.**
 03:17:12 **21 Q.** Those are all the questions I have.
 03:17:14 **22** Thank you.
 03:17:14 **23** THE COURT: Any redirect?
 03:17:17 **24** MR. MERCER: Nothing from us.
 03:17:18 **25** THE COURT: I'm sorry.
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03:17:19 **1** MR. ZADICK: No, Your Honor.
 03:17:20 **2** THE COURT: Thank you, Mr. Zadick.
 03:17:22 **3** Mr. Schneider, anything further?
 03:17:23 **4** MR. SCHNEIDER: Your Honor, nothing
 03:17:24 **5** further for this witness.
 03:17:26 **6** THE COURT: Dean Burchfield, you may step
 03:17:27 **7** down.
 03:17:32 **8** MR. SCHNEIDER: We have attempted to have
 03:17:34 **9** John Wilson from the City come over, who is the
 03:17:36 **10** last person on the list. We thought he would be
 03:17:39 **11** on Wednesday. He apparently is not in the office.
 03:17:42 **12** MS. PRINZING-JONES: We can get him.
 03:17:44 **13** He's not here at this particular moment.
 03:17:46 **14** THE COURT: So we need a few minutes to
 03:17:48 **15** break?
 03:17:50 **16** MS. PRINZING-JONES: Yes.
 03:17:50 **17** THE COURT: We can do that. Let us know
 03:17:52 **18** when he's here.
 03:17:53 **19** (Whereupon, court was in recess at
 03:26:14 **20** 3:17 p.m., reconvened at 3:26 p.m.)
 03:26:14 **21** Thereupon,
 03:26:14 **22** JOHN WILSON,
 03:26:14 **23** having been first duly sworn to tell the truth,
 03:26:48 **24** testified upon his oath as follows:
 03:26:48 **25** THE COURT: So, Mr. Wilson, please make
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03:26:51 **1** yourself as comfortable as possible there. Adjust
 03:26:53 **2** the mike so that we can all hear you.
 03:26:56 **3** Please state your full name, spell your
 03:26:59 **4** last name for us.
 03:27:00 **5** THE WITNESS: John Wilson. W-I-L-S-O-N.
 03:27:03 **6** THE COURT: You may inquire.
 03:27:05 **7** DIRECT EXAMINATION
 03:27:06 **8** BY MR. SCHNEIDER:
 03:27:06 **9** **Q.** Mr. Wilson, can you please tell the Court
 03:27:09 **10** what you were planning to do at 9:00 a.m.
 03:27:11 **11** tomorrow.
 03:27:11 **12** **A.** Right here, planning to testify.
 03:27:13 **13** **Q.** You were planning to meet with me and
 03:27:15 **14** chat?
 03:27:15 **15** **A.** Oh, excuse me, that was Wednesday. I was
 03:27:17 **16** planning to meet with you for preparation.
 03:27:19 **17** **Q.** So we're going to do this without having
 03:27:22 **18** met. Is that okay with you?
 03:27:23 **19** **A.** I am who I am.
 03:27:25 **20** **Q.** You were also, as I understand it, on
 03:27:27 **21** your way to pick up a suit coat and a blazer, and
 03:27:30 **22** you were called back saying you don't need it,
 03:27:32 **23** right?
 03:27:33 **24** **A.** Yes.
 03:27:33 **25** **Q.** You are ready to go?
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03:27:34 **1** **A.** I guess so.
 03:27:35 **2** **Q.** Where do you live?
 03:27:37 **3** **A.** I live at 708 South Second Street West in
 03:27:40 **4** Missoula.
 03:27:40 **5** **Q.** How long have you lived there?
 03:27:42 **6** **A.** About two weeks.
 03:27:43 **7** **Q.** What do you do for a living?
 03:27:45 **8** **A.** I'm a public works director for the City
 03:27:47 **9** of Missoula.
 03:27:47 **10** **Q.** How long have you been doing that?
 03:27:49 **11** **A.** For about a month. Maybe a few weeks
 03:27:53 **12** longer.
 03:27:55 **13** **Q.** Tell us a little bit about your
 03:27:57 **14** background. Start with education, if you will.
 03:28:04 **15** **A.** Okay. Well, just a touch before
 03:28:07 **16** education, I was a late college student. I lived
 03:28:09 **17** in Whitefish and I was a skiing carpenter until
 03:28:13 **18** 1984 when I went back to college. A few years at
 03:28:17 **19** the Flathead Valley Community College and then I
 03:28:20 **20** got a bachelor's degree in civil engineering in
 03:28:23 **21** Bozeman in 1990.
 03:28:24 **22** After graduation I worked for a
 03:28:28 **23** consulting engineer for a short period of time,
 03:28:31 **24** and then went to work for the City of Whitefish in
 03:28:34 **25** the spring of 1991. Worked there until November
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03:28:39 **1** '97 when I went to public works in Whitefish.
 03:28:43 **2** Became the public works director for the City of
 03:28:45 **3** Whitefish until I accepted this job.
 03:28:50 **4** **Q.** And in your positions with Whitefish,
 03:28:55 **5** what types of responsibilities did you have?
 03:29:00 **6** **A.** Well, I was the public works director and
 03:29:05 **7** responsible and in charge of the water supply
 03:29:07 **8** distribution system, wastewater collection and
 03:29:09 **9** treatment system, the streets division, solid
 03:29:11 **10** waste collection. And utility building was
 03:29:14 **11** underneath my responsibility as well. Oh, and
 03:29:17 **12** stormwater.
 03:29:18 **13** **Q.** Were you the person at the top of the org
 03:29:23 **14** chart, as far as we're concerned, with respect to
 03:29:25 **15** the wastewater system?
 03:29:26 **16** **A.** Yes.
 03:29:27 **17** **Q.** Were you the person at the top of the org
 03:29:29 **18** chart with respect to the water distribution
 03:29:31 **19** system?
 03:29:32 **20** **A.** Yes.
 03:29:33 **21** **Q.** Do you know a little bit about that water
 03:29:35 **22** distribution system in Whitefish?
 03:29:37 **23** **A.** Yes, I do.
 03:29:38 **24** **Q.** What type of system is it? Please
 03:29:41 **25** describe it to the Court.
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03:29:45 **1 A. Well, we have a water treatment system**
 03:29:47 **2 there. It's a surface water system. A**
 03:29:49 **3 combination of sources from the streams coming**
 03:29:53 **4 down off the hills above Whitefish. And we have a**
 03:29:55 **5 secondary source from Whitefish Lake. It's all**
 03:29:59 **6 pumped through a water treatment facility.**
 03:30:00 **7 And then the distribution system is much**
 03:30:03 **8 like any other system regardless of the source.**
 03:30:06 **9 Q. Do you--does the Whitefish system involve**
 03:30:10 **10 any sort of filtration before the water is**
 03:30:13 **11 distributed to customers?**
 03:30:14 **12 A. Yes. That's the nature of the treatment**
 03:30:16 **13 plant.**
 03:30:17 **14 Q. And it's not pumped out of a groundwater**
 03:30:20 **15 source or aquifer. It's from the surface water;**
 03:30:23 **16 is that right?**
 03:30:24 **17 A. That's correct, in Whitefish. When I**
 03:30:26 **18 worked in Kalispell, they did have a groundwater**
 03:30:29 **19 supply there.**
 03:30:38 **20 Q. During the time that you worked at**
 03:30:40 **21 Kalispell and Whitefish, did you have any**
 03:30:41 **22 responsibility or involvement in dealing with**
 03:30:45 **23 supervising others who ran the water system?**
 03:30:48 **24 A. Yes.**
 03:30:48 **25 Q. Supervising others who ran the wastewater**
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03:30:51 **1 system?**
 03:30:51 **2 A. Yes.**
 03:30:52 **3 Q. Did you have any responsibility or**
 03:30:53 **4 involvement in the determination of appropriate**
 03:30:57 **5 rates that needed to be set?**
 03:30:59 **6 A. I was involved in that.**
 03:31:00 **7 Q. Did you have any involvement or**
 03:31:02 **8 participation in budgeting capital expenditures?**
 03:31:08 **9 A. I was very much involved in that.**
 03:31:10 **10 Q. Were you primarily responsible for**
 03:31:12 **11 developing a budget for capital expenditures that**
 03:31:18 **12 needed to be made over a period of years?**
 03:31:21 **13 A. Yes. I involved other people, but I was**
 03:31:23 **14 responsible.**
 03:31:23 **15 Q. What type of information did you collect**
 03:31:25 **16 in order to prepare such budgets?**
 03:31:30 **17 A. Well, we looked at--are we talking about**
 03:31:32 **18 the budget or the capital improvements plan?**
 03:31:36 **19 Q. Let's take them one at a time. Which**
 03:31:38 **20 would you like to do first?**
 03:31:41 **21 A. Well, capital improvements plan comes**
 03:31:45 **22 first in the process, so...**
 03:31:45 **23 Q. Why don't you explain how that was**
 03:31:47 **24 prepared and what was involved.**
 03:31:47 **25 A. Well, capital improvements plan was based**
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03:31:48 **1 on, in our case, an in-house assessment of the**
 03:31:52 **2 condition of the facility. We had, you know, a**
 03:31:53 **3 record of leaks in the water system, a record of**
 03:31:59 **4 TV inspections and problems with infill/**
 03:32:01 **5 infiltration of the wastewater system, information**
 03:32:03 **6 like that from our own maintenance.**
 03:32:06 **7 We would use those records to prioritize**
 03:32:08 **8 projects, lay out a five-year plan. Each spring**
 03:32:13 **9 before the budget process we would review how many**
 03:32:16 **10 we had completed the previous year and update the**
 03:32:19 **11 capital improvements plan accordingly.**
 03:32:21 **12 Q. And then would you submit that budget to**
 03:32:24 **13 someone or some body for consideration?**
 03:32:27 **14 A. The capital improvements plan would go to**
 03:32:30 **15 the city manager and then to the Council for**
 03:32:32 **16 informational purposes. And then we would use**
 03:32:34 **17 that as we went on to develop the fiscal year**
 03:32:36 **18 budget and then the budget, of course, is approved**
 03:32:39 **19 by the City Council.**
 03:32:41 **20 Q. And then did you have responsibility to**
 03:32:43 **21 implement the plan?**
 03:32:44 **22 A. Yes.**
 03:32:45 **23 Q. And did you supervise others in**
 03:32:47 **24 attempting to do that?**
 03:32:50 **25 A. Yes.**
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03:32:51 **1 Q. Was the five-year horizon typical for**
 03:32:54 **2 such capital improvements plans?**
 03:32:56 **3 A. To my knowledge, yes.**
 03:32:57 **4 Q. Is that the format you always followed**
 03:32:59 **5 when you had that responsibility?**
 03:33:01 **6 A. Yes.**
 03:33:02 **7 Q. With respect to--you mentioned leaks,**
 03:33:05 **8 that was one bit of information you took into**
 03:33:08 **9 account.**
 03:33:08 **10 Do you have any sense for the period of**
 03:33:11 **11 time that you were working for either Kalispell or**
 03:33:13 **12 Whitefish, how serious or how severe the leakage**
 03:33:19 **13 problem was?**
 03:33:21 **14 A. I think so. In Whitefish it was hard to**
 03:33:24 **15 be specific because all of our parks weren't**
 03:33:26 **16 metered. But we believe we had 15 to 20 percent**
 03:33:29 **17 loss in the distribution system.**
 03:33:32 **18 Q. Did you endeavor to try to get that even**
 03:33:34 **19 lower?**
 03:33:34 **20 A. Yes.**
 03:33:35 **21 Q. Why?**
 03:33:36 **22 A. Because--especially because with the**
 03:33:40 **23 treated water system, we invested quite a bit of**
 03:33:43 **24 money in treating the water and sending it out to**
 03:33:46 **25 the distribution system, so we wanted to be**
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03:33:48 **1 efficient with that use of funds.**
 03:33:49 **2 Q.** Who set the rates at Whitefish?
 03:33:54 **3 A.** There were a couple of people involved.
 03:33:56 **4 Primarily me, my administrative assistant, and**
 03:34:00 **5 finance director. City manager also weighed in,**
 03:34:04 **6 depending on the manager. The last two managers**
 03:34:06 **7 were very fiscal-minded people.**
 03:34:08 **8 Q.** Was that a collaborative process?
 03:34:11 **9 A.** Yes.
 03:34:12 **10 Q.** Did that collaborative procedure result
 03:34:15 **11 in a recommendation to the City Council?**
 03:34:17 **12 A.** Yes.
 03:34:18 **13 Q.** Was the City Council the governing body
 03:34:21 **14 to consider whether to implement that rates you**
 03:34:23 **15 were recommending?**
 03:34:24 **16 A.** Yes.
 03:34:24 **17 Q.** Or something other than what you were
 03:34:26 **18 recommending?**
 03:34:26 **19 A.** Yes. I simply recommended. They, of
 03:34:29 **20 course, had the prerogative to do as they believe.**
 03:34:31 **21 Q.** Were you generally familiar with how that
 03:34:33 **22 process worked in Whitefish? Once you made your**
 03:34:37 **23 recommendation, what happened next?**
 03:34:38 **24 A.** Public hearing would be scheduled. If
 03:34:41 **25 there was a public hearing, anyone was welcome to**
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03:34:45 **1 weigh in. In the notice we encouraged people to**
 03:34:47 **2 attend the meeting, communicate by e-mail or write**
 03:34:53 **3 a letter. Council heard comment, comment from**
 03:34:57 **4 staff and deliberated.**
 03:34:57 **5 Q.** Did that process work well or not so
 03:35:00 **6 well?**
 03:35:00 **7 A.** I believe it worked very well.
 03:35:03 **8 Q.** Do you have any view as to whether or not
 03:35:05 **9 it resulted in a fair rate-setting process?**
 03:35:08 **10 A.** I believe so. All of us that worked on
 03:35:11 **11 the rates also were citizens, so we had that**
 03:35:15 **12 interest for ourselves and friends and neighbors,**
 03:35:18 **13 too, to be treated fairly.**
 03:35:21 **14 Q.** During the time that you worked for
 03:35:22 **15 Whitefish, did it ever--did you ever have occasion**
 03:35:25 **16 to consult with other cities' personnel with**
 03:35:29 **17 respect to the delivery of city services?**
 03:35:32 **18 A.** Absolutely.
 03:35:33 **19 Q.** Did you ever consult with other city--
 03:35:36 **20 other cities' personnel with respect to the**
 03:35:40 **21 efficient delivery of such services?**
 03:35:42 **22 A.** Yes. Not only I, but my supervisors had
 03:35:45 **23 peers in other cities as well.**
 03:35:47 **24 Q.** And did you not only obtain information
 03:35:49 **25 from other cities, but did you provide information**
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03:35:52 **1 pertinent to Whitefish to those folks?**
 03:35:55 **2 A.** Yes.
 03:35:57 **3 Q.** Did you ever have occasion to consult
 03:36:01 **4 with the folks in Missoula, Montana?**
 03:36:03 **5 A.** Yes.
 03:36:04 **6 Q.** What was that occasion?
 03:36:07 **7 A.** You know, it was not a single time. I
 03:36:12 **8 know I talked with Steve King, the previous public**
 03:36:15 **9 works director, about some of their street**
 03:36:18 **10 policies, the methods they used for chip-sealing**
 03:36:21 **11 or other comparable methods to maintain streets.**
 03:36:25 **12 I remember that specific conversation.**
 03:36:27 **13 Also, we went through a long process of**
 03:36:30 **14 working with the State to develop the nutrient**
 03:36:33 **15 standards. And in that process I gathered**
 03:36:37 **16 information from and asked opinions of a number of**
 03:36:39 **17 public works directors around the state.**
 03:36:41 **18 Q.** Including Missoula?
 03:36:43 **19 A.** Yes.
 03:36:44 **20 Q.** And did you know anything about
 03:36:47 **21 Missoula's wastewater treatment facility when you**
 03:36:49 **22 made that inquiry?**
 03:36:51 **23 A.** Yes.
 03:36:51 **24 Q.** What did you know?
 03:36:53 **25 A.** They were a model to follow. They had a
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03:36:57 **1 lot of experience that I could gain from.**
 03:37:00 **2 Q.** In your experience based on your years of
 03:37:03 **3 service in Whitefish and elsewhere, Kalispell, do**
 03:37:08 **4 you think that that opportunity for collaboration**
 03:37:11 **5 among the cities and towns that own water systems,**
 03:37:14 **6 wastewater systems, is it a benefit or detriment?**
 03:37:17 **7 A.** It's a tremendous benefit.
 03:37:27 **8 Q.** When did you first consider moving from
 03:37:30 **9 Whitefish to Missoula?**
 03:37:33 **10 A.** You know, I've thought about it in a very
 03:37:36 **11 general way over the years. You know, I've**
 03:37:40 **12 operated in a relatively small arena and I like a**
 03:37:46 **13 challenge. The work is the same but it's on a**
 03:37:48 **14 different scale, a different system.**
 03:37:51 **15 So I had thought about it, but it wasn't**
 03:37:53 **16 until this opportunity arose. I heard about it at**
 03:37:56 **17 the League of Cities and Towns conference last**
 03:37:57 **18 October. Started to give it some serious thought.**
 03:38:01 **19 And it wasn't an easy decision because I'd been in**
 03:38:05 **20 Whitefish for four years. I kind of liked it**
 03:38:07 **21 there. But my daughter is here, my wife will be**
 03:38:10 **22 following me soon. Probably more than you asked.**
 03:38:14 **23 Q.** You mentioned the League of Montana
 03:38:16 **24 Cities and towns. What is that, very generally?**
 03:38:19 **25 A.** It's an association of all of the cities
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03:38:20 **1** and towns in the State of Montana that come
 03:38:23 **2** together to learn from each other. I think most
 03:38:27 **3** of the things I've seen have been focused toward
 03:38:31 **4** legislation. But a nutrient work group that I was
 03:38:34 **5** involved in was also--actually, I represented the
 03:38:40 **6** League of Cities and Towns on a committee with the
 03:38:42 **7** Department of Environmental Quality. And that was
 03:38:44 **8** a purpose of the League of Cities and Towns, to
 03:38:47 **9** represent all the cities and communities. That's
 03:38:51 **10** my thoughts at the moment.
 03:38:53 **11** **Q.** In the course of your career exercising
 03:38:55 **12** your responsibilities for the municipalities for
 03:39:00 **13** whom you worked, did you come to rely on the
 03:39:02 **14** League as a source of information and guidance?
 03:39:05 **15** **A. Yes. And referral.**
 03:39:08 **16** **Q.** How did you become aware of this--I think
 03:39:10 **17** what you called this opportunity last October?
 03:39:13 **18** Was it posted?
 03:39:15 **19** **A. Actually, no. I was having a**
 03:39:16 **20** **conversation with Bruce Bender at the League**
 03:39:18 **21** **meeting. He said it sort of as a joke, because he**
 03:39:22 **22** **knows how dedicated I am--how attached I am to**
 03:39:25 **23** **Whitefish. But then I went home and talked to my**
 03:39:29 **24** **wife and it grew on us. So I heard it from Bruce.**
 03:39:33 **25** **Q.** Now, let's take the wastewater treatment
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03:39:36 **1** facility first. Do I understand correctly that
 03:39:40 **2** the Missoula system is larger system than you
 03:39:44 **3** managed in Whitefish?
 03:39:45 **4** **A. Yes.**
 03:39:47 **5** **Q.** You said earlier that you like a
 03:39:49 **6** challenge. Do you look forward to the challenge
 03:39:52 **7** of supervising the wastewater treatment facility
 03:39:54 **8** in Missoula?
 03:39:55 **9** **A. Of course.**
 03:39:57 **10** **Q.** Did you understand at any time in the
 03:40:00 **11** process of considering whether to move here to
 03:40:03 **12** take this job, that the City of Missoula had
 03:40:07 **13** aspirations to acquire its water system?
 03:40:10 **14** **A. Yes, I did.**
 03:40:12 **15** **Q.** And I take it that that's a larger water
 03:40:16 **16** system than the one you've managed in Whitefish,
 03:40:18 **17** correct?
 03:40:18 **18** **A. Yes, it is.**
 03:40:19 **19** **Q.** Do you look forward to that challenge if
 03:40:22 **20** it should come to pass that the City acquires the
 03:40:24 **21** system?
 03:40:24 **22** **A. Yes, I do.**
 03:40:25 **23** **Q.** You've been here a few weeks. You've
 03:40:27 **24** been working for how long?
 03:40:29 **25** **A. I came to work February 17th, so about a**
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03:40:33 **1** month.
 03:40:36 **2** **Q.** Over the course of the time that you've
 03:40:38 **3** been here, have you come to know people in the
 03:40:43 **4** City who work for the wastewater treatment
 03:40:45 **5** facility?
 03:40:46 **6** **A. Yes. And I knew the lead operator, Starr**
 03:40:50 **7** **Sullivan. I've known him for five or six years or**
 03:40:53 **8** **more.**
 03:40:54 **9** **Q.** Based on what you know from your own
 03:40:56 **10** knowledge and experience acquired over the years
 03:40:59 **11** as to what it takes to run a wastewater treatment
 03:41:02 **12** facility or a water system, do you believe that
 03:41:06 **13** you are up to the challenge of running the
 03:41:09 **14** wastewater treatment facility for the City of
 03:41:12 **15** Missoula?
 03:41:13 **16** **A. I'm up to the challenge.**
 03:41:14 **17** **I want to clarify that the operators run**
 03:41:17 **18** **the system. I see my job being there to support**
 03:41:20 **19** **them. I think I can do a good job at that.**
 03:41:23 **20** **Q.** In that same or similar capacity, do you
 03:41:25 **21** feel that you are up to the challenge of having
 03:41:27 **22** that responsibility with respect to the water
 03:41:29 **23** system should it be acquired?
 03:41:31 **24** **A. Yes, I do. There again, I would depend**
 03:41:35 **25** **on others to do the day-to-day work and I look**
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03:41:37 **1** forward to supporting them.
 03:41:38 **2** **Q.** And as you sit here today, based on
 03:41:42 **3** everything that you know--let me back up and ask
 03:41:46 **4** you a little bit more about what you know.
 03:41:48 **5** Did you participate in any way in
 03:41:50 **6** preparing the City's interim plan for running the
 03:41:56 **7** water system should it be acquired?
 03:41:57 **8** **A. The business plan?**
 03:41:58 **9** **Q.** The business plan.
 03:41:59 **10** **A. Yes, I did.**
 03:42:00 **11** **Q.** And what was the nature of your
 03:42:01 **12** participation?
 03:42:09 **13** **A. Yes, I worked primarily with Bruce and**
 03:42:12 **14** **Dale. By the time it came to me some of the**
 03:42:16 **15** **parameters were set for the funds available for**
 03:42:22 **16** **capital improvements. Primarily I worked on that**
 03:42:24 **17** **capital improvement plan. A little bit of review**
 03:42:27 **18** **for some of the other detail provided by.**
 03:42:32 **19** **Q.** Based on what you know as you sit here
 03:42:35 **20** today, do you think there are benefits or are
 03:42:37 **21** there detriments for the citizens of Missoula, the
 03:42:41 **22** inhabitants of this city, if the water system is
 03:42:44 **23** acquired?
 03:42:45 **24** **A. I think that there's benefits.**
 03:42:47 **25** **Q.** Have you given that some thought?
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03:42:49 **1 A. Not as much as others, but I've given it**
 03:42:52 **2 some thoughts.**
 03:42:52 **3 Q. You haven't been here as long as others,**
 03:42:55 **4 right?**
 03:42:55 **5 Last question. Do you know of any reason**
 03:42:58 **6 why the City would not be able to run the water**
 03:43:01 **7 system, operate it for the citizens of Missoula**
 03:43:05 **8 should it be acquired?**
 03:43:06 **9 A. No, I do not know of any reason.**
 03:43:08 **10 MR. SCHNEIDER: No further questions.**
 03:43:09 **11 THE COURT: Any cross-examination?**
 03:43:14 **12 Mr. Conner?**
 03:43:15 **13 MR. CONNER: Yes, Your Honor.**
 03:43:35 **14 CROSS-EXAMINATION**
 03:43:36 **15 BY MR. CONNER:**
 03:43:36 **16 Q. Hello, Mr. Wilson.**
 03:44:12 **17 A. Good afternoon.**
 03:44:15 **18 Q. I'm glad to meet you. I finally met**
 03:44:17 **19 somebody--I've been here longer than you.**
 03:44:21 **20 A. I first slept in Missoula 40 years ago,**
 03:44:24 **21 though.**
 03:44:24 **22 Q. Well, you've got me beat there.**
 03:44:27 **23 A. My sister was a college student.**
 03:44:29 **24 Q. I won't ask where or what part of the**
 03:44:32 **25 river.**
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03:44:33 **1 Mr. Wilson, you indicated that it's a**
 03:44:37 **2 positive thing for you to be able to collaborate,**
 03:44:40 **3 and that you have collaborated with other public**
 03:44:43 **4 works directors, and I think you mentioned city**
 03:44:45 **5 managers maybe, across the state in regard to your**
 03:44:50 **6 operation in Whitefish.**
 03:44:51 **7 I'm sure they probably called you a time**
 03:44:53 **8 or two, is that right, asking questions, things**
 03:44:55 **9 like that?**
 03:44:56 **10 A. Yes. It's a small group. Small**
 03:44:58 **11 fraternity, I guess I'd say.**
 03:45:00 **12 Q. I can appreciate that.**
 03:45:02 **13 Is there any reason that--you didn't**
 03:45:05 **14 mention that you've ever tried to call John Kappes**
 03:45:08 **15 at Mountain Water Company.**
 03:45:09 **16 A. We've never met.**
 03:45:10 **17 Q. All right. Is there any reason that you**
 03:45:13 **18 couldn't have called John or picked up the phone**
 03:45:16 **19 if you had a question about water or water system?**
 03:45:19 **20 A. No, just that we hadn't met.**
 03:45:21 **21 Q. Okay. So there is nothing--there is**
 03:45:25 **22 nothing particular about Mountain Water being**
 03:45:26 **23 owned by a private company that prohibits you from**
 03:45:30 **24 reaching out to Mountain Water Company for help or**
 03:45:34 **25 support or anything like that?**
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03:45:35 **1 A. And vice versa.**
 03:45:36 **2 Q. Absolutely. Okay. I just wanted to make**
 03:45:41 **3 sure that was the case.**
 03:45:42 **4 Now, with respect to the--I know you just**
 03:45:46 **5 got here. So do you know how long the public**
 03:45:48 **6 works position has been open?**
 03:45:51 **7 A. I understand two years.**
 03:45:54 **8 Q. Do you know, did Mr. Bender ever contact**
 03:45:58 **9 you prior to October and ask you if you would be**
 03:46:01 **10 interested in the job?**
 03:46:03 **11 A. No. The job was never--never that way.**
 03:46:06 **12 Bruce and I have known each other for a number of**
 03:46:08 **13 years and I knew about the reorganization going on**
 03:46:10 **14 to create Development Services and split out some**
 03:46:13 **15 of the staff from Public Works. I knew that was**
 03:46:16 **16 happening. But, no, we never--never had that same**
 03:46:20 **17 sort of conversation that we had last fall.**
 03:46:23 **18 Q. I understand. So you didn't know the**
 03:46:27 **19 position had been open for two years; is that**
 03:46:30 **20 correct?**
 03:46:30 **21 A. No, I did know that, yes. I'm sorry, I**
 03:46:33 **22 thought you asked if Bruce had encouraged me to**
 03:46:36 **23 apply for the job or something. We talked about**
 03:46:39 **24 the fact that he hadn't filled the position**
 03:46:42 **25 several times during those two years.**
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03:46:44 **1 Q. You mentioned Starr Sullivan as a lead**
 03:46:47 **2 operator. Is he an operator of the wastewater**
 03:46:50 **3 system?**
 03:46:50 **4 A. He's a licensed wastewater operator.**
 03:46:52 **5 Q. And that's what you view really his role**
 03:46:55 **6 is at the wastewater treatment plant; is that**
 03:46:57 **7 correct, sir?**
 03:46:57 **8 A. In general terms. He's also a**
 03:47:01 **9 supervisor. Gene Connell who works under him is**
 03:47:04 **10 more involved in the details of the daily**
 03:47:06 **11 operation, but him and Starr collaborate on many**
 03:47:10 **12 points.**
 03:47:11 **13 Q. Sure. Now, with respect to the plan**
 03:47:16 **14 that--the business plan. I think Mr. Schneider**
 03:47:20 **15 referred to it as the interim plan. We've heard**
 03:47:23 **16 it called the preliminary plan, things of that**
 03:47:28 **17 nature, with respect to the document that it**
 03:47:29 **18 sounds like you participated in with Mr. Bender**
 03:47:31 **19 and Mr. Bickell.**
 03:47:34 **20 When that document came to you, it was**
 03:47:36 **21 basically already drafted, wasn't it, the text of**
 03:47:38 **22 it?**
 03:47:39 **23 A. It was a preliminary draft, yes.**
 03:47:40 **24 Q. And did you change any of the text in the**
 03:47:42 **25 document itself, as far as you could tell?**
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03:47:46 **1 A. Very little. I added my bio and offered**
 03:47:49 **2 a few comments, but not--I don't recall adding any**
 03:47:52 **3 substantial text.**
 03:47:53 **4 Q. It's fair to say that you really didn't**
 03:47:56 **5 have the background in order to discuss about the**
 03:47:59 **6 water system and the operation of the water system**
 03:48:01 **7 in Missoula because you just got here, right?**
 03:48:04 **8 A. Yes.**
 03:48:06 **9 Q. And you really have no knowledge of the**
 03:48:08 **10 Mountain Water system itself, do you, sir, from**
 03:48:12 **11 your own personal knowledge?**
 03:48:15 **12 A. Limited knowledge. I notice the pump**
 03:48:18 **13 houses when I drive around town. People in our**
 03:48:20 **14 business do that.**
 03:48:22 **15 Q. Yeah. Water Tank Hill you can see a pump**
 03:48:27 **16 house.**
 03:48:27 **17 A. And pump houses scattered all through**
 03:48:29 **18 town. I notice they have their generators on**
 03:48:31 **19 trailers, which is a little bit different**
 03:48:33 **20 approach. I'm sure that will be interesting to**
 03:48:35 **21 learn their process for that. I can see that's a**
 03:48:38 **22 good idea. But, no, I don't know the system in**
 03:48:40 **23 detail.**
 03:48:41 **24 Q. And isn't it true, sir, you can't really**
 03:48:44 **25 make any comments on how the system is operating,**
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03:48:46 **1** how efficiently it's operating, any of those type
 03:48:49 **2** of comments regarding the system itself, correct?
 03:48:53 **3 A. Not from direct knowledge.**
 03:48:54 **4 Q. And you don't know about any issues or**
 03:48:57 **5** challenges the City or the system has, or what the
 03:49:00 **6** water company has done over the years to plan and
 03:49:03 **7** try to address those issues. Correct?
 03:49:05 **8 A. That's fair to say. I'm a quick study,**
 03:49:10 **9** though.
 03:49:10 **10 Q. I'm sure you are. No, I'm sure you are.**
 03:49:14 **11 A. Could I go back and say one thing about**
 03:49:15 **12** the plant?
 03:49:16 **13 Q. No, sir, there is not a question pending.**
 03:49:18 **14** With respect to Whitefish itself, are you
 03:49:24 **15** familiar with the--or let me just ask you the
 03:49:28 **16** question leading up to that first.
 03:49:32 **17** Do you know if the Whitefish wastewater
 03:49:35 **18** treatment plant has been out of compliance at any
 03:49:39 **19** point in the last 12 quarters?
 03:49:42 **20 A. Yes.**
 03:49:44 **21 Q. Has it?**
 03:49:45 **22 A. Yes.**
 03:49:47 **23 Q. Is it--is it also true, sir, that there**
 03:49:51 **24** were two quarters where there were significant
 03:49:54 **25** noncompliance status?
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03:49:57 **1 A. There have been a few different issues.**
 03:49:59 **2 I'm not sure which one you are referring to as**
 03:50:01 **3** significant.
 03:50:01 **4 Q. I'm just asking, sir. You would**
 03:50:05 **5** think--there have been some significant violation
 03:50:07 **6** issues, though, haven't there?
 03:50:09 **7 A. Noncompliance.**
 03:50:09 **8 Q. Excuse me?**
 03:50:11 **9 A. Yes. I would love to be able to explain**
 03:50:13 **10** a few of those if I could.
 03:50:14 **11 Q. Well, this is cross-examination.**
 03:50:16 **12 A. I'm just letting you know I'd love to be**
 03:50:18 **13** able to.
 03:50:19 **14 Q. I understand. I'm sure you'll get an**
 03:50:21 **15** opportunity to.
 03:50:21 **16** Noncompliance actually consisted of 15
 03:50:28 **17** direct violations during that period of time, or
 03:50:29 **18** during the last, what, two years?
 03:50:32 **19 A. 12 quarters would be three years, so...**
 03:50:35 **20 Q. Would that be correct?**
 03:50:37 **21 A. Yes.**
 03:50:38 **22 Q. And you've had nine SSO violations?**
 03:50:42 **23 A. Yes.**
 03:50:42 **24 Q. And 24 permit-related deficiencies?**
 03:50:47 **25 A. If that's what's in DEQ's record.**
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03:50:52 **1 Q. And isn't it true that the facility, the**
 03:50:55 **2** treatment facility, is currently under active
 03:50:57 **3** Administrative Order for two separate actions?
 03:51:01 **4 A. It's under Administrative Order.**
 03:51:05 **5 Q. For two separate actions?**
 03:51:07 **6 A. For failing ammonia-related tests, which**
 03:51:11 **7** they acknowledge can't be accomplished with that
 03:51:14 **8** plant until we build a new one.
 03:51:15 **9 Q. I understand, sir. I'm sure there's an**
 03:51:19 **10** explanation, but I'm just asking you about the
 03:51:21 **11** violations.
 03:51:21 **12** Are you familiar, sir, with the DNRC?
 03:51:24 **13 A. Yes.**
 03:51:26 **14 Q. And are you aware that the DNRC does a**
 03:51:30 **15** Statewide Water and Wastewater Rate Study?
 03:51:34 **16 A. DNRC or DEQ?**
 03:51:37 **17 Q. I believe it's the DNRC.**
 03:51:40 **18 A. Oh, with the loan program. Yes.**
 03:51:45 **19 Q. And you've received those reports in the**
 03:51:46 **20** past, I believe?
 03:51:48 **21 A. I'm sure I have.**
 03:51:49 **22 Q. And you participate because they ask for**
 03:51:51 **23** data, don't they?
 03:51:53 **24 A. Our system participates. Not me**
 03:51:56 **25** personally.
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03:51:56 **1** **Q.** No, I understand. When you say your
 03:51:58 **2** system and not you personally, when you were the
 03:52:01 **3** public works director of Whitefish, again, you
 03:52:05 **4** really weren't involved in the day-to-day
 03:52:07 **5** activities of the water department or the
 03:52:10 **6** wastewater department. You were in charge of the
 03:52:12 **7** whole public works department, correct?
 03:52:15 **8** **A.** Well, no, I wasn't involved in every
 03:52:18 **9** day-to-day activity, but I met with or crossed
 03:52:22 **10** paths with our supervisors every day. But I was
 03:52:28 **11** not in the field very much.
 03:52:30 **12** **Q.** Very good.
 03:52:31 **13** MR. CONNER: I would like to turn to
 03:52:36 **14** 2542. It's not been admitted yet, Your Honor. I
 03:52:36 **15** asked about that.
 03:52:53 **16** Your Honor, we have a certified copy of
 03:52:55 **17** this.
 03:52:55 **18** MS. PRINZING-JONES: No objection. There
 03:52:57 **19** is no objection.
 03:52:57 **20** MR. CONNER: No objection? We would move
 03:52:59 **21** for the introduction of 2542, Your Honor.
 03:53:02 **22** THE COURT: All right, it's admitted.
 03:53:04 **23** MR. CONNER: Thank you, Counsel.
 03:53:04 **24** EXHIBITS:
 03:53:05 **25** (Exhibit No. 2542 received into evidence.)
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03:53:12 **1** **Q.** (By Mr. Conner) And if you could turn to
 03:53:15 **2** Page 8 first. This is 2014 rate survey.
 03:53:18 **3** And are you aware that Whitefish
 03:53:20 **4** participated in this as well, Mr. Wilson?
 03:53:23 **5** **A.** I don't have any direct knowledge of
 03:53:25 **6** that. But if there's information in there, I
 03:53:28 **7** guess we did.
 03:53:29 **8** **Q.** Okay. And actually what I'm going to do,
 03:53:32 **9** Whitefish is on the other page. Well, let's go to
 03:53:35 **10** Page 9. I believe it's the second one. There we
 03:53:42 **11** go.
 03:53:42 **12** And this is the monthly bill based on
 03:53:48 **13** 10,000 gallons used for the City of Whitefish for
 03:53:51 **14** water; is that correct?
 03:53:52 **15** **A.** Correct.
 03:53:52 **16** **Q.** And it shows the monthly bill being
 03:53:55 **17** \$59.81, correct?
 03:53:57 **18** **A.** Correct.
 03:53:59 **19** **Q.** All right. If you would, go back to the
 03:54:01 **20** page prior to that. Let's just pull the bottom
 03:54:10 **21** two.
 03:54:14 **22** We have Mountain Water Company. And for
 03:54:18 **23** 10,000 gallons, the monthly bill was \$44.08,
 03:54:24 **24** correct?
 03:54:25 **25** **A.** Correct.
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03:54:25 **1** **Q.** And for the City--Miles City, City of
 03:54:28 **2** Miles City, there was \$47.31, correct?
 03:54:31 **3** **A.** Yes.
 03:54:32 **4** **Q.** All right, let's go above that one, if we
 03:54:34 **5** can. I want to go up to the top, top two. I'm
 03:54:42 **6** sorry, top three. There we go.
 03:54:44 **7** And the City of Bozeman is reflected at
 03:54:48 **8** being \$48.88 per month for the water, correct?
 03:54:53 **9** **A.** Correct.
 03:54:53 **10** **Q.** And the City of Butte, \$49.24 per month.
 03:54:58 **11** Correct?
 03:54:59 **12** **A.** Correct.
 03:54:59 **13** **Q.** So with respect to systems--water system
 03:55:03 **14** data in communities with population greater than
 03:55:07 **15** 7,500 people, the Whitefish system is the highest
 03:55:11 **16** rate of those that participated, at \$59.81 a
 03:55:17 **17** month. Correct?
 03:55:18 **18** **A.** Well, that was water and sewer. I don't
 03:55:20 **19** know if--these all say water. I don't know if
 03:55:23 **20** they have that same total.
 03:55:25 **21** **Q.** It says water, though, right? Let's go
 03:55:27 **22** back to the Whitefish one.
 03:55:29 **23** **A.** Well, it's inaccurate.
 03:55:30 **24** **Q.** Well, that's fine. Let's just see what
 03:55:33 **25** it says.
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03:55:36 **1** Here it says water, right? Monthly bill
 03:55:39 **2** based on 10,000 gallons used, \$59.81. That's what
 03:55:39 **3** it says, correct?
 03:55:47 **4** **A.** That's what it says. It's wrong.
 03:55:48 **5** **Q.** It may be, it may not be, sir. That's
 03:55:51 **6** just what the document reflects, correct, sir?
 03:55:54 **7** **A.** Correct.
 03:55:54 **8** **Q.** Let's also go to the Work Data Sheet 1.
 03:56:02 **9** And pull up--let's look at--highlight Mountain
 03:56:08 **10** Water, which is the third one down.
 03:56:09 **11** THE COURT: What page are we on?
 03:56:12 **12** MR. CONNER: I'm sorry, Your Honor. It's
 03:56:14 **13** the Work Data Sheet. I'm not exactly sure where
 03:56:16 **14** it is. I can hand you mine, Your Honor.
 03:56:18 **15** THE COURT: It's in this exhibit book?
 03:56:21 **16** MR. CONNER: Yes, it is. I'm sorry. It
 03:56:23 **17** should say Work Data Sheet 1 at the bottom in fine
 03:56:28 **18** print.
 03:56:28 **19** THE COURT: Okay.
 03:56:37 **20** **Q.** (By Mr. Conner) And if you'll take a
 03:56:39 **21** look, the last column over, this is Mountain
 03:56:42 **22** Water. The last column over at the right, at the
 03:56:44 **23** top so we can see what it is, it says customer
 03:56:48 **24** satisfaction on a 1 to 5 scale; 1 being poor, 5
 03:56:55 **25** being very good. And Mountain Water is reflected
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03:56:59 **1** at a 4.5, correct?

03:57:01 **2** **A. Yes.**

03:57:02 **3** **Q.** Let's go down to Whitefish. It's at the

03:57:04 **4** very bottom of this. Let's just take it all the

03:57:12 **5** way across.

03:57:16 **6** So for Whitefish, this report reflects

03:57:21 **7** the customer satisfaction of 1. Correct?

03:57:24 **8** **A. It says that. That's quite a surprise to**

03:57:27 **9** **me.**

03:57:28 **10** **Q.** Thank you, sir. No further questions.

03:57:30 **11** THE COURT: Any redirect, Mr. Schneider?

03:57:35 **12** MR. SCHNEIDER: Just briefly, Your Honor.

03:57:37 **13** REDIRECT EXAMINATION

03:57:38 **14** BY MR. SCHNEIDER:

03:57:38 **15** **Q.** Mr. Wilson, actually you do get to go

03:57:43 **16** back and say one thing about your answer regarding

03:57:46 **17** the business plan. What was that one thing you

03:57:49 **18** were about to say?

03:57:50 **19** **A. What I wanted to go back, was make one**

03:57:52 **20** **quick comment about the wastewater plant.**

03:57:55 **21** **Q.** You may. This was in response to

03:57:58 **22** Counsel's question.

03:57:58 **23** **A. Yeah, about my role and what I knew out**

03:58:00 **24** **there. I just forgot to mention Pat. I'm sorry,**

03:58:04 **25** **I'm forgetting Pat's last name now. But he's**
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03:58:10 **1** **responsible for the collection system. I**

03:58:10 **2** **referenced Gene Bibler (phon.) and Pat. I**

03:58:12 **3** **certainly want to recognize John, too. And I just**

03:58:13 **4** **felt conscious of that.**

03:58:14 **5** **Q.** Second. The noncompliance issues with

03:58:20 **6** respect to the wastewater treatment facility.

03:58:22 **7** Based on your knowledge, experience,

03:58:24 **8** training, having run, supervised wastewater in

03:58:29 **9** other communities, do you consider that to be a

03:58:31 **10** big deal?

03:58:32 **11** **A. No.**

03:58:33 **12** **Q.** Why not?

03:58:35 **13** **A. Well, we have very dedicated operators**

03:58:37 **14** **out there. When there are hiccoughs, they work to**

03:58:41 **15** **straighten them out.**

03:58:43 **16** **Two of the issues I'm sure were included**

03:58:45 **17** **in those noncompliances, one related to what's**

03:58:49 **18** **called a wet test that tests the system's ability**

03:58:53 **19** **to remove ammonia. We have a lagoon system in**

03:58:57 **20** **Whitefish and it technically can't remove ammonia**

03:58:59 **21** **in cold water temperatures. We exceeded that.**

03:59:03 **22** **That's part of the Administrative Order. The**

03:59:05 **23** **Administrative Order includes a waiver of the**

03:59:06 **24** **requirement to do further wet tests until we build**

03:59:10 **25** **a new system.**
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03:59:11 **1** **Another one was we were trying to**

03:59:14 **2** **optimize the use of alum which we use to remove**

03:59:16 **3** **phosphorous. I won't explain the whole process.**

03:59:19 **4** **But our consultant advised us we were using way**

03:59:24 **5** **more than necessary.**

03:59:24 **6** **And when we tried to cut back on it and**

03:59:26 **7** **fine-tune it, we created some circumstances where**

03:59:29 **8** **we exceeded suspended solids, for instance, on a**

03:59:32 **9** **couple of occasions. And then we went back to**

03:59:34 **10** **prior operations and then backed down the alum**

03:59:38 **11** **slowly again. But that was an effort to fine-tune**

03:59:40 **12** **the plant and I'm sure there was an exceedance.**

03:59:43 **13** **Q.** Do you have any personal knowledge of

03:59:44 **14** whether any of those notices of noncompliance were

03:59:48 **15** rescinded by the Department of Environmental

03:59:50 **16** Quality?

03:59:52 **17** **A. I don't remember clearly. Maybe one or**

03:59:54 **18** **two on reporting issues. But--**

03:59:56 **19** **Q.** Based on what you know about the City,

03:59:59 **20** would Mr. Bender know whether any were rescinded?

04:00:03 **21** **A. About Whitefish?**

04:00:04 **22** **Q.** I'm sorry. Oh, I thought you were being

04:00:06 **23** asked about Missoula.

04:00:08 **24** **A. No, I was being asked about Whitefish.**

04:00:10 **25** **Q.** Oh, I apologize. I don't have to ask you
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04:00:13 **1** any questions about--

04:00:13 **2** **A. I don't think Bruce would know anything**

04:00:15 **3** **about that.**

04:00:16 **4** **Q.** --DEQ notices in Whitefish.

04:00:18 **5** But I do want to ask you this. Does it

04:00:23 **6** surprise you that Whitefish's water rates are

04:00:28 **7** high?

04:00:28 **8** **A. No.**

04:00:29 **9** **Q.** Why not?

04:00:30 **10** **A. In about--in the late '90s we had to**

04:00:35 **11** **build a water treatment plant. And our rates were**

04:00:37 **12** **so low then we couldn't qualify for some of the**

04:00:40 **13** **low-interest loans and grants. So we had to**

04:00:43 **14** **finance a \$6 million water treatment plant on the**

04:00:46 **15** **backs of the small customer base.**

04:00:48 **16** **Q.** And is there a distinction--I think we

04:00:51 **17** covered this earlier but I think it's pertinent

04:00:53 **18** here.

04:00:54 **19** Is there a distinction between

04:00:55 **20** groundwater systems and surface water systems,

04:00:58 **21** particularly those that require filtration

04:01:00 **22** treatment?

04:01:01 **23** **A. Yes.**

04:01:02 **24** **Q.** All other things equal, which are more

04:01:04 **25** expensive?
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04:01:06 **1 A. Filtration treatment system.**
 04:01:08 **2 Q.** Mr. Wilson, have you ever heard the
 04:01:09 **3** phrase apples to apples, oranges to oranges?
 04:01:12 **4 A. Yes.**
 04:01:13 **5 Q.** Now, if you were going to take a look at
 04:01:15 **6** the rates for water, would you compare Mountain
 04:01:21 **7** Water Company's groundwater system with a city
 04:01:22 **8** like Whitefish, which is a filtration surface
 04:01:26 **9** water system?
 04:01:27 **10 A. No, I wouldn't.**
 04:01:28 **11 Q.** Why not?
 04:01:29 **12 A. Mountain Water doesn't have the expense**
 04:01:32 **13 of debt service or operations, chemicals,**
 04:01:35 **14 electricity, all the things that go into the**
 04:01:37 **15 treatment process.**
 04:01:38 **16 Q.** Now, had you been shown a comparison,
 04:01:40 **17** which I'll call apples to apples, oranges to
 04:01:44 **18** oranges, of two groundwater systems--let me ask
 04:01:47 **19** you, is Kalispell a groundwater system?
 04:01:49 **20 A. Yes.**
 04:01:49 **21 Q.** Is Missoula a groundwater system?
 04:01:51 **22 A. Yes.**
 04:01:52 **23 Q.** How do those rates compare?
 04:01:53 **24 A. I'm sorry, I don't recall.**
 04:01:54 **25 Q.** Fair enough. No further questions.
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04:01:56 **1** THE COURT: Very well. Anything further
 04:02:01 **2** from other counsel?
 04:02:03 **3** MR. CONNER: No, Your Honor.
 04:02:05 **4** MR. SCHNEIDER: That exhausts our
 04:02:07 **5** witnesses locally for today. We have four
 04:02:09 **6** witnesses from out of town Wednesday.
 04:02:09 **7** THE COURT: Mr. Wilson, may be excused
 04:02:11 **8** then at this point?
 04:02:12 **9** MR. SCHNEIDER: Yes.
 04:02:13 **10** THE COURT: Thank you, Mr. Wilson, you
 04:02:15 **11** are free to go.
 04:02:16 **12** So we'll stand in recess
 04:02:19 **13** until--officially to resume testimony Wednesday
 04:02:22 **14** morning at 9 o'clock.
 04:02:23 **15** We will have tomorrow afternoon at 4,
 04:02:25 **16** anybody who is involved in that issue, about the
 04:02:28 **17** subpoena for--I think it's Ms. Ash?
 04:02:32 **18** THE CLERK: Susan Ash.
 04:02:34 **19** THE COURT: Susan Ash. We'll do it in
 04:02:37 **20** here, okay, even though I'll be down doing law and
 04:02:41 **21** motion in 2 South. So when I finish the probation
 04:02:43 **22** violation hearing, I'll come up here for this.
 04:02:46 **23** All right?
 04:02:47 **24** Anything we need to do? I'll go update
 04:02:50 **25** your times in just a moment if you wish to wait.
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04:02:53 **1** Mr. Mercer.
 04:02:54 **2** MR. MERCER: On that issue, Your Honor,
 04:02:55 **3** we've got a housekeeping issue we would like to
 04:02:57 **4** raise with you. We can do that in chambers or--
 04:03:04 **5** THE COURT: We can do it here. Is there
 04:03:07 **6** some reason it has to be done in chambers?
 04:03:07 **7** MR. MERCER: I don't think so.
 04:03:07 **8** We just want to raise with you that we
 04:03:09 **9** think that there may be a discrepancy in one time
 04:03:12 **10** entry. And I have given the City a preliminary
 04:03:16 **11** indication of our concern about that, but wanted
 04:03:18 **12** to be able to tell you what it is so you can
 04:03:20 **13** double-check.
 04:03:21 **14** THE COURT: Okay. I've kept all the
 04:03:22 **15** data, so I haven't thrown it out even though I've
 04:03:25 **16** been updating your papers. So--I don't think we
 04:03:29 **17** need this on the record, right? Or do you want
 04:03:31 **18** this on the record?
 04:03:33 **19** MR. MERCER: I think it--I think it can
 04:03:35 **20** be very brief.
 04:03:36 **21** THE COURT: Okay.
 04:03:37 **22** MR. MERCER: We believe that the
 04:03:40 **23** after-lunch-break direct testimony of Mr. Bender
 04:03:46 **24** on the 19th, we believe that there is essentially
 04:03:51 **25** 39 minutes of time that should be charged to the
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04:03:55 **1** City that is not.
 04:03:58 **2** THE COURT: I better go look at that
 04:04:01 **3** then. I'll look at it.
 04:04:02 **4** MR. MERCER: We've tried to reconcile it
 04:04:04 **5** with times on the transcript that would indicate
 04:04:08 **6** when that testimony began and when it ended.
 04:04:11 **7** THE COURT: Okay.
 04:04:11 **8** MR. MERCER: According to our
 04:04:13 **9** understanding of the chart, the allocation is
 04:04:15 **10** somewhere around 89 minutes for his direct on the
 04:04:21 **11** 19th. So happy to give that data to you--
 04:04:24 **12** THE COURT: So I have--Julie has given me
 04:04:27 **13** copies of the--courtesy copies of the transcript,
 04:04:31 **14** so I can go back and look at her figures as well
 04:04:36 **15** and try and figure this out.
 04:04:38 **16** But you think it's as much as 39 minutes?
 04:04:41 **17** MR. MERCER: I think so.
 04:04:42 **18** MS. PRINZING-JONES: And, Your Honor,
 04:04:44 **19** this is the first we've heard of it. But I would
 04:04:46 **20** just point out the fact that I believe the Court
 04:04:48 **21** is stopping time for--
 04:04:49 **22** THE COURT: Objections?
 04:04:50 **23** MS. PRINZING-JONES: --objections and--
 04:04:52 **24** THE COURT: It doesn't stop--you
 04:04:55 **25** understand we're not counting objection argument.
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04:04:57 **1** And so that's not reflected in Julie's time
 04:05:00 **2** keeping.
 04:05:00 **3** MR. MERCER: And I believe that we've
 04:05:03 **4** attempted to back that out. And the number is not
 04:05:05 **5** 39. It's 29, Your Honor.
 04:05:08 **6** THE COURT: 29 minutes you think.
 04:05:11 **7** MR. MERCER: 29 minutes.
 04:05:13 **8** THE COURT: Let me go look and I'll at
 04:05:15 **9** least update what we've got right here.
 04:05:17 **10** Otherwise, anything else?
 04:05:19 **11** MR. ZADICK: Judge, I was charged with, I
 04:05:21 **12** think, two minutes of cross of the professor. And
 04:05:25 **13** I don't know, you might have corrected that, but I
 04:05:28 **14** didn't question Professor--
 04:05:31 **15** THE COURT: Professor Running?
 04:05:33 **16** MR. ZADICK: Steve Running.
 04:05:34 **17** THE COURT: I think the only person that
 04:05:37 **18** questioned Steve was Katie. So maybe I put it in
 04:05:41 **19** the wrong column.
 04:05:42 **20** MR. ZADICK: I might have two minutes.
 04:05:43 **21** THE COURT: All right, I'll be back in a
 04:05:45 **22** minute.
 04:05:46 **23** (Whereupon, court was in recess at
 04:05:53 **24** 4:05 p.m., to reconvene Wednesday, March 25,
 04:06:02 **25** 2015.)

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C E R T I F I C A T E

1
 2 STATE OF MONTANA)
 3 COUNTY OF MISSOULA) ss.
 4 I, Julie M. Lake, RDR, CRR, CSR,
 5 Freelance Court Reporter for the State of Montana,
 6 residing in Missoula, Montana, do hereby certify:

7 That I was duly authorized to and did
 8 report the proceedings in VOLUME 4 of the
 9 above-entitled cause;

10 I further certify that the foregoing
 11 pages of this transcript represent a true and
 12 accurate transcription of my stenotype notes.

13 IN WITNESS WHEREOF, I have hereunto set
 14 my hand on this the 24th day of March, 2015.

15 Julie M Lake
 16 Julie M. Lake, RDR, CRR, CSR
 17 Freelance Court Reporter
 18 State of Montana, residing in
 19 Missoula, Montana.

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 23
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 25

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Memo

Date: Friday, December 19, 2014
Project: Perkins Coie-Expert Testimony – Rate Analysis
To: Kathryn Jones, Craig Close
From: Angie Flores
Subject: Financial Model Summary

PURPOSE

The purpose of this technical memorandum is to describe the financial models developed by HDR to reflect various future ownership scenarios for the water system, currently known as the Mountain Water Company in Missoula, Montana. This memorandum describes the assumptions and results of the model as well as the approach used for each scenario.

APPROACH

In October 2014 Perkins-Coie, LLC requested that HDR prepare a proforma rate analysis of the Mountain Water Company in Missoula, Montana to determine the range of the anticipated water rate increases if Algonquin Power and Utilities Corp. were to purchase the system at a price of \$100 million, or if the Carlyle Infrastructure Partners LP continued private ownership. HDR developed financial models to reflect four different ownership scenarios, including three public ownership options and one city (public) ownership option. Each of the three private ownership options included the same level of annual capital investment as the public ownership option. The proforma assumptions and results are outlined in this memo.

In developing the models HDR considered the ownership scenario and the regulatory environment in which rates would be set. The primary difference between a privately owned utility and a government-owned (public) utility is the method in which capital investment is recovered. For a privately owned utility, a debt to equity ratio of 60% debt to 40% equity must be maintained and the rate of return on the investment is set by the regulatory agency. For a government-owned (public) utility where capital is funded with bond proceeds, the same ratios do not need to be met and only the debt service and any other bond covenant must be met. This tends to make the government-owned utility scenario cheaper to the rate payer when compared to a privately owned utility scenario.

Based on the two different types of ownership being considered for the models, HDR considered two different approaches – the utility basis approach and the cash-needs approach. For private ownership with regulatory oversight, the utility basis approach is described by AWWA's Principles of Water Rates, Fees and Charges (M1 Manual), as "typically mandated for investor-owned water utilities." The utility basis approach considers expenses including taxes, rate base, depreciation and rate of return. HDR used this approach for the private ownership model.

For the government-owned scenario, the cash-needs approach, which is described in the M1 Manual, as being "used by government-owned utilities" and represents the "total revenues required by the utility to meet its annual cash expenditures," was used. The cash-needs approach considers expenses, not including taxes, debt service and debt service coverage and no depreciation.

In each of the scenarios the basis for the 2012 and 2013 costs is primarily the Mountain Water Company PSC Annual Reports, with a few modifications as recommended by City of Missoula staff.

HDR developed two separate Excel-based spreadsheet models to evaluate water rate impacts under two different capital scenarios. The first file (*proforma 11-7-14.xls*) assumes capital investments of \$90 million annualized over 10 years, while the second file (*proforma-60 million capital 11-7-14.xls*) assumes capital investments of \$60 million annualized over 10 years. The model evaluates rate impacts for the four different ownership scenarios, listed as Options 1 – 4. The capital scenarios are designated as (A) and (B). With the exception of the capital investment amounts, the assumptions and structure of the two models are the same.

Options 1 – 4, described below:

Option 1 (A&B): Reflects a Utility Basis Approach as defined by the M1 Manual. Assumes that Rate Base is increased by the difference in a \$100 million purchase price and the existing rate base; includes additional \$6 Million to \$9 Million in annual capital investment over the 10-year period.

Option 2 (A&B): Reflects a Utility Basis Approach as defined by the M1 Manual. Assumes the difference in the purchase price of \$100 million and the existing rate base is amortized over 30 years (Included in Acquisition Adjustment); includes additional \$6 Million to \$9 Million in annual capital investment over the 10-year period.

Option 3 (A&B): Reflects a Utility Basis Approach as defined by the M1 Manual. Assumes that the purchase price is not allowed in Rate Base; includes additional \$6 Million to \$9 Million in annual capital investment over the 10-year period.

Option 4 (A&B): Reflects a Cash Basis Approach as defined by the M1 Manual. Assumes the city purchases the system at a cost of \$50 million; therefore debt service is estimated for both the purchase price and an additional \$6 Million to \$9 Million in annual capital investment over the 10-year period.

RATE MODEL DEVELOPMENT

The model has color-coded cells to identify data input cells and computational cells. Yellow cells are data input cells which can be changed by the user and will affect the results of the model. Cells without color shading are computational cells with formulas that use inputs from various parts of the model.

The financial model file is an excel spreadsheet made up of several tabs, including:

Summary of Options – This tab summarizes the four options evaluated in the model along with the results of the model. It also compares the rate base, rate of return, debt service, rate increase percentages and revenue requirements for each option.

FSum – Each table in this tab reflects an income statement and calculation of rate of return on rate base or debt service for each option. The rate structures and sample bills for each option are also on this tab. Finally, the capital and purchase price assumptions are identified on this tab. Each table in the tab is described in more detail below.

WDem – This tab lists the number of connections and consumption data that are used to generate revenue calculations in the model.

WRev- This tab calculates the revenue for each of the four options based on the rate assumptions in the *FSum* tab and the assumptions in the *WDem* tab.

WExp – This tab outlines the operations and maintenance expense assumptions for the both the private ownership options and the city ownership option.

WDebt – This tab calculates the debt service for the city ownership option and the amortization of the purchase price for Option 3.

Cust Info – This tab summarizes the historic monthly consumption and connection data used to develop the data in the *WDem* tab.

The following information provides more detail about each tab including a description of each table in the tab, the assumptions and the source of the data.

CUSTOMER INFORMATION

For the *Cust Info* tab, HDR obtained information from the document titled "Mountain Water – Revenue Summary," bate stamped MW-019484-MW-019506. The months available in the documents were January 2013 – December 2013, and April 2014. Because April 2014 data was available, it was used for the month of April instead of using April 2013 data. The connections listed in this spreadsheet represent metered connections only. The consumption data from this spreadsheet was used in the *WDem* tab in cell F18 and was used to forecast future consumption. The connections in these tabs were only used for comparison purposes.

WDem (WATER DEMOGRAPHICS)

In Table 1 of the *WDem* tab, the number of connections by meter size in 2014 were based on a document bate stamped MW-019098-MW019107, with the title "Budget Customer Counts." The budgeted numbers for 2014 were used over the actual customer counts from the *Cust Info* tab since the actual data reflected most of 2013 and only 4 months of 2014. The forecast connection counts were increased by the percentages identified in Table 3 of this tab. One percent growth was used for the residential and business connections (up to 4-inch meter size). No growth in the number of connections was assumed for the other classes, including business connections with 4-inch and larger meter sizes. The growth percentage of 1% was used based on historical growth on the system. The growth rate used in the models is slightly less than the 3% annual growth used by Mountain Water Company in their financial forecasts.

In Table 2 of the *WDem* tab, water consumption (in cubic feet) is forecasted. The forecast is based on the average water use per connection (in 2014) and then multiplied times the projected number of connections in future years.

WRev (WATER REVENUES)

In this tab, the revenue for each of the four options is calculated. Option 1 revenues are summarized in Table 1 and the revenues are calculated in Table 1a. Option 2 revenues are summarized in Table 2 and the revenues are calculated in Table 2a, and so forth. In the revenue calculation tables, the revenue is calculated by multiplying the monthly minimum charges in Tables 5 through 8 of the *FSum* tab times the number of connections in Table 1 of the *WDem* tab times 12 months. Also in the revenue calculation tables, the consumption revenue is calculated by taking the water volume charge from Tables 5 through 8 times the consumption data in Table 2 of the *WDem* tab. This is done for each of the four options. The total revenue is then reflected in the corresponding income statement for each option in the *FSum* tab.

WExp (WATER EXPENSES)

Table 1 of the *WExp* tab reflects the O&M expenses used for Options 1 through 3, which reflect private ownership of the system. The total O&M expenses from Table 1 are used in

each to the income statements for Options 1 through 3 in the *FSum* tab. The 2012 expenses information comes from the Mountain Water Company 2012 PSC Annual Report, with the exception of the Management Fee amount. The Management Fee amount of \$2.2 million was provided by City of Missoula staff. The 2013 expenses were also taken from the Mountain Water Company 2013 PSC Annual Report, again with the exception of the Management Fee, as well as the Income Taxes. The Income Tax number in 2013 was provided by City of Missoula staff.

Projected O&M expenses are increased based on the Expense Inflation Parameters in Table 2 with the exception of the Employee Pension and Benefits and Insurance Expenses. Employee Pensions & Benefits are calculated as 45% of Salaries & Wages. Insurance Expense in 2014 is based on an average of the two previous years' expenses. The Inflation Parameters are based on the increase of historical actuals or based on increases identified in the analysis done by Springsted Inc.

Table 3 of the *WExp* tab reflects the O&M expenses used for Option 4 and reflects city ownership. The total O&M expenses from Table 3 are used in the income statement for Option 4 in the *FSum* tab. The source of the 2012 and 2013 expenses is the Springsted proforma. Like the expenses in Table 1 of this tab, the projections are based on the Expense Inflation Parameters in Table 4, with the exception of the Employee Pensions & Benefits, Materials & Supplies and Insurance Expense. Employee Pensions & Benefits are calculated as 56% of the Salaries & Wages Employees. Materials & Supplies were set at \$50,000 in 2014, since there was such a difference between 2012 and 2013. Beyond 2014, Materials & Supplies increases based on the Expense Inflation Parameters. Insurance Expense in 2014 is based on an average of the 2012 and 2013 expense and then increased based on the Expense Inflation Parameters in Table 4.

WDebt (WATER DEBT)

The *WDebt* tab calculates the debt service used in the Income Statement for Option 4, or the city-owned option, and performs the calculation of the amortization of the purchase price for the Options 1 through 3. Table 1 of this tab calculates debt service based on the capital improvements identified in Table 11 of the *FSum* tab and the assumptions in lines 591 through 595, as well as Table 4 of this tab.

Table 2 calculates the amortization of the purchase price for Option 2. This option assumes that the purchase price will be amortized over a 30-year period and will be added to rate base over that time period. The number is then used in Table 2a of the *FSum* tab beginning with cell G103.

Table 3 tracks the accumulation of funds for the Capital Reserve that can be generated from remaining funds for a city-owned system. This table takes the funds in line 204 of

Table 4 of the *FSum* tab and accumulates the funds for use on capital projects. These projects are reflected in Table 4 and are taken from line 585 of the *FSum* tab. The amount of capital to be debt-funded is then used in Table 1 of the *WDebt* tab.

FSum (FINANCIAL SUMMARY)

The *FSum* tab is the summary of all the assumptions in the other tabs. There are several yellow color-coded inputs cells on this tab. Other Revenue found in Table 1 of this tab is based on the Mountain Water Company PSC Annual Report. This amount is used in each of the Income Statements for each of the four options.

The Total Revenues in 2012 and 2013 are based on historic revenues from the Mountain Water Company PSC Annual Reports. Another input in this tab is the Target Rate of Return found in each of the Income Statements for each option. In these scenarios, the rate of return is 9.25%. The rate of return reflects the amount used by Mountain Water Company in their budgets for 2012 and 2013. In 2014, the budgeted rate of return was 9.18%. In the only application for a rate increase provided by Mountain Water Company from 2008, the rate of return requested was 8.97%.

Each option has a goal-seek macro, identified in red that is built into its income statement. The goal seek macro can be used to set rates that will meet the target rate of return or target debt service coverage. It should be noted that in Option 4, if the coverage is already greater than 1.25 times coverage and the goal seek macro is used, then the rates will be set to generate less coverage.

In Table 4, Option 4, there is a target for operating reserves. The level of this target will also impact the amount of revenues available for transfer to the capital reserve. The target for 2015 through 2017 is set to 6 months of reserves. Because the system will be under new ownership and operations will be transitioning, it is good practice to increase the amount of the reserves in case unanticipated operational issues occur. The target is then reduced to 3 months for 2018 through 2024. Three months of operations reserve should be sufficient once operations are fully transitioned.

Tables 5 through 8 can also be modified manually to affect the income statements described above. By changing the average increase in each table, the revenue will be recalculated for that percentage increase.

Table 9 of the *FSum* tab provides sample bills for each option based on the projected rates generated by the model. Table 10 shows the increase (decrease) in the sample bill over the previous year.

CONCLUSIONS

The Summary of Options tab in the model provides the outcome for each option. Table 1 below shows the outcome of the model (*proforma 11-7-14.xls*). As can be seen from the summary, Option 1 generates the need for the highest rate increase in 2015. This is due to the increase of \$100 million to the rate base. Option 2 generates the next highest rate increase in 2015. Again in this option the increase is caused by the purchase price being included in the rate base. Option 4 results in the lowest rate impacts for the system.

Table 2 shows a comparison of sample bills resulting from the projected rates for 2015 for each of the Options (*proforma 11-7-14.xls*). Table 3 shows the projected increase in rates over the previous year. Sample bill results for 2016 through 2024 can be found within the model. Copies of each of the models are attached to the memo for reference.

Essentially, it can be deduced from the results that the city-owned scenario provides the lowest rate impact due to the lower revenue requirement. In the privately-owned scenarios the revenues requirements are about \$17 million plus the return on rate base while in the government-owned scenario the revenue requirements are about \$14 million plus coverage.

TABLE 1

Summary of Options

Item	2015	2016	2017	2018	2019
Rate Base Comparison					
Option 1	\$ 105,998,031	\$ 113,417,254	\$ 120,939,185	\$ 128,556,474	\$ 136,261,328
Option 2	\$ 46,792,269	\$ 54,211,492	\$ 61,733,423	\$ 69,350,712	\$ 77,055,566
Option 3	\$ 44,750,691	\$ 52,169,914	\$ 59,691,845	\$ 67,309,134	\$ 75,013,988
Option 4	n/a	n/a	n/a	n/a	n/a
Rate of Return Comparison					
Option 1	\$ 9,804,818	\$ 10,491,096	\$ 11,186,875	\$ 11,891,474	\$ 12,604,173
Option 2	\$ 4,328,285	\$ 5,014,563	\$ 5,710,342	\$ 6,414,941	\$ 7,127,640
Option 3	\$ 4,139,439	\$ 4,825,717	\$ 5,521,496	\$ 6,226,095	\$ 6,938,794
Option 4	n/a	n/a	n/a	n/a	n/a
Debt Service Coverage					
Option 4	2.31	2.04	1.90	1.75	1.65
Percentage Rate Increases (increases applied to minimum & volume charges)					
Option 1	35.90%	4.35%	4.25%	4.16%	4.08%
Option 2	9.31%	5.57%	5.38%	5.20%	5.04%
Option 3	8.40%	5.62%	5.43%	5.25%	5.08%
Option 4	0.00%	0.00%	0.00%	0.00%	0.00%
Revenue Requirement					
Option 1 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497
Option 2 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497
Option 3 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497
Option 4 (incl. Debt Service)	\$ 14,182,921	\$ 15,110,620	\$ 15,760,833	\$ 16,501,720	\$ 17,111,633

TABLE 2

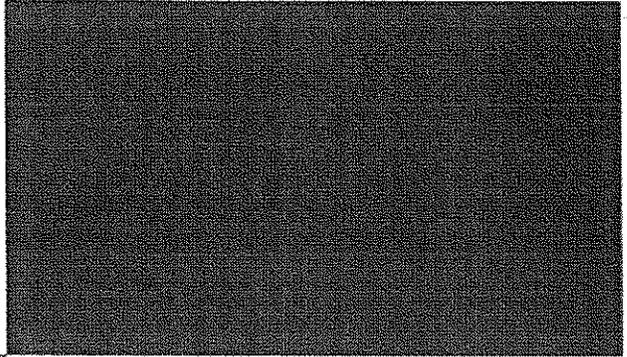
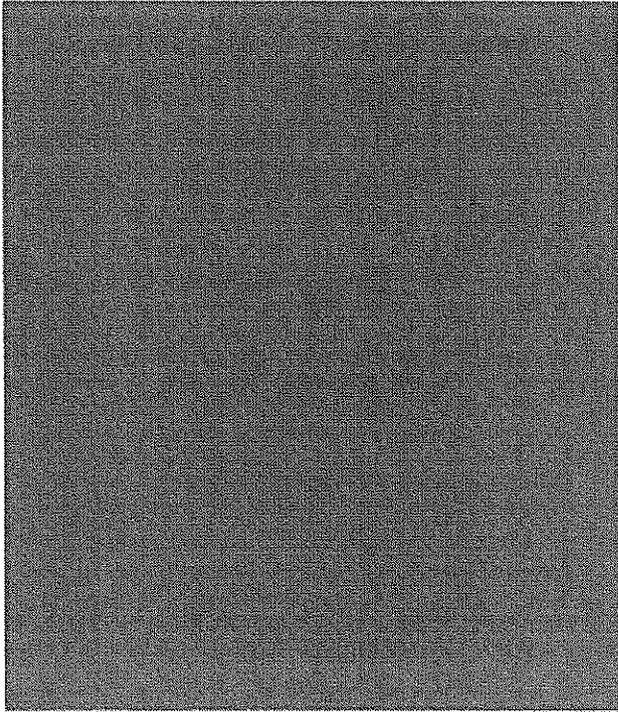
Sample Bill Comparison

Item	Current Rates	2015 Rates				
		Option 1	Option 2	Option 3	Option 4	
Residential 5/8" Meter Cubic Feet	10	\$ 37.33	\$ 59.73	\$ 40.81	\$ 40.45	\$ 37.33
	20	\$ 57.36	\$ 77.95	\$ 52.70	\$ 52.18	\$ 57.36
	50	\$ 117.45	\$ 159.51	\$ 128.30	\$ 127.31	\$ 117.45
	100	\$ 217.60	\$ 295.71	\$ 237.86	\$ 235.97	\$ 217.60
Business - 1" meter	25	\$ 69.37	\$ 121.44	\$ 97.69	\$ 96.87	\$ 69.37
	50	\$ 139.44	\$ 188.50	\$ 152.43	\$ 151.15	\$ 139.44
	75	\$ 199.52	\$ 257.65	\$ 207.16	\$ 205.43	\$ 199.52
Public Authority - 2" meter	400	\$ 821.11	\$ 1,251.77	\$ 1,006.89	\$ 998.45	\$ 821.11
	500	\$ 1,121.91	\$ 1,523.97	\$ 1,225.85	\$ 1,215.57	\$ 1,121.91
	650	\$ 1,421.86	\$ 1,932.27	\$ 1,554.26	\$ 1,541.24	\$ 1,421.86
Irrigation - 1" meter	400	\$ 840.49	\$ 1,142.21	\$ 918.76	\$ 911.08	\$ 840.49
	500	\$ 1,040.73	\$ 1,414.41	\$ 1,137.72	\$ 1,126.18	\$ 1,040.73
	650	\$ 1,341.24	\$ 1,822.71	\$ 1,468.15	\$ 1,453.85	\$ 1,341.24

TABLE 3

Increase / (Decrease) in Sample Bills

Item	Current Rates	2015 Rates			
		Option 1	Option 2	Option 3	Option 4
Residential 5/8" Meter Cubic Feet	10	\$ 13.40	\$ 3.48	\$ 3.13	\$ -
	20	\$ 20.60	\$ 5.34	\$ 4.02	\$ -
	50	\$ 42.16	\$ 10.94	\$ 9.86	\$ -
	100	\$ 78.11	\$ 20.66	\$ 16.27	\$ -
Business - 1" meter	25	\$ 32.08	\$ 8.32	\$ 7.50	\$ -
	50	\$ 58.06	\$ 12.99	\$ 11.71	\$ -
	75	\$ 68.03	\$ 17.66	\$ 15.91	\$ -
Public Authority - 2" meter	400	\$ 338.68	\$ 85.76	\$ 77.34	\$ -
	500	\$ 402.56	\$ 104.44	\$ 94.16	\$ -
	650	\$ 510.41	\$ 132.42	\$ 119.38	\$ -
Irrigation - 1" meter	400	\$ 301.72	\$ 78.27	\$ 70.57	\$ -
	500	\$ 373.62	\$ 96.93	\$ 87.39	\$ -
	650	\$ 481.47	\$ 124.91	\$ 112.61	\$ -



**\$90 Million Capital
Investment Proforma**



Summary of Options (Item) 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

Description of Options
 Option 1: Options 1-3 assume the same amount of O&M; Option 4 assumes that the City owns the system and operates it.
 Option 2: Assumes that Rate Base is increased by the difference in a \$100 million purchase price and the existing rate base; includes additional capital investment over the 10-year period
 Option 3: Assumes the difference in the purchase price of \$100 million and the existing rate base is amortized over 30 years (included in Acquisition Adjustment); includes additional capital investment over the 10-year period
 Option 4: Assumes that the purchase price is not allowed in rate base; includes additional capital investment over the 10-year period
City-Owned Option (includes debt service and coverage for purchase price and capital investments)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Rate Base Comparison										
Option 1	\$ 105,996,031	\$ 113,417,254	\$ 120,939,185	\$ 128,556,474	\$ 136,261,328	\$ 144,045,488	\$ 151,900,198	\$ 159,816,175	\$ 167,783,579	\$ 175,791,981
Option 2	\$ 46,792,269	\$ 54,211,492	\$ 61,733,423	\$ 69,350,712	\$ 77,059,566	\$ 84,839,727	\$ 92,694,436	\$ 100,610,413	\$ 108,577,817	\$ 116,586,219
Option 3	\$ 44,750,681	\$ 52,169,914	\$ 59,691,845	\$ 67,309,134	\$ 75,019,988	\$ 82,798,149	\$ 90,652,858	\$ 98,588,835	\$ 106,596,239	\$ 114,544,641
Option 4	n/a									
Rate of Return Comparison										
Option 1	\$ 9,804,818	\$ 10,491,096	\$ 11,186,975	\$ 11,891,474	\$ 12,604,173	\$ 13,324,208	\$ 14,050,768	\$ 14,782,986	\$ 15,519,961	\$ 16,260,758
Option 2	\$ 4,328,285	\$ 5,014,563	\$ 5,710,342	\$ 6,414,941	\$ 7,127,640	\$ 7,847,675	\$ 8,574,235	\$ 9,306,463	\$ 10,043,448	\$ 10,784,225
Option 3	\$ 4,139,459	\$ 4,825,717	\$ 5,521,496	\$ 6,226,095	\$ 6,938,794	\$ 7,658,829	\$ 8,385,389	\$ 9,117,617	\$ 9,854,602	\$ 10,595,379
Option 4	n/a									
Debt Service Coverage										
Option 4	2.31	2.04	1.90	1.75	1.65	1.50	1.35	1.25	1.25	1.25

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Percentage Rate Increases (Increases applied to minimum & volume charges)										
Option 1	35.90%	4.35%	4.25%	4.16%	4.08%	3.99%	3.92%	3.84%	3.77%	3.71%
Option 2	9.31%	5.37%	5.38%	5.20%	5.04%	4.89%	4.75%	4.62%	4.50%	4.39%
Option 3	8.40%	5.92%	5.43%	5.25%	5.08%	4.93%	4.79%	4.66%	4.53%	4.42%
Option 4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.18%	6.25%	5.96%

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Revenue Requirement										
Option 1 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 2 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 3 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 4 (incl. Debt Service)	\$ 14,182,921	\$ 15,110,620	\$ 15,760,883	\$ 16,501,720	\$ 17,111,633	\$ 18,039,733	\$ 19,094,590	\$ 20,292,881	\$ 21,607,802	\$ 22,959,217

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Page 3

Professional Staff
San Joaquin Hospital Foundation

Table 1
Assumes the Difference in the Purchase Price of \$100 Million and the Existing Rate Base in Months Over 39 Years Included in Acquisition Adjustment

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
REVENUES	\$ 447,725	\$ 482,294	\$ 520,187	\$ 558,228	\$ 596,270	\$ 634,311	\$ 672,353	\$ 710,395	\$ 748,437	\$ 786,479	\$ 824,521	\$ 862,563	\$ 900,605	\$ 938,647	\$ 976,689	\$ 1,014,731	\$ 1,052,773	\$ 1,090,815	\$ 1,128,857	\$ 1,166,899	\$ 1,204,941	\$ 1,242,983	\$ 1,281,025	\$ 1,319,067	\$ 1,357,109	\$ 1,395,151	\$ 1,433,193	\$ 1,471,235	\$ 1,509,277	\$ 1,547,319	\$ 1,585,361	\$ 1,623,403	\$ 1,661,445	\$ 1,699,487	\$ 1,737,529	\$ 1,775,571	\$ 1,813,613	\$ 1,851,655	\$ 1,889,697	\$ 1,927,739	\$ 1,965,781	\$ 2,003,823	\$ 2,041,865	\$ 2,079,907	\$ 2,117,949	\$ 2,155,991	\$ 2,194,033	\$ 2,232,075	\$ 2,270,117	\$ 2,308,159	\$ 2,346,201	\$ 2,384,243	\$ 2,422,285	\$ 2,460,327	\$ 2,498,369	\$ 2,536,411	\$ 2,574,453	\$ 2,612,495	\$ 2,650,537	\$ 2,688,579	\$ 2,726,621	\$ 2,764,663	\$ 2,802,705	\$ 2,840,747	\$ 2,878,789	\$ 2,916,831	\$ 2,954,873	\$ 2,992,915	\$ 3,030,957	\$ 3,068,999	\$ 3,107,041	\$ 3,145,083	\$ 3,183,125	\$ 3,221,167	\$ 3,259,209	\$ 3,297,251	\$ 3,335,293	\$ 3,373,335	\$ 3,411,377	\$ 3,449,419	\$ 3,487,461	\$ 3,525,503	\$ 3,563,545	\$ 3,601,587	\$ 3,639,629	\$ 3,677,671	\$ 3,715,713	\$ 3,753,755	\$ 3,791,797	\$ 3,829,839	\$ 3,867,881	\$ 3,905,923	\$ 3,943,965	\$ 3,982,007	\$ 4,020,049	\$ 4,058,091	\$ 4,096,133	\$ 4,134,175	\$ 4,172,217	\$ 4,210,259	\$ 4,248,301	\$ 4,286,343	\$ 4,324,385	\$ 4,362,427	\$ 4,400,469	\$ 4,438,511	\$ 4,476,553	\$ 4,514,595	\$ 4,552,637	\$ 4,590,679	\$ 4,628,721	\$ 4,666,763	\$ 4,704,805	\$ 4,742,847	\$ 4,780,889	\$ 4,818,931	\$ 4,856,973	\$ 4,895,015	\$ 4,933,057	\$ 4,971,099	\$ 5,009,141	\$ 5,047,183	\$ 5,085,225	\$ 5,123,267	\$ 5,161,309	\$ 5,199,351	\$ 5,237,393	\$ 5,275,435	\$ 5,313,477	\$ 5,351,519	\$ 5,389,561	\$ 5,427,603	\$ 5,465,645	\$ 5,503,687	\$ 5,541,729	\$ 5,579,771	\$ 5,617,813	\$ 5,655,855	\$ 5,693,897	\$ 5,731,939	\$ 5,769,981	\$ 5,808,023	\$ 5,846,065	\$ 5,884,107	\$ 5,922,149	\$ 5,960,191	\$ 5,998,233	\$ 6,036,275	\$ 6,074,317	\$ 6,112,359	\$ 6,150,401	\$ 6,188,443	\$ 6,226,485	\$ 6,264,527	\$ 6,302,569	\$ 6,340,611	\$ 6,378,653	\$ 6,416,695	\$ 6,454,737	\$ 6,492,779	\$ 6,530,821	\$ 6,568,863	\$ 6,606,905	\$ 6,644,947	\$ 6,682,989	\$ 6,721,031	\$ 6,759,073	\$ 6,797,115	\$ 6,835,157	\$ 6,873,199	\$ 6,911,241	\$ 6,949,283	\$ 6,987,325	\$ 7,025,367	\$ 7,063,409	\$ 7,101,451	\$ 7,139,493	\$ 7,177,535	\$ 7,215,577	\$ 7,253,619	\$ 7,291,661	\$ 7,329,703	\$ 7,367,745	\$ 7,405,787	\$ 7,443,829	\$ 7,481,871	\$ 7,519,913	\$ 7,557,955	\$ 7,595,997	\$ 7,634,039	\$ 7,672,081	\$ 7,710,123	\$ 7,748,165	\$ 7,786,207	\$ 7,824,249	\$ 7,862,291	\$ 7,900,333	\$ 7,938,375	\$ 7,976,417	\$ 8,014,459	\$ 8,052,501	\$ 8,090,543	\$ 8,128,585	\$ 8,166,627	\$ 8,204,669	\$ 8,242,711	\$ 8,280,753	\$ 8,318,795	\$ 8,356,837	\$ 8,394,879	\$ 8,432,921	\$ 8,470,963	\$ 8,509,005	\$ 8,547,047	\$ 8,585,089	\$ 8,623,131	\$ 8,661,173	\$ 8,699,215	\$ 8,737,257	\$ 8,775,299	\$ 8,813,341	\$ 8,851,383	\$ 8,889,425	\$ 8,927,467	\$ 8,965,509	\$ 9,003,551	\$ 9,041,593	\$ 9,079,635	\$ 9,117,677	\$ 9,155,719	\$ 9,193,761	\$ 9,231,803	\$ 9,269,845	\$ 9,307,887	\$ 9,345,929	\$ 9,383,971	\$ 9,422,013	\$ 9,460,055	\$ 9,498,097	\$ 9,536,139	\$ 9,574,181	\$ 9,612,223	\$ 9,650,265	\$ 9,688,307	\$ 9,726,349	\$ 9,764,391	\$ 9,802,433	\$ 9,840,475	\$ 9,878,517	\$ 9,916,559	\$ 9,954,601	\$ 9,992,643	\$ 10,030,685	\$ 10,068,727	\$ 10,106,769	\$ 10,144,811	\$ 10,182,853	\$ 10,220,895	\$ 10,258,937	\$ 10,296,979	\$ 10,335,021	\$ 10,373,063	\$ 10,411,105	\$ 10,449,147	\$ 10,487,189	\$ 10,525,231	\$ 10,563,273	\$ 10,601,315	\$ 10,639,357	\$ 10,677,399	\$ 10,715,441	\$ 10,753,483	\$ 10,791,525	\$ 10,829,567	\$ 10,867,609	\$ 10,905,651	\$ 10,943,693	\$ 10,981,735	\$ 11,019,777	\$ 11,057,819	\$ 11,095,861	\$ 11,133,903	\$ 11,171,945	\$ 11,210,000	\$ 11,248,055	\$ 11,286,100	\$ 11,324,155	\$ 11,362,200	\$ 11,400,255	\$ 11,438,300	\$ 11,476,355	\$ 11,514,400	\$ 11,552,455	\$ 11,590,500	\$ 11,628,555	\$ 11,666,600	\$ 11,704,655	\$ 11,742,700	\$ 11,780,755	\$ 11,818,800	\$ 11,856,855	\$ 11,894,900	\$ 11,932,955	\$ 11,971,000	\$ 12,009,055	\$ 12,047,100	\$ 12,085,155	\$ 12,123,200	\$ 12,161,255	\$ 12,199,300	\$ 12,237,355	\$ 12,275,400	\$ 12,313,455	\$ 12,351,500	\$ 12,389,555	\$ 12,427,600	\$ 12,465,655	\$ 12,503,700	\$ 12,541,755	\$ 12,579,800	\$ 12,617,855	\$ 12,655,900	\$ 12,693,955	\$ 12,732,000	\$ 12,770,055	\$ 12,808,100	\$ 12,846,155	\$ 12,884,200	\$ 12,922,255	\$ 12,960,300	\$ 12,998,355	\$ 13,036,400	\$ 13,074,455	\$ 13,112,500	\$ 13,150,555	\$ 13,188,600	\$ 13,226,655	\$ 13,264,700	\$ 13,302,755	\$ 13,340,800	\$ 13,378,855	\$ 13,416,900	\$ 13,454,955	\$ 13,493,000	\$ 13,531,055	\$ 13,569,100	\$ 13,607,155	\$ 13,645,200	\$ 13,683,255	\$ 13,721,300	\$ 13,759,355	\$ 13,797,400	\$ 13,835,455	\$ 13,873,500	\$ 13,911,555	\$ 13,949,600	\$ 13,987,655	\$ 14,025,700	\$ 14,063,755	\$ 14,101,800	\$ 14,139,855	\$ 14,177,900	\$ 14,215,955	\$ 14,254,000	\$ 14,292,055	\$ 14,330,100	\$ 14,368,155	\$ 14,406,200	\$ 14,444,255	\$ 14,482,300	\$ 14,520,355	\$ 14,558,400	\$ 14,596,455	\$ 14,634,500	\$ 14,672,555	\$ 14,710,600	\$ 14,748,655	\$ 14,786,700	\$ 14,824,755	\$ 14,862,800	\$ 14,900,855	\$ 14,938,900	\$ 14,976,955	\$ 15,015,000	\$ 15,053,055	\$ 15,091,100	\$ 15,129,155	\$ 15,167,200	\$ 15,205,255	\$ 15,243,300	\$ 15,281,355	\$ 15,319,400	\$ 15,357,455	\$ 15,395,500	\$ 15,433,555	\$ 15,471,600	\$ 15,509,655	\$ 15,547,700	\$ 15,585,755	\$ 15,623,800	\$ 15,661,855	\$ 15,699,900	\$ 15,737,955	\$ 15,776,000	\$ 15,814,055	\$ 15,852,100	\$ 15,890,155	\$ 15,928,200	\$ 15,966,255	\$ 16,004,300	\$ 16,042,355	\$ 16,080,400	\$ 16,118,455	\$ 16,156,500	\$ 16,194,555	\$ 16,232,600	\$ 16,270,655	\$ 16,308,700	\$ 16,346,755	\$ 16,384,800	\$ 16,422,855	\$ 16,460,900	\$ 16,498,955	\$ 16,537,000	\$ 16,575,055	\$ 16,613,100	\$ 16,651,155	\$ 16,689,200	\$ 16,727,255	\$ 16,765,300	\$ 16,803,355	\$ 16,841,400	\$ 16,879,455	\$ 16,917,500	\$ 16,955,555	\$ 16,993,600	\$ 17,031,655	\$ 17,069,700	\$ 17,107,755	\$ 17,145,800	\$ 17,183,855	\$ 17,221,900	\$ 17,259,955	\$ 17,298,000	\$ 17,336,055	\$ 17,374,100	\$ 17,412,155	\$ 17,450,200	\$ 17,488,255	\$ 17,526,300	\$ 17,564,355	\$ 17,602,400	\$ 17,640,455	\$ 17,678,500	\$ 17,716,555	\$ 17,754,600	\$ 17,792,655	\$ 17,830,700	\$ 17,868,755	\$ 17,906,800	\$ 17,944,855	\$ 17,982,900	\$ 18,020,955	\$ 18,059,000	\$ 18,097,055	\$ 18,135,100	\$ 18,173,155	\$ 18,211,200	\$ 18,249,255	\$ 18,287,300	\$ 18,325,355	\$ 18,363,400	\$ 18,401,455	\$ 18,439,500	\$ 18,477,555	\$ 18,515,600	\$ 18,553,655	\$ 18,591,700	\$ 18,629,755	\$ 18,667,800	\$ 18,705,855	\$ 18,743,900	\$ 18,781,955	\$ 18,820,000	\$ 18,858,055	\$ 18,896,100	\$ 18,934,155	\$ 18,972,200	\$ 19,010,255	\$ 19,048,300	\$ 19,086,355	\$ 19,124,400	\$ 19,162,455	\$ 19,200,500	\$ 19,238,555	\$ 19,276,600	\$ 19,314,655	\$ 19,352,700	\$ 19,390,755	\$ 19,428,800	\$ 19,466,855	\$ 19,504,900	\$ 19,542,955	\$ 19,581,000	\$ 19,619,055	\$ 19,657,100	\$ 19,695,155	\$ 19,733,200	\$ 19,771,255	\$ 19,809,300	\$ 19,847,355	\$ 19,885,400	\$ 19,923,455	\$ 19,961,500	\$ 20,000,000

Table 2
Assumes the Difference in the Purchase Price of \$100 Million and the Existing Rate Base in Months Over 39 Years Included in Acquisition Adjustment

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040																																																																																																																																																																			
REVENUES	\$ 447,725	\$ 482,294	\$ 520,187	\$ 558,228	\$ 596,270	\$ 634,311	\$ 672,353	\$ 710,395	\$ 748,437	\$ 786,479	\$ 824,521	\$ 862,563	\$ 900,605	\$ 938,647	\$ 976,689	\$ 1,014,731	\$ 1,052,773	\$ 1,090,815	\$ 1,128,857	\$ 1,166,899	\$ 1,204,941	\$ 1,242,983	\$ 1,281,025	\$ 1,319,067	\$ 1,357,109	\$ 1,395,151	\$ 1,433,193	\$ 1,471,235	\$ 1,509,277	\$ 1,547,319	\$ 1,585,361	\$ 1,623,403	\$ 1,661,445	\$ 1,699,487	\$ 1,737,529	\$ 1,775,571	\$ 1,813,613	\$ 1,851,655	\$ 1,889,697	\$ 1,927,739	\$ 1,965,781	\$ 2,003,823	\$ 2,041,865	\$ 2,079,907	\$ 2,117,949	\$ 2,155,991	\$ 2,194,033	\$ 2,232,075	\$ 2,270,117	\$ 2,308,159	\$ 2,346,201	\$ 2,384,243	\$ 2,422,285	\$ 2,460,327	\$ 2,498,369	\$ 2,536,411	\$ 2,574,453	\$ 2,612,495	\$ 2,650,537	\$ 2,688,579	\$ 2,726,621	\$ 2,764,663	\$ 2,802,705	\$ 2,840,747	\$ 2,878,789	\$ 2,916,831	\$ 2,954,873	\$ 2,992,915	\$ 3,030,957	\$ 3,068,999	\$ 3,107,041	\$ 3,145,083	\$ 3,183,125	\$ 3,221,167	\$ 3,259,209	\$ 3,297,251	\$ 3,335,293	\$ 3,373,335	\$ 3,411,377	\$ 3,449,419	\$ 3,487,461	\$ 3,525,503	\$ 3,563,545	\$ 3,601,587	\$ 3,639,629	\$ 3,677,671	\$ 3,715,713	\$ 3,753,755	\$ 3,791,797	\$ 3,829,839	\$ 3,867,881	\$ 3,905,923	\$ 3,943,965	\$ 3,982,007	\$ 4,020,049	\$ 4,058,091	\$ 4,096,133	\$ 4,134,175	\$ 4,172,217	\$ 4,210,259	\$ 4,248,301	\$ 4,286,343	\$ 4,324,385	\$ 4,362,427	\$ 4,400,469	\$ 4,438,511	\$ 4,476,553	\$ 4,514,595	\$ 4,552,637	\$ 4,590,679	\$ 4,628,721	\$ 4,666,763	\$ 4,704,805	\$ 4,742,847	\$ 4,780,889	\$ 4,818,931	\$ 4,856,973	\$ 4,895,015	\$ 4,933,057	\$ 4,971,099	\$ 5,009,141	\$ 5,047,183	\$ 5,085,225	\$ 5,123,267	\$ 5,161,309	\$ 5,199,351	\$ 5,237,393	\$ 5,275,435	\$ 5,313,477	\$ 5,351,519	\$ 5,389,561	\$ 5,427,603	\$ 5,465,645	\$ 5,503,687	\$ 5,541,729	\$ 5,579,771	\$ 5,617,813	\$ 5,655,855	\$ 5,693,897	\$ 5,731,939	\$ 5,769,981	\$ 5,808,023	\$ 5,846,065	\$ 5,884,107	\$ 5,922,149	\$ 5,960,191	\$ 5,998,233	\$ 6,036,275	\$ 6,074,317	\$ 6,112,359	\$ 6,150,401	\$ 6,188,443	\$ 6,226,485	\$ 6,264,527	\$ 6,302,569	\$ 6,340,611	\$ 6,378,653	\$ 6,416,695	\$ 6,454,737	\$ 6,492,779	\$ 6,530,821	\$ 6,568,863	\$ 6,606,905	\$ 6,644,947	\$ 6,682,989	\$ 6,721,031	\$ 6,759,073	\$ 6,797,115	\$ 6,835,157	\$ 6,873,199	\$ 6,911,241	\$ 6,949,283	\$ 6,987,325	\$ 7,025,367	\$ 7,063,409	\$ 7,101,451	\$ 7,139,493	\$ 7,177,535	\$ 7,215,577	\$ 7,253,619	\$ 7,291,661	\$ 7,329,703	\$ 7,367,745	\$ 7,405,787	\$ 7,443,829	\$ 7,481,871	\$ 7,519,913	\$ 7,557,955	\$ 7,595,997	\$ 7,634,039	\$ 7,672,081	\$ 7

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10/16/2014
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Worksheet: 11-24-14-RSum
\$\$0.000000 Capital Investment

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Problem: 112-143200
San Milan Capital Investment

CITY00118151

CITY-OWNED OPTION											
REVENUES											
Charges from Client Services	\$ 20,600,845										
Other Revenue	447,755.0	482,294	482,294	482,294	482,294	482,294	482,294	482,294	482,294	482,294	482,294
TOTAL REVENUES	21,048,600	964,538									
REVENUE REQUIREMENTS											
Operations & Maintenance Expenses	\$ 8,108,839	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854	\$ 8,283,854
Debt Service (Requirements)											
Debt Service - Sinking Fund											
Debt Service - Sinking Fund - New Debt											
Debt Service - Sinking Fund - Old Debt											
TOTAL REVENUE REQUIREMENTS	8,108,839	8,283,854									
ANNUAL SURPLUS (DEFICIENCY)											
UNADJUSTED FUND BALANCE	\$ 12,939,761	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684	\$ 13,064,684
LESS TRANSFER TO CAPITAL RESERVE											
SOIALLY ADJUSTED ENDING FUND BALANCE	12,939,761	13,064,684									
OPERATING RESERVE											
Planned Additions	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Actual Operating Reserves	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Target Debt Service Coverage	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Actual Debt Service Coverage	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21
Net Revenue Available for Coverage											

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Problem: 11-2-1 ARSUC
\$50 Million Capital Investment

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1/21/2014
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Palmer Hospital
SPS Patient Capital Investment

Table 6
Water Plus Structure - Option 2
MINIMUM CHARGE

Category	3.0%	3.5%	3.8%	4.0%	4.5%	4.7%	4.8%	4.9%	5.0%	5.5%	6.0%	6.5%	7.0%	7.5%	8.0%	8.5%	9.0%	9.5%	10.0%
Residential	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Business	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Industrial	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Public Authority	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Private Fire Protection Service	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Manufacturing	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
3/4"	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
1"	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
1-1/2"	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Water Plus Meter	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
Residential	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87
Business	32.74	34.74	36.74	38.74	40.74	42.74	44.74	46.74	48.74	50.74	52.74	54.74	56.74	58.74	60.74	62.74	64.74	66.74	68.74
Industrial	40.61	42.61	44.61	46.61	48.61	50.61	52.61	54.61	56.61	58.61	60.61	62.61	64.61	66.61	68.61	70.61	72.61	74.61	76.61
Water Plus Meter Charge	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00
All Metered Users, per 100 cubic feet	24.87	26.87	28.87	30.87	32.87	34.87	36.87	38.87	40.87	42.87	44.87	46.87	48.87	50.87	52.87	54.87	56.87	58.87	60.87

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Prudential 11/7/14/Sum
800 Million Capital Investment

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Proforma 117-14PS-1
\$90 Billion Capital Investment

Table 9
Sample BIF Comparison

Item	2015 Rates			2017 Rates			2018 Rates		
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Residential 3/4" meter	57.23	46.81	37.23	55.19	45.06	37.23	57.23	47.78	37.23
20	57.23	46.81	37.23	55.19	45.06	37.23	57.23	47.78	37.23
30	171.69	135.39	117.45	165.58	135.39	117.45	171.69	135.39	117.45
40	217.60	174.65	217.60	208.15	174.65	217.60	217.60	174.65	217.60
Business - 1" meter	86.87	67.66	60.07	103.13	102.32	86.87	86.87	114.53	115.53
25	86.87	67.66	60.07	103.13	102.32	86.87	86.87	114.53	115.53
30	186.52	139.43	139.43	186.52	139.43	139.43	186.52	139.43	139.43
40	186.52	207.18	207.18	207.18	216.06	186.52	207.18	242.46	242.46
74	186.52	207.18	207.18	207.18	216.06	186.52	207.18	242.46	242.46
Public Authority - 2" meter	981.11	1,051.77	1,051.77	1,002.38	1,051.77	981.11	981.11	1,174.45	1,174.45
100	981.11	1,051.77	1,051.77	1,002.38	1,051.77	981.11	981.11	1,174.45	1,174.45
400	1,421.41	1,523.97	1,523.97	1,384.44	1,523.97	1,421.41	1,421.41	1,743.72	1,743.72
500	1,421.41	1,523.97	1,523.97	1,384.44	1,523.97	1,421.41	1,421.41	1,743.72	1,743.72
800	1,421.41	1,523.97	1,523.97	1,384.44	1,523.97	1,421.41	1,421.41	1,743.72	1,743.72
Irrigation - 1" meter	666.43	918.76	918.76	866.84	918.76	666.43	666.43	846.40	846.40
400	666.43	918.76	918.76	866.84	918.76	666.43	666.43	846.40	846.40
500	1,040.79	1,137.72	1,137.72	1,002.38	1,137.72	1,040.79	1,040.79	1,261.24	1,261.24
550	1,040.79	1,137.72	1,137.72	1,002.38	1,137.72	1,040.79	1,040.79	1,261.24	1,261.24

Table 10
Increase / (Decrease) in Sample Bif's

Item	2015 Rates			2017 Rates			2018 Rates		
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Residential 3/4" Meter	15.40	3.48	3.15	2.27	2.28	2.28	2.30	2.35	2.38
20	15.40	3.48	3.15	2.27	2.28	2.28	2.30	2.35	2.38
30	26.59	6.34	4.82	3.16	3.56	3.56	3.53	3.83	3.81
40	42.18	10.74	8.27	5.28	7.29	7.29	7.23	7.43	7.44
100	73.11	20.24	15.27	13.25	13.25	13.02	13.39	13.77	13.78
Business - 1" meter	32.88	8.32	5.44	5.44	5.55	5.55	5.59	5.88	5.88
25	32.88	8.32	5.44	5.44	5.55	5.55	5.59	5.88	5.88
30	60.05	17.65	13.71	8.24	8.87	8.87	8.89	9.30	9.30
74	60.05	17.65	13.71	8.24	8.87	8.87	8.89	9.30	9.30
Public Authority - 2" meter	330.66	64.74	77.04	55.09	57.19	57.24	56.09	58.30	58.35
100	330.66	64.74	77.04	55.09	57.19	57.24	56.09	58.30	58.35
400	510.41	132.42	173.29	86.35	88.87	88.86	87.04	88.89	89.04
500	510.41	132.42	173.29	86.35	88.87	88.86	87.04	88.89	89.04
Irrigation - 1" meter	661.72	70.37	70.37	51.20	52.18	52.22	51.72	53.00	53.45
400	661.72	70.37	70.37	51.20	52.18	52.22	51.72	53.00	53.45
500	871.47	124.81	112.81	81.78	82.27	82.83	82.53	84.80	84.07

Table 11
Capital Investment Projects

Project Name	2015		2017		2018		2019		2020		2021		2022		2023	
	Cost	Revenue														
Capital Investment Projects	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0
City Pushback Price	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0	\$ 8,000,000	\$ 0
Private Purchase	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0	\$ 10,000,000	\$ 0

Year	2015	2017	2018	2019	2020	2021	2022	2023
Revenue (Total)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cost (Total)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net (Total)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 6
Detailed BR Comparison, continued

	2011 Values		2012 Values		2013 Values		2014 Values		2015 Values	
	Option 1	Option 2								
\$ 59.83	\$ 56.17	\$ 48.83	\$ 37.03	\$ 37.03	\$ 48.83	\$ 48.83	\$ 56.17	\$ 59.83	\$ 62.52	\$ 62.52
\$ 91.50	\$ 87.84	\$ 79.50	\$ 79.50	\$ 87.84	\$ 87.84	\$ 91.50	\$ 91.50	\$ 91.50	\$ 91.50	\$ 91.50
\$ 348.75	\$ 322.42	\$ 296.48	\$ 277.69	\$ 277.69	\$ 296.48	\$ 296.48	\$ 322.42	\$ 348.75	\$ 364.76	\$ 364.76
\$ 145.00	\$ 139.10	\$ 119.00	\$ 89.27	\$ 89.27	\$ 119.00	\$ 119.00	\$ 139.10	\$ 145.00	\$ 150.89	\$ 150.89
\$ 202.40	\$ 194.09	\$ 186.15	\$ 186.15	\$ 186.15	\$ 194.09	\$ 194.09	\$ 202.40	\$ 202.40	\$ 202.40	\$ 202.40
\$ 1,076.96	\$ 1,077.68	\$ 1,229.87	\$ 821.11	\$ 821.11	\$ 1,076.96	\$ 1,076.96	\$ 1,076.96	\$ 1,076.96	\$ 1,076.96	\$ 1,076.96
\$ 1,707.28	\$ 1,507.67	\$ 1,697.06	\$ 1,214.41	\$ 1,214.41	\$ 1,507.67	\$ 1,507.67	\$ 1,507.67	\$ 1,507.67	\$ 1,507.67	\$ 1,507.67
\$ 2,278.81	\$ 1,978.88	\$ 1,884.18	\$ 1,421.86	\$ 1,421.86	\$ 1,884.18	\$ 1,884.18	\$ 1,884.18	\$ 1,884.18	\$ 1,884.18	\$ 1,884.18
\$ 1,297.25	\$ 1,292.54	\$ 1,129.04	\$ 840.49	\$ 840.49	\$ 1,129.04	\$ 1,129.04	\$ 1,292.54	\$ 1,297.25	\$ 1,297.25	\$ 1,297.25
\$ 1,960.07	\$ 1,388.79	\$ 1,594.44	\$ 1,040.78	\$ 1,040.78	\$ 1,388.79	\$ 1,388.79	\$ 1,388.79	\$ 1,388.79	\$ 1,388.79	\$ 1,388.79
\$ 2,169.80	\$ 1,862.80	\$ 1,786.23	\$ 1,241.24	\$ 1,241.24	\$ 1,786.23	\$ 1,786.23	\$ 1,786.23	\$ 1,786.23	\$ 1,786.23	\$ 1,786.23

Table 16
Increase / (Decrease) in Shares BFA, continued

	2011 Values		2012 Values		2013 Values		2014 Values		2015 Values	
	Option 1	Option 2								
\$ 2.94	\$ 2.41	\$ 2.41	\$ 2.46	\$ 2.46	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41
\$ 3.50	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50
\$ 7.07	\$ 7.58	\$ 7.58	\$ 7.58	\$ 7.58	\$ 7.07	\$ 7.07	\$ 7.07	\$ 7.07	\$ 7.07	\$ 7.07
\$ 12.65	\$ 14.01	\$ 14.01	\$ 14.01	\$ 14.01	\$ 12.65	\$ 12.65	\$ 12.65	\$ 12.65	\$ 12.65	\$ 12.65
\$ 5.61	\$ 5.77	\$ 5.77	\$ 5.77	\$ 5.77	\$ 5.61	\$ 5.61	\$ 5.61	\$ 5.61	\$ 5.61	\$ 5.61
\$ 11.08	\$ 12.50	\$ 12.51	\$ 12.47	\$ 12.47	\$ 11.08	\$ 11.08	\$ 11.08	\$ 11.08	\$ 11.08	\$ 11.08
\$ 57.81	\$ 59.42	\$ 59.42	\$ 59.42	\$ 59.42	\$ 57.81	\$ 57.81	\$ 57.81	\$ 57.81	\$ 57.81	\$ 57.81
\$ 81.24	\$ 81.73	\$ 81.73	\$ 81.73	\$ 81.73	\$ 81.24	\$ 81.24	\$ 81.24	\$ 81.24	\$ 81.24	\$ 81.24
\$ 63.75	\$ 61.52	\$ 61.52	\$ 61.52	\$ 61.52	\$ 63.75	\$ 63.75	\$ 63.75	\$ 63.75	\$ 63.75	\$ 63.75
\$ 84.18	\$ 84.53	\$ 84.53	\$ 84.53	\$ 84.53	\$ 84.18	\$ 84.18	\$ 84.18	\$ 84.18	\$ 84.18	\$ 84.18

Table 1
Water Customer and Service Demand Summary
Source: Budget Customer Counts - AMV 01/06/06-01/07

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
NUMBER OF WATER CONNECTIONS																			
Residential																			
1-1/2"	14,462	14,897	14,253	14,901	15,820	15,200	15,352	15,506	15,661	15,817	15,976	16,137	16,298	16,461	16,625	16,790	16,956	17,123	17,291
2"	232	232	238	331	335	338	341	345	348	352	355	358	361	364	367	370	373	376	379
3"	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108
4"	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
5"	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
6"	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Residential Total	14,884	15,003	14,883	15,535	16,486	15,843	16,200	16,368	16,517	16,667	16,818	16,970	17,123	17,277	17,431	17,586	17,741	17,897	18,054
Business																			
3/4"	1,691	1,707	1,725	1,743	1,763	1,777	1,785	1,813	1,831	1,849	1,867	1,885	1,903	1,921	1,939	1,957	1,975	1,993	2,011
1"	500	505	510	515	520	525	530	535	540	545	550	555	560	565	570	575	580	585	590
1-1/2"	685	692	699	706	713	720	727	734	741	748	755	762	769	776	783	790	797	804	811
2"	207	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
3"	63	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
4"	29	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
5"	9	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
6"	3,514	3,528	3,544	3,560	3,578	3,592	3,602	3,618	3,633	3,648	3,663	3,678	3,693	3,708	3,723	3,738	3,753	3,768	3,783
Business Total	3,514	3,528	3,544	3,560	3,578	3,592	3,602	3,618	3,633	3,648	3,663	3,678	3,693	3,708	3,723	3,738	3,753	3,768	3,783
Industrial																			
1-1/2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
6"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Public Utility Total	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
Private Fire Protection Service																			
3/4"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
6"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Private Fire Protection Service Total	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
Interdepartmental																			
3/4"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1-1/2"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6"	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Interdepartmental Total	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
Irrigation																			
3/4"	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493
1"	19,507	19,631	19,676	19,804	20,053	20,444	20,837	21,232	21,629	22,028	22,429	22,831	23,234	23,638	24,043	24,449	24,856	25,264	25,673
1-1/2"	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327
2"	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
3"	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416
4"	22,998	23,110	23,225	23,343	23,462	23,583	23,705	23,828	23,952	24,077	24,203	24,330	24,458	24,587	24,717	24,848	24,980	25,113	25,247
5"	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016
6"	22,998	23,110	23,225	23,343	23,462	23,583	23,705	23,828	23,952	24,077	24,203	24,330	24,458	24,587	24,717	24,848	24,980	25,113	25,247
Irrigation Total	29,925	30,143	30,362	30,583	30,806	31,031	31,258	31,487	31,718	31,951	32,186	32,423	32,662	32,903	33,146	33,391	33,638	33,887	34,138
Non-Departmental																			
3/4"	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493
1"	19,507	19,631	19,676	19,804	20,053	20,444	20,837	21,232	21,629	22,028	22,429	22,831	23,234	23,638	24,043	24,449	24,856	25,264	25,673
1-1/2"	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327	3,327
2"	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
3"	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416	3,416
4"	22,998	23,110	23,225	23,343	23,462	23,583	23,705	23,828	23,952	24,077	24,203	24,330	24,458	24,587	24,717	24,848	24,980	25,113	25,247
5"	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016	2,016
6"	22,998	23,110	23,225	23,343	23,462	23,583	23,705	23,828	23,952	24,077	24,203	24,330	24,458	24,587	24,717	24,848	24,980	25,113	25,247
Non-Departmental Total	29,925	30,143	30,362	30,583	30,806	31,031	31,258	31,487	31,718	31,951	32,186	32,423	32,662	32,903	33,146	33,391	33,638	33,887	34,138

Table 2
Consumption Data

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Consumption (100 ac ft)	4,730,959	4,775,113	4,820,119	4,865,582	4,911,466	4,957,989	5,004,655	5,051,951	5,099,718	5,147,994	5,196,682			

Table 3
Rate & Number of Connections

Rate	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential 5/8"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Residential 3/4"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Residential 1"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Residential 1-1/2"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 3/4"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 1"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 1-1/2"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 2"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 3"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 4"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 5"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Business 6"	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Industrial 5/8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 3/4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 1"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 1-1/2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 3"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 5"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 6"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial 8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 3/4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 1"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 1-1/2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 3"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 5"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 6"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Public Agency 8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 3/4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 1"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 1-1/2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 3"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 5"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 6"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Private Production Service 8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 3/4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 1"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 1-1/2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 3"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 5"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 6"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Interdependent 8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 5/8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 3/4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 1"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 1-1/2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 2"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 3"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 4"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 5"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 6"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Irrigation 8"	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Unmanned Water Residential Business Irrigators	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 1
Operations and Maintenance Expenses - Private Ownership

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees	\$ 2,668,072	\$ 2,830,188	\$ 2,915,094	\$ 3,089,999	\$ 3,275,399	\$ 3,471,923	\$ 3,680,239	\$ 3,901,053	\$ 4,135,116	\$ 4,383,223	\$ 4,646,216	\$ 4,924,989	\$ 5,220,489	
Employee Pensions & Benefits	\$ 1,317,110	\$ 1,296,692	\$ 1,311,892	\$ 1,330,500	\$ 1,352,365	\$ 1,378,457	\$ 1,407,807	\$ 1,440,474	\$ 1,476,502	\$ 1,515,902	\$ 1,558,737	\$ 1,606,002	\$ 1,657,745	
Purchased Power	\$ 99,338	\$ 101,479	\$ 103,620	\$ 105,761	\$ 107,902	\$ 110,043	\$ 112,184	\$ 114,325	\$ 116,466	\$ 118,607	\$ 120,748	\$ 122,889	\$ 125,030	
Chemicals	\$ 33,729	\$ 34,063	\$ 34,397	\$ 34,731	\$ 35,065	\$ 35,399	\$ 35,733	\$ 36,067	\$ 36,401	\$ 36,735	\$ 37,069	\$ 37,403	\$ 37,737	
Materials & Supplies	\$ 3,039,204	\$ 3,099,097	\$ 3,130,088	\$ 3,161,389	\$ 3,193,003	\$ 3,224,963	\$ 3,257,162	\$ 3,289,794	\$ 3,322,651	\$ 3,355,878	\$ 3,389,437	\$ 3,423,331	\$ 3,457,564	
Contractual Services	\$ 1,400	\$ 1,200	\$ 1,236	\$ 1,273	\$ 1,311	\$ 1,351	\$ 1,391	\$ 1,433	\$ 1,476	\$ 1,520	\$ 1,566	\$ 1,613	\$ 1,661	
Rent	\$ 214,264	\$ 216,602	\$ 218,768	\$ 220,955	\$ 223,165	\$ 225,397	\$ 227,651	\$ 229,927	\$ 232,227	\$ 234,549	\$ 236,894	\$ 239,263	\$ 241,656	
Transportation Expense	\$ 477,353	\$ 372,688	\$ 425,026	\$ 442,021	\$ 459,702	\$ 478,090	\$ 497,213	\$ 517,102	\$ 537,786	\$ 559,297	\$ 581,669	\$ 604,996	\$ 629,193	
Insurance Expense	\$ 17,325	\$ 51,318	\$ 52,344	\$ 53,381	\$ 54,439	\$ 55,548	\$ 56,658	\$ 57,792	\$ 58,948	\$ 60,127	\$ 61,330	\$ 62,556	\$ 63,807	
Regulatory Commission Expense	\$ 21,164	\$ 22,139	\$ 22,381	\$ 22,604	\$ 22,830	\$ 23,059	\$ 23,289	\$ 23,522	\$ 23,757	\$ 23,995	\$ 24,235	\$ 24,477	\$ 24,722	
Bad Debt Expense	\$ 389,964	\$ 384,900	\$ 396,344	\$ 408,234	\$ 420,481	\$ 433,086	\$ 446,089	\$ 459,471	\$ 473,255	\$ 487,453	\$ 502,077	\$ 517,139	\$ 532,653	
Miscellaneous Expenses	\$ 1,413,042	\$ 1,499,477	\$ 1,563,951	\$ 1,642,148	\$ 1,724,236	\$ 1,810,469	\$ 1,900,992	\$ 1,996,042	\$ 2,085,844	\$ 2,180,600	\$ 2,280,636	\$ 2,385,201	\$ 2,494,711	
Taxes other than Income & Property	\$ 1,945,931	\$ 1,296,312	\$ 1,348,184	\$ 1,402,091	\$ 1,458,175	\$ 1,516,502	\$ 1,577,162	\$ 1,640,248	\$ 1,705,858	\$ 1,774,092	\$ 1,845,055	\$ 1,918,958	\$ 1,995,613	
Income Taxes	\$ 40,258	\$ 30,154	\$ 30,757	\$ 31,372	\$ 32,000	\$ 32,640	\$ 33,292	\$ 33,958	\$ 34,637	\$ 35,330	\$ 36,037	\$ 36,756	\$ 37,489	
Amortized Intangible Plant	\$ 2,362,281	\$ 2,496,290	\$ 2,584,942	\$ 2,667,539	\$ 2,774,241	\$ 2,895,210	\$ 3,000,619	\$ 3,120,644	\$ 3,245,469	\$ 3,375,288	\$ 3,510,200	\$ 3,650,712	\$ 3,796,740	
Depreciation	\$ 47,202	\$ 86,403	\$ 103,259	\$ 104,269	\$ 108,440	\$ 112,778	\$ 117,289	\$ 121,981	\$ 126,860	\$ 131,934	\$ 137,212	\$ 142,700	\$ 148,408	
City of Missouri Admin Fee	\$ 2,200,000	\$ 2,200,000	\$ 2,255,000	\$ 2,333,980	\$ 2,403,899	\$ 2,475,119	\$ 2,550,403	\$ 2,626,915	\$ 2,705,723	\$ 2,786,894	\$ 2,870,501	\$ 2,956,618	\$ 3,045,315	
Other Expenses	\$ 17,894,240	\$ 17,387,003	\$ 17,977,487	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,581	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,269	\$ 25,549,660	\$ 26,603,424	
Management Fee														
Total Operating Expenses														

Table 2
Expense Inflation Parameters

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees					6%									
Employee Pensions & Benefits	44%													
Purchased Power														
Chemicals														
Materials & Supplies														
Contractual Services														
Rent														
Transportation Expense														
Insurance Expense														
Regulatory Commission Expense														
Bad Debt Expense														
Miscellaneous Expenses														
Taxes other than Income & Property														
Property Taxes														
Income Taxes														
Amortized Intangible Plant														
Depreciation														
City of Missouri Admin Fee														
Other Expenses														
Management Fee														
Total Operating Expenses														

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees	1,657,920	1,766,584	1,819,551	1,928,724	2,044,458	2,167,126	2,297,154	2,434,983	2,581,082	2,735,947	2,890,103	3,074,110	3,253,556
Employee Pensions & Benefits	1,014,131	1,006,457	1,019,954	1,080,091	1,144,897	1,213,581	1,286,406	1,363,580	1,446,406	1,532,130	1,624,058	1,721,501	1,824,791
Purchased Power	1,252,803	1,371,266	1,426,117	1,483,162	1,542,488	1,604,188	1,669,355	1,735,089	1,804,463	1,876,673	1,951,739	2,029,809	2,111,001
Chemicals	39,336	101,479	110,612	120,567	131,418	143,246	156,138	170,190	185,508	202,203	220,402	240,238	261,859
Materials & Supplies	64,980	(106,687)	50,000	52,000	54,080	56,243	58,493	60,833	63,266	65,797	68,428	71,166	74,012
Contractual Services	2,531,505	2,638,411	2,664,755	2,691,443	2,718,357	2,745,541	2,772,956	2,800,726	2,828,733	2,857,021	2,885,591	2,914,447	2,943,581
Rent	1,400	1,200	1,235	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661
Transportation Expense	214,284	215,602	218,782	220,955	223,165	225,397	227,651	229,927	232,227	234,549	236,894	239,263	241,656
Insurance Expense	208,088	104,894	156,161	162,407	169,504	175,680	182,686	189,954	197,593	205,497	213,717	222,266	231,166
Regulatory Commission Expense													
Bad Debt Expense	21,154	22,159	22,381	22,604	22,830	23,059	23,288	23,522	23,757	23,995	24,235	24,477	24,722
Miscellaneous Expenses	38,127	45,847	47,222	48,639	50,098	51,601	53,148	54,743	56,386	58,077	59,819	61,614	63,462
Taxes other than Income & Property													
Property Taxes													
Amortized Intangible Plant													
Depreciation													
City of Missoula Admin Fee	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Other Expenses	47,202	96,403	100,259	104,259	108,440	112,778	117,289	121,981	126,860	131,934	137,212	142,700	148,408
Total Operating Expenses	8,108,538	8,283,934	8,636,065	8,916,146	9,210,447	9,519,778	9,844,997	10,187,011	10,546,786	10,925,342	11,323,755	11,743,203	12,184,878

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Employee Pensions & Benefits		57%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Purchased Power		9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Chemicals			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Materials & Supplies			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Contractual Services			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Rent		1%											
Transportation Expense			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Insurance Expense			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Regulatory Commission Expense			3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bad Debt Expense			5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Miscellaneous Expenses		#DIV/0!	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Taxes other than Income & Property			4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Income Taxes			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Amortized Intangible Plant			4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Depreciation			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
City of Missoula Admin Fee			4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Other Expenses			4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%

Table 1
Debt Service Summary

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Future Debt Service													
Series 2015				\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775	\$ 5,266,775
Series 2016				\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397	\$ 633,397
Series 2017				\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881	\$ 340,881
Series 2018				\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669	\$ 415,669
Series 2019				\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899	\$ 267,899
Series 2020				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Series 2021				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Series 2022				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Series 2023				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Series 2024				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Future Debt Service				\$ 5,266,775	\$ 5,903,173	\$ 6,241,054	\$ 6,656,723	\$ 6,924,622	\$ 7,482,947	\$ 8,169,248	\$ 8,969,117	\$ 9,864,599	\$ 10,774,339

First Year Issue P&I: 100%

Table 2
Amortization of Purchase Price

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Annual Amortization				\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578	\$ 2,041,578
adjust for currently rate base or asset value												

Table 3
Capital Reserve

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning Balance				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers In / (Out) -available at the end of the year				\$ -	\$ 2,441,651	\$ 5,963,212	\$ 5,445,204	\$ 4,447,211	\$ 3,658,625	\$ 2,744,466	\$ 2,142,674	\$ 2,361,290
Capital Improvements				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Use Maximum Funds for Capital Projects each year				\$ -	\$ 2,441,651	\$ 5,963,212	\$ 5,445,204	\$ 4,447,211	\$ 3,658,625	\$ 2,744,466	\$ 2,142,674	\$ 2,361,290
Annual Surplus (Deficiency)				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Table 4
Capital Projects to be Debt-Funded

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital Projects				\$ 9,225,000	\$ 9,450,000	\$ 9,675,000	\$ 10,125,000	\$ 10,350,000	\$ 10,575,000	\$ 10,800,000	\$ 11,025,000	\$ 11,250,000
Amount Cash-Funded				\$ 2,441,651	\$ 5,963,212	\$ 5,445,204	\$ 4,447,211	\$ 3,658,625	\$ 2,744,466	\$ 2,142,674	\$ 1,426,874	\$ 2,361,290
Amount Debt-Funded				\$ 6,783,349	\$ 3,486,788	\$ 4,229,796	\$ 5,677,789	\$ 6,691,375	\$ 7,826,325	\$ 8,155,324	\$ 8,882,326	\$ 8,888,710

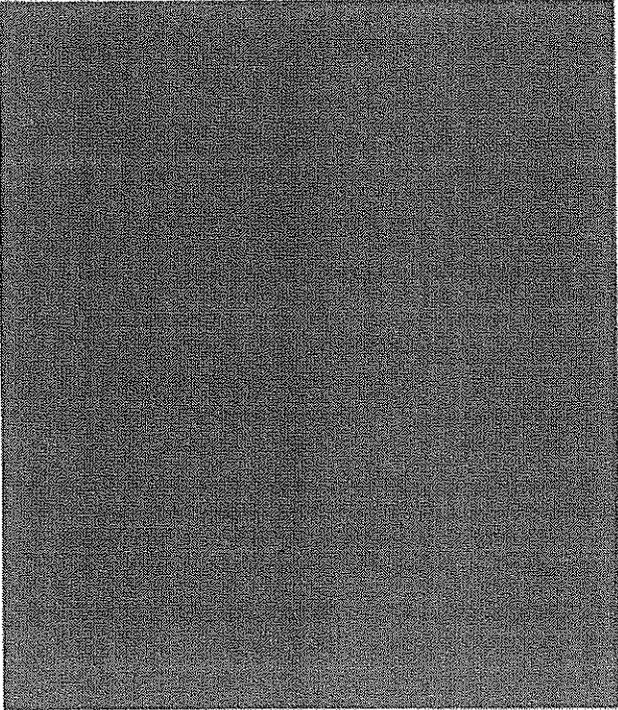
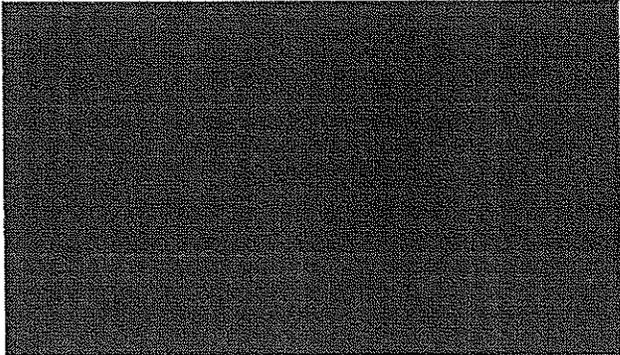
Source: Mountain Water - Revenue Summary - MW-019494-MM-019506

	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19 Total
Consumption	139,214	219,427	360,417	494,125	393,925	176,227	79,036	74,406	75,383	72,418	71,802	2,231,863
Residential	128,838	145,167	175,952	208,276	169,583	142,217	105,519	100,714	99,181	99,018	100,862	1,803,446
Business	42,070	36,262	38,215	61,500	32,633	25,535	54,812	21,763	26,513	29,562	31,446	430,035
Industrial	24	16	18	23	17	16	12	13	13	13	15	203
Private Fire Prot	31,124	69,720	84,608	128,301	105,624	32,977	2,181	133	-	-	-	344
Interdepartmental	341,270	471,592	689,210	883,285	721,988	376,872	241,060	197,028	201,090	201,011	204,025	212,028
Irrigation	-	-	-	-	-	-	-	-	-	-	-	-
Total	683,088	935,638	1,327,685	1,772,253	1,482,387	739,642	473,321	392,791	391,902	392,441	399,638	8,940,986

	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19 Total
Revenue from Volume Charges	\$ 276,714	\$ 435,233	\$ 714,913	\$ 980,146	\$ 782,685	\$ 346,018	\$ 155,118	\$ 148,050	\$ 145,448	\$ 141,352	\$ 140,574	\$ 4,267,262
Residential	\$ 256,297	\$ 290,052	\$ 349,150	\$ 415,282	\$ 376,208	\$ 279,218	\$ 207,209	\$ 200,878	\$ 193,659	\$ 193,841	\$ 197,239	\$ 2,958,538
Business	\$ 83,488	\$ 71,962	\$ 75,838	\$ 122,166	\$ 65,169	\$ 50,120	\$ 106,689	\$ 43,574	\$ 51,769	\$ 57,723	\$ 61,795	\$ 780,292
Industrial	\$ 67	\$ 71	\$ 50	\$ 105	\$ 123	\$ 57	\$ 24	\$ 24	\$ 25	\$ 25	\$ 29	\$ 601
Private Fire Prot	\$ 66,522	\$ 139,320	\$ 187,735	\$ 254,555	\$ 208,192	\$ 64,429	\$ 4,281	\$ 264	\$ -	\$ -	\$ -	\$ 924,298
Interdepartmental	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Irrigation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 683,088	\$ 935,638	\$ 1,327,685	\$ 1,772,253	\$ 1,482,387	\$ 739,642	\$ 473,321	\$ 392,791	\$ 391,902	\$ 392,441	\$ 399,638	\$ 8,940,986

	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19 Total
Communications	14,648	14,691	14,727	14,779	14,817	14,805	14,893	14,978	15,009	15,074	15,068	14,863
Residential	3,485	3,487	3,492	3,501	3,521	3,531	3,544	3,554	3,563	3,573	3,577	3,584
Business	61	61	61	61	61	61	61	61	61	61	61	61
Industrial	552	552	553	553	554	557	557	556	559	559	561	557
Private Fire Prot	3	3	3	3	3	3	3	3	3	3	3	3
Interdepartmental	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation	-	-	-	-	-	-	-	-	-	-	-	-
Total	18,749	18,794	18,836	19,055	19,493	19,563	19,695	19,780	19,794	19,547	19,270	19,325

	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19 Total
Average Usage	9.50	14.94	24.47	33.43	26.59	11.90	5.31	4.97	5.02	4.80	4.77	12.50
Residential	36.97	41.92	50.39	59.78	53.84	40.28	29.77	28.34	27.84	27.71	28.14	37.81
Business	689.67	594.46	626.48	1,009.18	538.94	419.61	890.36	356.77	434.54	484.62	515.51	587.46
Industrial	-	-	-	-	-	-	-	-	-	-	-	-
Private Fire Prot	8.00	5.33	6.00	7.67	5.67	5.93	4.00	4.00	4.33	4.33	5.00	5.64
Interdepartmental	-	-	-	812.03	196.68	54.42	3.42	0.21	-	-	-	185.10
Irrigation	18.20	25.09	35.53	46.88	37.04	19.27	12.24	9.96	10.16	10.28	10.59	20.40
Total	733.77	1,177.74	1,362.94	2,169.16	1,734.62	906.80	1,012.73	872.94	977.80	1,026.74	1,030.64	1,342.44



\$60 Million Capital
Investment Proforma



Options 1-3 assume the same amount of O&M; Option 4 assumes that the City owns the system and operates it.
 Assumes that Rate Base is increased by the difference in a \$100 million purchase price and the existing rate base; includes additional capital investment over the 10-year period
 Assumes the difference in the purchase price of \$100 million and the existing rate base is amortized over 30 years (included in Acquisition Adjustment); includes additional capital investment over the 10-year period
 Assumes that the purchase price is not allowed in rate base; includes additional capital investment over the 10-year period
 City-Owned Option (includes debt service and coverage for purchase price and capital investments)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Rate Base Comparison										
Option 1	\$ 102,923,031	\$ 107,192,254	\$ 111,489,185	\$ 115,806,474	\$ 120,136,328	\$ 124,470,489	\$ 128,800,198	\$ 133,116,175	\$ 137,408,579	\$ 141,666,981
Option 2	\$ 43,717,269	\$ 47,986,492	\$ 52,283,423	\$ 56,600,712	\$ 60,930,566	\$ 65,264,727	\$ 69,594,436	\$ 73,910,413	\$ 78,202,817	\$ 82,461,219
Option 3	\$ 41,675,691	\$ 45,944,914	\$ 50,241,945	\$ 54,559,134	\$ 58,888,988	\$ 63,223,149	\$ 67,552,858	\$ 71,868,835	\$ 76,161,239	\$ 80,419,641
Option 4	n/a									
Rate of Return Comparison										
Option 1	\$ 9,520,980	\$ 9,916,283	\$ 10,312,750	\$ 10,712,099	\$ 11,112,610	\$ 11,513,520	\$ 11,914,018	\$ 12,313,246	\$ 12,710,294	\$ 13,104,196
Option 2	\$ 4,043,847	\$ 4,438,750	\$ 4,836,217	\$ 5,235,566	\$ 5,636,077	\$ 6,036,987	\$ 6,437,485	\$ 6,838,713	\$ 7,239,761	\$ 7,627,883
Option 3	\$ 3,855,001	\$ 4,249,904	\$ 4,647,371	\$ 5,046,720	\$ 5,447,231	\$ 5,848,141	\$ 6,248,639	\$ 6,647,867	\$ 7,044,915	\$ 7,438,817
Option 4	n/a									
Debt Service Coverage										
Option 4	2.44	2.26	2.23	2.19	2.15	2.11	2.08	1.95	1.83	1.69
Percentage Rate Increases (Increases applied to minimum & volume charges)										
Option 1	34.52%	3.36%	3.32%	3.29%	3.26%	3.23%	3.20%	3.17%	3.15%	3.12%
Option 2	7.93%	4.35%	4.26%	4.18%	4.10%	4.02%	3.95%	3.89%	3.83%	3.77%
Option 3	7.02%	4.39%	4.30%	4.21%	4.13%	4.06%	3.99%	3.92%	3.85%	3.79%
Option 4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenue Requirement										
Option 1 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 2 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 3 (incl. depr & taxes)	\$ 18,672,860	\$ 19,400,555	\$ 20,162,220	\$ 20,959,591	\$ 21,794,497	\$ 22,668,868	\$ 23,584,739	\$ 24,544,258	\$ 25,549,690	\$ 26,603,424
Option 4 (incl. Debt Service)	\$ 13,909,467	\$ 14,527,762	\$ 14,837,094	\$ 15,174,907	\$ 15,516,922	\$ 15,876,696	\$ 16,275,871	\$ 16,836,820	\$ 17,478,647	\$ 18,212,489

Table 1
Income Statement - Required Yield Stream - Outline 1
ASSUMES THAT RATE BASE IS INCREASE BY THE DIFFERENCE IN A \$100 MILLION PURCHASE PRICE AND THE EXISTING RATE BASE

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030			
REVENUES																					
Operating Income before Income Taxes	\$ 14,153,781	\$ 15,801,202	\$ 17,448,623	\$ 19,096,044	\$ 20,743,465	\$ 22,390,886	\$ 24,038,307	\$ 25,685,728	\$ 27,333,149	\$ 28,980,570	\$ 30,627,991	\$ 32,275,412	\$ 33,922,833	\$ 35,570,254	\$ 37,217,675	\$ 38,865,096	\$ 40,512,517	\$ 42,160,000	\$ 43,807,421		
Operating Expenses	\$ 4,417,725	\$ 4,862,284	\$ 5,306,843	\$ 5,751,402	\$ 6,195,961	\$ 6,640,520	\$ 7,085,079	\$ 7,529,638	\$ 7,974,197	\$ 8,418,756	\$ 8,863,315	\$ 9,307,874	\$ 9,752,433	\$ 10,196,992	\$ 10,641,551	\$ 11,086,110	\$ 11,530,669	\$ 11,975,228	\$ 12,419,787		
Operating Income	\$ 9,736,056	\$ 10,938,918	\$ 12,141,780	\$ 13,344,642	\$ 14,547,504	\$ 15,750,366	\$ 16,953,228	\$ 18,156,090	\$ 19,358,952	\$ 20,561,814	\$ 21,764,676	\$ 22,967,538	\$ 24,170,400	\$ 25,373,262	\$ 26,576,124	\$ 27,778,986	\$ 28,981,848	\$ 30,184,710	\$ 31,387,572	\$ 32,590,434	
Income Tax Expense	\$ 1,413,042	\$ 1,538,251	\$ 1,663,460	\$ 1,788,669	\$ 1,913,878	\$ 2,039,087	\$ 2,164,296	\$ 2,289,505	\$ 2,414,714	\$ 2,539,923	\$ 2,665,132	\$ 2,790,341	\$ 2,915,550	\$ 3,040,759	\$ 3,165,968	\$ 3,291,177	\$ 3,416,386	\$ 3,541,595	\$ 3,666,804	\$ 3,792,013	
Operating Income after Income Taxes	\$ 8,323,014	\$ 9,399,667	\$ 10,478,320	\$ 11,555,973	\$ 12,632,626	\$ 13,709,279	\$ 14,785,932	\$ 15,862,585	\$ 16,939,238	\$ 18,015,891	\$ 19,092,544	\$ 20,169,197	\$ 21,245,850	\$ 22,322,503	\$ 23,399,156	\$ 24,475,809	\$ 25,552,462	\$ 26,629,115	\$ 27,705,768	\$ 28,782,421	
Capital Investment	\$ 1,413,042	\$ 1,538,251	\$ 1,663,460	\$ 1,788,669	\$ 1,913,878	\$ 2,039,087	\$ 2,164,296	\$ 2,289,505	\$ 2,414,714	\$ 2,539,923	\$ 2,665,132	\$ 2,790,341	\$ 2,915,550	\$ 3,040,759	\$ 3,165,968	\$ 3,291,177	\$ 3,416,386	\$ 3,541,595	\$ 3,666,804	\$ 3,792,013	
Operating Income after Capital Investment	\$ 6,910,000	\$ 7,861,416	\$ 8,814,860	\$ 9,766,304	\$ 10,719,748	\$ 11,673,192	\$ 12,626,636	\$ 13,580,080	\$ 14,533,524	\$ 15,486,968	\$ 16,440,412	\$ 17,393,856	\$ 18,347,300	\$ 19,300,744	\$ 20,254,188	\$ 21,207,632	\$ 22,161,076	\$ 23,114,520	\$ 24,067,964	\$ 25,021,408	\$ 25,974,852
Rate Base	\$ 36,309,554	\$ 37,724,210	\$ 39,138,866	\$ 40,553,522	\$ 41,968,178	\$ 43,382,834	\$ 44,797,490	\$ 46,212,146	\$ 47,626,802	\$ 49,041,458	\$ 50,456,114	\$ 51,870,770	\$ 53,285,426	\$ 54,700,082	\$ 56,114,738	\$ 57,529,394	\$ 58,944,050	\$ 60,358,706	\$ 61,773,362	\$ 63,188,018	
Rate of Return	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	0.74%	

Table 1b
Calculation of Return on Rate Base

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Operating Income after Capital Investment	\$ 6,910,000	\$ 7,861,416	\$ 8,814,860	\$ 9,766,304	\$ 10,719,748	\$ 11,673,192	\$ 12,626,636	\$ 13,580,080	\$ 14,533,524	\$ 15,486,968	\$ 16,440,412	\$ 17,393,856	\$ 18,347,300	\$ 19,300,744	\$ 20,254,188	\$ 21,207,632	\$ 22,161,076	\$ 23,114,520	\$ 24,067,964	\$ 25,021,408
Rate Base	\$ 36,309,554	\$ 37,724,210	\$ 39,138,866	\$ 40,553,522	\$ 41,968,178	\$ 43,382,834	\$ 44,797,490	\$ 46,212,146	\$ 47,626,802	\$ 49,041,458	\$ 50,456,114	\$ 51,870,770	\$ 53,285,426	\$ 54,700,082	\$ 56,114,738	\$ 57,529,394	\$ 58,944,050	\$ 60,358,706	\$ 61,773,362	\$ 63,188,018
Rate of Return	0.20%	0.21%	0.22%	0.24%	0.25%	0.26%	0.27%	0.28%	0.29%	0.30%	0.31%	0.32%	0.33%	0.34%	0.35%	0.36%	0.37%	0.38%	0.39%	0.40%

Table 1c
Financial Indicators

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Operating Income after Capital Investment	\$ 6,910,000	\$ 7,861,416	\$ 8,814,860	\$ 9,766,304	\$ 10,719,748	\$ 11,673,192	\$ 12,626,636	\$ 13,580,080	\$ 14,533,524	\$ 15,486,968	\$ 16,440,412	\$ 17,393,856	\$ 18,347,300	\$ 19,300,744	\$ 20,254,188	\$ 21,207,632	\$ 22,161,076	\$ 23,114,520	\$ 24,067,964	\$ 25,021,408
Rate Base	\$ 36,309,554	\$ 37,724,210	\$ 39,138,866	\$ 40,553,522	\$ 41,968,178	\$ 43,382,834	\$ 44,797,490	\$ 46,212,146	\$ 47,626,802	\$ 49,041,458	\$ 50,456,114	\$ 51,870,770	\$ 53,285,426	\$ 54,700,082	\$ 56,114,738	\$ 57,529,394	\$ 58,944,050	\$ 60,358,706	\$ 61,773,362	\$ 63,188,018
Rate of Return	0.20%	0.21%	0.22%	0.24%	0.25%	0.26%	0.27%	0.28%	0.29%	0.30%	0.31%	0.32%	0.33%	0.34%	0.35%	0.36%	0.37%	0.38%	0.39%	0.40%

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2/21/2014
Prepared By: TDR

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Performance Metrics Capital 11-7-14/FSum
\$10 Million Capital

Table 2
Income Statement - Regulatee Water System - Option 2
Assumes the difference in the purchase price of \$100 million and the existing rate base is amortized over 30 years (included in acquisition adjustment)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
REVENUES																					
Charges from Current Services	\$ 20,450,935	\$ 22,024,415	\$ 23,615,143	\$ 25,212,553	\$ 26,848,201	\$ 28,522,591	\$ 30,243,531	\$ 32,011,157	\$ 33,825,919	\$ 35,697,459	\$ 37,625,317	\$ 39,609,154	\$ 41,648,628	\$ 43,743,401	\$ 45,894,143	\$ 48,100,525	\$ 50,362,317	\$ 52,679,281	\$ 55,051,187	\$ 57,477,715	\$ 60,058,537
Other Revenues	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284	482,284
TOTAL REVENUES	\$ 20,933,219	\$ 22,506,699	\$ 24,097,427	\$ 25,694,837	\$ 27,330,485	\$ 28,964,875	\$ 30,625,815	\$ 32,303,441	\$ 34,008,203	\$ 35,749,743	\$ 37,527,601	\$ 39,341,438	\$ 41,192,912	\$ 43,084,685	\$ 45,016,427	\$ 47,000,809	\$ 49,038,601	\$ 51,130,565	\$ 53,277,471	\$ 55,479,002	\$ 57,735,821
REVENUE REQUIREMENTS																					
Depreciation & Maintenance Expenses	\$ 12,172,896	\$ 12,004,924	\$ 11,835,951	\$ 11,667,078	\$ 11,498,205	\$ 11,329,332	\$ 11,160,459	\$ 10,991,586	\$ 10,822,713	\$ 10,653,840	\$ 10,484,967	\$ 10,316,094	\$ 10,147,221	\$ 9,978,348	\$ 9,809,475	\$ 9,640,602	\$ 9,471,729	\$ 9,302,856	\$ 9,133,983	\$ 8,965,110	\$ 8,796,237
Operating Expenses	2,382,291	2,468,250	2,554,209	2,640,168	2,726,127	2,812,086	2,898,045	2,983,999	3,069,958	3,155,917	3,241,876	3,327,835	3,413,794	3,500,753	3,586,712	3,672,671	3,758,630	3,844,589	3,930,548	4,016,507	4,102,466
Taxes Other Than Income	1,415,042	1,488,477	1,561,912	1,635,347	1,708,782	1,782,217	1,855,652	1,929,087	2,002,522	2,075,957	2,149,392	2,222,827	2,296,262	2,369,697	2,443,132	2,516,567	2,590,002	2,663,437	2,736,872	2,810,307	2,883,742
TOTAL REVENUE REQUIREMENTS	\$ 15,968,229	\$ 16,961,651	\$ 17,955,073	\$ 18,948,495	\$ 19,941,917	\$ 20,935,339	\$ 21,928,761	\$ 22,922,183	\$ 23,915,605	\$ 24,909,027	\$ 25,902,449	\$ 26,895,871	\$ 27,889,293	\$ 28,882,715	\$ 29,876,137	\$ 30,869,559	\$ 31,862,981	\$ 32,856,403	\$ 33,849,825	\$ 34,843,247	\$ 35,836,669
Operating Income before Income Taxes	\$ 5,065,090	\$ 5,545,028	\$ 6,024,966	\$ 6,504,904	\$ 6,984,842	\$ 7,464,780	\$ 7,944,718	\$ 8,424,656	\$ 8,904,594	\$ 9,384,532	\$ 9,864,470	\$ 10,344,408	\$ 10,824,346	\$ 11,304,284	\$ 11,784,222	\$ 12,264,160	\$ 12,744,098	\$ 13,224,036	\$ 13,703,974	\$ 14,183,912	\$ 14,663,850
Federal & State Income Taxes	1,945,811	2,085,312	2,224,813	2,364,314	2,503,815	2,643,316	2,782,817	2,922,318	3,061,819	3,201,320	3,340,821	3,480,322	3,619,823	3,759,324	3,898,825	4,038,326	4,177,827	4,317,328	4,456,829	4,596,330	4,735,831
OPERATING INCOME	\$ 3,119,279	\$ 3,459,716	\$ 3,800,153	\$ 4,140,590	\$ 4,480,027	\$ 4,819,464	\$ 5,158,901	\$ 5,498,338	\$ 5,837,775	\$ 6,177,212	\$ 6,516,649	\$ 6,856,086	\$ 7,195,523	\$ 7,534,960	\$ 7,874,397	\$ 8,213,834	\$ 8,553,271	\$ 8,892,708	\$ 9,232,145	\$ 9,571,582	\$ 9,911,019
State Bond	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000	38,200,000
NET OF YEAR	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279	\$ 38,238,279
RATE OF RETURN	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%
Financial Indicators																					
Target Operating Reserves	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Actual Operating Reserves	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%
Target Rate of Return	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%
Actual Rate of Return	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%

Table 2A
Calculation of Return on Rate Base

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Income	\$ 3,119,279	\$ 3,459,716	\$ 3,800,153	\$ 4,140,590	\$ 4,480,027	\$ 4,819,464	\$ 5,158,901	\$ 5,498,338	\$ 5,837,775	\$ 6,177,212	\$ 6,516,649	\$ 6,856,086	\$ 7,195,523	\$ 7,534,960	\$ 7,874,397	\$ 8,213,834	\$ 8,553,271	\$ 8,892,708	\$ 9,232,145	\$ 9,571,582
Capital Investment	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000
Capital Investment	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000	\$ 46,500,000
Return on Rate Base	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%
Target Rate of Return	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%
Actual Rate of Return	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%

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approximately million capital 11-77-1995sum
\$60 Million Capital

Table 4
Statement - Regulated Water System - Option 1
ASSUMES THAT THE PURCHASE PRICE IS NOT ALLOWED IN RATE BASE

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
REGULATED FUND BALANCE													
REVENUES													
Operating Revenue	\$ 18,153,789	\$ 18,688,283	\$ 19,222,777	\$ 19,757,271	\$ 20,291,765	\$ 20,826,259	\$ 21,360,753	\$ 21,895,247	\$ 22,429,741	\$ 22,964,235	\$ 23,498,729	\$ 24,033,223	\$ 24,567,717
Operating Expenses	\$ 447,723	\$ 482,284	\$ 516,845	\$ 551,406	\$ 585,967	\$ 620,528	\$ 655,089	\$ 689,650	\$ 724,211	\$ 758,772	\$ 793,333	\$ 827,894	\$ 862,455
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Operating Profit as % of Revenue	97.6%	97.0%	96.4%	95.8%	95.2%	94.6%	94.0%	93.4%	92.8%	92.2%	91.6%	91.0%	90.4%
Operating Profit as % of Total Revenue Requirements	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
REVENUE REQUIREMENTS													
Operating Expenses	\$ 447,723	\$ 482,284	\$ 516,845	\$ 551,406	\$ 585,967	\$ 620,528	\$ 655,089	\$ 689,650	\$ 724,211	\$ 758,772	\$ 793,333	\$ 827,894	\$ 862,455
Depreciation	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Interest	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Other	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
TOTAL REVENUE REQUIREMENTS	\$ 3,747,723	\$ 3,762,284	\$ 3,776,845	\$ 3,791,406	\$ 3,805,967	\$ 3,820,528	\$ 3,835,089	\$ 3,849,650	\$ 3,864,211	\$ 3,878,772	\$ 3,893,333	\$ 3,907,894	\$ 3,922,455
Operating Profit as % of Total Revenue Requirements	47.3%	48.3%	49.3%	50.3%	51.3%	52.3%	53.3%	54.3%	55.3%	56.3%	57.3%	58.3%	59.3%
OPERATING INCOME													
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Interest	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Other	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
TOTAL INCOME	\$ 15,506,066	\$ 16,005,999	\$ 16,505,932	\$ 17,005,865	\$ 17,505,798	\$ 18,005,731	\$ 18,505,664	\$ 19,005,597	\$ 19,505,530	\$ 20,005,463	\$ 20,505,396	\$ 21,005,329	\$ 21,505,262
Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
RATE OF RETURN													
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Operating Profit as % of Total Revenue Requirements	47.3%	48.3%	49.3%	50.3%	51.3%	52.3%	53.3%	54.3%	55.3%	56.3%	57.3%	58.3%	59.3%
FINANCIAL INDICATORS													
Target Operating Reserves	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Actual Operating Reserves	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Target Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
Actual Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%

Table 5
Statement - Regulated Water System - Option 2
ASSUMES THAT THE PURCHASE PRICE IS NOT ALLOWED IN RATE BASE

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
REGULATED FUND BALANCE													
REVENUES													
Operating Revenue	\$ 18,153,789	\$ 18,688,283	\$ 19,222,777	\$ 19,757,271	\$ 20,291,765	\$ 20,826,259	\$ 21,360,753	\$ 21,895,247	\$ 22,429,741	\$ 22,964,235	\$ 23,498,729	\$ 24,033,223	\$ 24,567,717
Operating Expenses	\$ 447,723	\$ 482,284	\$ 516,845	\$ 551,406	\$ 585,967	\$ 620,528	\$ 655,089	\$ 689,650	\$ 724,211	\$ 758,772	\$ 793,333	\$ 827,894	\$ 862,455
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Operating Profit as % of Revenue	97.6%	97.0%	96.4%	95.8%	95.2%	94.6%	94.0%	93.4%	92.8%	92.2%	91.6%	91.0%	90.4%
Operating Profit as % of Total Revenue Requirements	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
REVENUE REQUIREMENTS													
Operating Expenses	\$ 447,723	\$ 482,284	\$ 516,845	\$ 551,406	\$ 585,967	\$ 620,528	\$ 655,089	\$ 689,650	\$ 724,211	\$ 758,772	\$ 793,333	\$ 827,894	\$ 862,455
Depreciation	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Interest	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Other	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
TOTAL REVENUE REQUIREMENTS	\$ 3,747,723	\$ 3,762,284	\$ 3,776,845	\$ 3,791,406	\$ 3,805,967	\$ 3,820,528	\$ 3,835,089	\$ 3,849,650	\$ 3,864,211	\$ 3,878,772	\$ 3,893,333	\$ 3,907,894	\$ 3,922,455
Operating Profit as % of Total Revenue Requirements	47.3%	48.3%	49.3%	50.3%	51.3%	52.3%	53.3%	54.3%	55.3%	56.3%	57.3%	58.3%	59.3%
OPERATING INCOME													
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Interest	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
Other	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000
TOTAL INCOME	\$ 15,506,066	\$ 16,005,999	\$ 16,505,932	\$ 17,005,865	\$ 17,505,798	\$ 18,005,731	\$ 18,505,664	\$ 19,005,597	\$ 19,505,530	\$ 20,005,463	\$ 20,505,396	\$ 21,005,329	\$ 21,505,262
Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
RATE OF RETURN													
Operating Profit	\$ 17,706,066	\$ 18,205,999	\$ 18,705,932	\$ 19,205,865	\$ 19,705,798	\$ 20,205,731	\$ 20,705,664	\$ 21,205,597	\$ 21,705,530	\$ 22,205,463	\$ 22,705,396	\$ 23,205,329	\$ 23,705,262
Operating Profit as % of Total Revenue Requirements	47.3%	48.3%	49.3%	50.3%	51.3%	52.3%	53.3%	54.3%	55.3%	56.3%	57.3%	58.3%	59.3%
FINANCIAL INDICATORS													
Target Operating Reserves	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Actual Operating Reserves	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Target Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
Actual Rate of Return	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%

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Professional Services Contract 11-7-14P&G
550 Fulton Street

CITY00118181

Table 4		CITY-OWNED OPTION	
Tidebasket - Unregulated Water System - Option 4		2013	2014
REVENUES			
Charges from Current Services	\$ 447,725	\$ 482,294	\$ 482,294
Other Revenue	\$ -	\$ -	\$ -
TOTAL REVENUES	\$ 447,725	\$ 482,294	\$ 482,294
OPERATING EXPENSES			
Operating & Maintenance Expenses:	\$ 1,069,939	\$ 1,069,939	\$ 1,069,939
Debt Service Requirements:	\$ -	\$ -	\$ -
Other Expenses:	\$ -	\$ -	\$ -
TOTAL OPERATING EXPENSES	\$ 1,069,939	\$ 1,069,939	\$ 1,069,939
OPERATING SURPLUS (DEFICIT)	\$ -	\$ -	\$ -
FINANCIAL STATEMENTS			
Beginning Fund Balance	\$ 2,810,441	\$ 2,810,441	\$ 2,810,441
Operating Surplus (Deficit)	\$ -	\$ -	\$ -
Capital Contributions	\$ -	\$ -	\$ -
Other Additions	\$ -	\$ -	\$ -
Other Deductions	\$ -	\$ -	\$ -
Ending Fund Balance	\$ 2,810,441	\$ 2,810,441	\$ 2,810,441
PERFORMANCE RATIOS			
Operating Ratio	100.0%	100.0%	100.0%
Debt Service Coverage Ratio	1.00	1.00	1.00
Other Ratios	-	-	-

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Proforma: \$5 million capital 11-7-14P&W
\$50 Million Capital

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Performance: \$0 million capital 11-7-44PSum
\$00 Million Capital

Rate	4.38%	4.26%	4.14%	4.02%	3.90%	3.78%	3.66%	3.54%	3.42%
17.30	18.48	20.31	21.16	22.03	22.92	23.82	24.75	25.70	26.66
24.63	27.74	32.82	35.13	37.63	40.32	43.20	46.28	49.56	53.04
32.96	44.25	48.16	49.06	50.03	51.05	52.12	53.24	54.41	55.64
41.29	55.52	63.10	67.28	71.03	75.36	79.34	83.97	88.25	93.18
49.62	65.82	74.80	79.57	83.91	88.82	93.39	98.62	103.51	109.06
57.95	76.13	87.20	92.57	97.43	102.80	107.77	113.34	118.61	124.58
66.28	86.42	99.50	105.57	111.13	117.28	123.03	129.38	135.43	142.18
74.61	96.57	111.60	118.27	124.43	131.18	137.53	144.48	151.03	158.18
82.94	106.72	123.70	130.97	137.73	145.08	151.93	159.38	166.43	174.08
91.27	116.87	135.78	143.65	150.91	158.66	165.91	173.66	180.91	188.66
99.60	127.02	147.86	156.23	163.49	171.24	178.49	186.24	193.49	201.24
107.93	137.17	160.94	169.71	177.47	185.72	193.47	201.72	209.47	217.22
116.26	147.32	174.02	183.19	190.95	199.20	206.95	215.20	222.95	230.70
124.59	157.47	187.10	196.67	204.03	212.28	220.03	228.28	235.03	242.78
132.92	167.62	200.18	209.75	217.11	225.36	233.11	241.36	249.11	256.86
141.25	177.77	213.26	222.83	230.19	238.44	246.19	254.44	262.19	269.94
149.58	187.92	226.34	235.91	243.27	251.52	259.27	267.52	275.27	283.02
157.91	198.07	239.42	248.99	256.35	264.60	272.35	280.60	288.35	296.10
166.24	208.22	252.50	262.07	269.43	277.68	285.43	293.68	301.43	309.18
174.57	218.37	265.58	275.15	282.51	290.76	298.51	306.76	314.51	322.26
182.90	228.52	278.66	288.23	295.59	303.84	311.59	319.84	327.59	335.34
191.23	238.67	291.74	301.31	308.67	316.92	324.67	332.92	340.67	348.42
199.56	248.82	304.82	314.39	321.75	329.97	337.72	345.97	353.72	361.47
207.89	258.97	317.90	327.47	334.83	343.05	350.80	359.05	366.80	374.55
216.22	269.12	330.98	340.55	347.91	356.13	363.88	372.13	379.88	387.63
224.55	279.27	344.06	353.63	360.99	369.21	376.96	385.21	392.96	400.71
232.88	289.42	357.14	366.71	374.07	382.29	389.94	398.19	405.94	413.69
241.21	299.57	370.22	379.79	387.15	395.37	403.02	411.27	419.02	426.77
249.54	309.72	383.30	392.87	400.23	408.45	416.10	424.35	432.10	439.85
257.87	319.87	396.38	405.95	413.31	421.53	429.18	437.43	445.18	452.93
266.20	329.99	409.46	419.03	426.39	434.61	442.26	450.51	458.26	466.01
274.53	340.14	422.54	432.11	439.47	447.69	455.34	463.59	471.34	479.09
282.86	350.29	435.62	445.19	452.55	460.77	468.42	476.67	484.42	492.17
291.19	360.44	448.70	458.27	465.63	473.85	481.50	489.75	497.50	505.25
299.52	370.59	461.78	471.35	478.71	486.97	494.62	502.87	510.62	518.37
307.85	380.74	474.86	484.43	491.79	500.05	507.70	515.95	523.70	531.45
316.18	390.89	487.94	497.51	504.87	513.13	520.78	529.03	536.78	544.53
324.51	401.04	501.02	510.59	517.95	526.21	533.86	542.11	550.36	558.11
332.84	411.19	514.10	523.67	530.03	538.29	545.94	554.19	562.44	570.19
341.17	421.34	527.18	536.75	543.11	551.37	559.02	567.27	575.52	583.27
349.50	431.49	540.26	549.83	556.19	564.45	572.10	580.35	588.60	596.35
357.83	441.64	553.34	562.91	569.27	577.53	585.18	593.43	601.68	609.43
366.16	451.79	566.42	575.99	582.35	590.61	598.26	606.51	614.76	622.51
374.49	461.94	579.50	589.07	595.43	603.69	611.34	619.59	627.84	635.59
382.82	472.09	592.58	602.15	608.51	616.77	624.42	632.67	640.92	648.67
391.15	482.24	605.66	615.23	621.59	629.85	637.50	645.75	654.00	661.75
399.48	492.39	618.74	628.31	634.67	642.93	650.58	658.83	667.08	674.83
407.81	502.54	631.82	641.39	647.73	655.99	663.64	671.89	680.14	687.89
416.14	512.69	644.90	654.47	660.81	669.05	676.70	684.95	693.20	700.95
424.47	522.84	657.98	667.55	673.91	682.11	689.76	698.01	706.26	714.01
432.80	532.99	671.06	680.63	687.03	695.23	702.88	711.13	719.38	727.13
441.13	543.14	684.14	693.71	700.11	708.31	715.96	724.21	732.46	740.21
449.46	553.29	697.22	706.79	713.19	721.39	729.04	737.29	745.54	753.29
457.79	563.44	710.30	719.87	726.27	734.47	742.12	750.37	758.62	766.37
466.12	573.59	723.38	732.95	739.83	748.03	755.68	763.93	772.18	780.43
474.45	583.74	736.46	746.03	752.91	761.13	768.78	777.03	785.28	793.53
482.78	593.89	749.54	759.11	765.99	774.19	781.84	790.09	798.34	806.59
491.11	604.04	762.62	772.19	779.07	787.27	794.92	803.17	811.42	819.67
499.44	614.19	775.70	785.27	792.15	800.35	808.00	816.25	824.50	832.75
507.77	624.34	788.78	798.35	805.23	813.43	821.08	829.33	837.58	845.83
516.10	634.49	801.86	811.43	818.31	826.51	834.16	842.41	850.66	858.91
524.43	644.64	814.94	824.51	831.39	839.59	847.24	855.49	863.74	871.99
532.76	654.79	828.02	838.59	845.47	853.67	861.32	869.57	877.82	886.07
541.09	664.94	841.10	851.67	858.55	866.75	874.40	882.65	890.90	899.15
549.42	675.09	854.18	864.75	871.63	880.83	888.48	896.73	905.98	914.23
557.75	685.24	867.26	877.83	884.71	893.91	901.56	909.81	918.06	926.31
566.08	695.39	880.34	890.91	897.79	907.01	914.66	922.91	931.16	939.41
574.41	705.54	893.42	903.99	910.87	919.99	927.64	935.89	944.14	952.39
582.74	715.69	906.50	917.07	923.95	933.17	940.80	949.05	957.30	965.55
591.07	725.84	919.58	930.15	937.03	946.25	953.80	962.05	970.30	978.55
599.40	735.99	932.66	943.23	950.11	959.33	966.96	975.21	983.46	991.71
607.73	746.14	945.74	956.31	962.99	972.31	980.94	989.19	997.44	1005.69
616.06	756.29	958.82	969.39	976.27	985.59	993.22	1001.47	1009.72	1017.97
624.39	766.44	971.90	982.47	989.35	998.67	1006.30	1014.55	1022.80	1031.05
632.72	776.59	984.98	995.55	1002.43	1011.75	1019.38	1027.63	1035.88	1044.13
641.05	786.74	998.06	1008.63	1015.51	1024.83	1032.46	1040.71	1048.96	1057.21
649.38	796.89	1011.14	1021.71	1028.39	1037.71	1045.34	1053.59	1061.84	1070.09
657.71	807.04	1024.22	1034.79	1041.27	1050.59	1058.22	1066.47	1074.72	1082.97
666.04	817.19	1037.30	1047.87	1054.15	1063.51	1071.14	1079.39	1087.64	1095.89
674.37	827.34	1050.38	1060.95	1067.03	1076.63	1084.26	1092.51	1100.76	1109.01
682.70	837.49	1063.46	1074.03	1080.01	1089.75	1097.38	1105.63	1113.88	1122.13
691.03	847.64	1076.54	1087.11	1092.99	1102.81	1110.44	1118.69	1126.94	1135.19
699.36	857.79	1089.62	1100.19	1105.97	1115.93	1123.56	1131.81	1140.06	1148.31
707.69	867.94	1102.70	1113.27	1119.05	1128.79	1136.42	1144.67	1152.92	1161.17
716.02	878.09	1115.78	1126.35	1131.93	1141.81	1149.05	1157.30	1165.55	1173.80
724.35	888.24	1128.86	1139.43	1145.01	1154.95	1162.68	1170.93	1179.18	1187.43
732.68	898.39	1141.94	1152.51	1158.11	1168.09	1175.32	1183.57	1191.82	1200.07
741.01	908.54	1155.02	1165.59	1171.21	1181.23	1188.56	1196.81	1205.06	1213.31
749.34	918.69	1168.10	1178.67	1184.31	1194.35	1201.68	1210.93	1219.18	1227.43
757.67	928.84	1181.18	1191.75	1197.43	1207.47	1214.80	1223.05	1231.30	1239.55
766.00	938.99	1194.26	1204.83	1210.55	1220.59	1227.92	1236.17	1244.42	1252.67
774.33	949.14	1207.34	1217.91	1223.67	1233.71	1241.04	1249.29	1257.54	1265.79
782.66	959.29	1220.42	1230.99	1236.79	1246.85	1254.18	1262.43	1270.68	1278.93
791.00	969.44	1233.50	1244.07	1248.61	1258.89	1266.22	1274.47	1282.72	1290.97
799.33	979.59	1246.58	1257.15	1261.31	1271.43	1278.76	1286.91	1295.16	1303.41
807.66	989.74	1259.66	1270.23	1					

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problem-90_inclm capital 17-7-41PSum
S50_MJRCor_CapIncl

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Performance 80 million (actual) 11-7-14FSum
\$80 MILLION Capital

Water Rate Structure - Option 4	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
Annual Charge	17,200	24,653	32,106	39,559	47,012	54,465	61,918	69,371	76,824	84,277	91,730
Monthly Water	1,433	2,054	2,676	3,297	3,918	4,539	5,160	5,781	6,402	7,023	7,644
1-1/2"	118,911	168,334	217,757	267,180	316,603	366,026	415,449	464,872	514,295	563,718	613,141
Business	17,200	24,653	32,106	39,559	47,012	54,465	61,918	69,371	76,824	84,277	91,730
3/4"	24,653	32,106	39,559	47,012	54,465	61,918	69,371	76,824	84,277	91,730	99,183
1-1/2"	32,106	39,559	47,012	54,465	61,918	69,371	76,824	84,277	91,730	99,183	106,636
1"	39,559	47,012	54,465	61,918	69,371	76,824	84,277	91,730	99,183	106,636	114,089
2"	47,012	54,465	61,918	69,371	76,824	84,277	91,730	99,183	106,636	114,089	121,542
3"	54,465	61,918	69,371	76,824	84,277	91,730	99,183	106,636	114,089	121,542	129,000
4"	61,918	69,371	76,824	84,277	91,730	99,183	106,636	114,089	121,542	129,000	136,453
5"	69,371	76,824	84,277	91,730	99,183	106,636	114,089	121,542	129,000	136,453	143,906
6"	76,824	84,277	91,730	99,183	106,636	114,089	121,542	129,000	136,453	143,906	151,359
7"	84,277	91,730	99,183	106,636	114,089	121,542	129,000	136,453	143,906	151,359	158,812
8"	91,730	99,183	106,636	114,089	121,542	129,000	136,453	143,906	151,359	158,812	166,265
9"	99,183	106,636	114,089	121,542	129,000	136,453	143,906	151,359	158,812	166,265	173,718
10"	106,636	114,089	121,542	129,000	136,453	143,906	151,359	158,812	166,265	173,718	181,171
11"	114,089	121,542	129,000	136,453	143,906	151,359	158,812	166,265	173,718	181,171	188,624
12"	121,542	129,000	136,453	143,906	151,359	158,812	166,265	173,718	181,171	188,624	196,077
13"	129,000	136,453	143,906	151,359	158,812	166,265	173,718	181,171	188,624	196,077	203,530
14"	136,453	143,906	151,359	158,812	166,265	173,718	181,171	188,624	196,077	203,530	210,983
15"	143,906	151,359	158,812	166,265	173,718	181,171	188,624	196,077	203,530	210,983	218,436
16"	151,359	158,812	166,265	173,718	181,171	188,624	196,077	203,530	210,983	218,436	225,889
17"	158,812	166,265	173,718	181,171	188,624	196,077	203,530	210,983	218,436	225,889	233,342
18"	166,265	173,718	181,171	188,624	196,077	203,530	210,983	218,436	225,889	233,342	240,795
19"	173,718	181,171	188,624	196,077	203,530	210,983	218,436	225,889	233,342	240,795	248,248
20"	181,171	188,624	196,077	203,530	210,983	218,436	225,889	233,342	240,795	248,248	255,701
21"	188,624	196,077	203,530	210,983	218,436	225,889	233,342	240,795	248,248	255,701	263,154
22"	196,077	203,530	210,983	218,436	225,889	233,342	240,795	248,248	255,701	263,154	270,607
23"	203,530	210,983	218,436	225,889	233,342	240,795	248,248	255,701	263,154	270,607	278,060
24"	210,983	218,436	225,889	233,342	240,795	248,248	255,701	263,154	270,607	278,060	285,513
25"	218,436	225,889	233,342	240,795	248,248	255,701	263,154	270,607	278,060	285,513	292,966
26"	225,889	233,342	240,795	248,248	255,701	263,154	270,607	278,060	285,513	292,966	300,419
27"	233,342	240,795	248,248	255,701	263,154	270,607	278,060	285,513	292,966	300,419	307,872
28"	240,795	248,248	255,701	263,154	270,607	278,060	285,513	292,966	300,419	307,872	315,325
29"	248,248	255,701	263,154	270,607	278,060	285,513	292,966	300,419	307,872	315,325	322,778
30"	255,701	263,154	270,607	278,060	285,513	292,966	300,419	307,872	315,325	322,778	330,231
31"	263,154	270,607	278,060	285,513	292,966	300,419	307,872	315,325	322,778	330,231	337,684
32"	270,607	278,060	285,513	292,966	300,419	307,872	315,325	322,778	330,231	337,684	345,137
33"	278,060	285,513	292,966	300,419	307,872	315,325	322,778	330,231	337,684	345,137	352,590
34"	285,513	292,966	300,419	307,872	315,325	322,778	330,231	337,684	345,137	352,590	360,043
35"	292,966	300,419	307,872	315,325	322,778	330,231	337,684	345,137	352,590	360,043	367,496
36"	300,419	307,872	315,325	322,778	330,231	337,684	345,137	352,590	360,043	367,496	374,949
37"	307,872	315,325	322,778	330,231	337,684	345,137	352,590	360,043	367,496	374,949	382,402
38"	315,325	322,778	330,231	337,684	345,137	352,590	360,043	367,496	374,949	382,402	389,855
39"	322,778	330,231	337,684	345,137	352,590	360,043	367,496	374,949	382,402	389,855	397,308
40"	330,231	337,684	345,137	352,590	360,043	367,496	374,949	382,402	389,855	397,308	404,761
41"	337,684	345,137	352,590	360,043	367,496	374,949	382,402	389,855	397,308	404,761	412,214
42"	345,137	352,590	360,043	367,496	374,949	382,402	389,855	397,308	404,761	412,214	419,667
43"	352,590	360,043	367,496	374,949	382,402	389,855	397,308	404,761	412,214	419,667	427,120
44"	360,043	367,496	374,949	382,402	389,855	397,308	404,761	412,214	419,667	427,120	434,573
45"	367,496	374,949	382,402	389,855	397,308	404,761	412,214	419,667	427,120	434,573	442,026
46"	374,949	382,402	389,855	397,308	404,761	412,214	419,667	427,120	434,573	442,026	449,479
47"	382,402	389,855	397,308	404,761	412,214	419,667	427,120	434,573	442,026	449,479	456,932
48"	389,855	397,308	404,761	412,214	419,667	427,120	434,573	442,026	449,479	456,932	464,385
49"	397,308	404,761	412,214	419,667	427,120	434,573	442,026	449,479	456,932	464,385	471,838
50"	404,761	412,214	419,667	427,120	434,573	442,026	449,479	456,932	464,385	471,838	479,291
51"	412,214	419,667	427,120	434,573	442,026	449,479	456,932	464,385	471,838	479,291	486,744
52"	419,667	427,120	434,573	442,026	449,479	456,932	464,385	471,838	479,291	486,744	494,197
53"	427,120	434,573	442,026	449,479	456,932	464,385	471,838	479,291	486,744	494,197	501,650
54"	434,573	442,026	449,479	456,932	464,385	471,838	479,291	486,744	494,197	501,650	509,103
55"	442,026	449,479	456,932	464,385	471,838	479,291	486,744	494,197	501,650	509,103	516,556
56"	449,479	456,932	464,385	471,838	479,291	486,744	494,197	501,650	509,103	516,556	524,009
57"	456,932	464,385	471,838	479,291	486,744	494,197	501,650	509,103	516,556	524,009	531,462
58"	464,385	471,838	479,291	486,744	494,197	501,650	509,103	516,556	524,009	531,462	538,915
59"	471,838	479,291	486,744	494,197	501,650	509,103	516,556	524,009	531,462	538,915	546,368
60"	479,291	486,744	494,197	501,650	509,103	516,556	524,009	531,462	538,915	546,368	553,821
61"	486,744	494,197	501,650	509,103	516,556	524,009	531,462	538,915	546,368	553,821	561,274
62"	494,197	501,650	509,103	516,556	524,009	531,462	538,915	546,368	553,821	561,274	568,727
63"	501,650	509,103	516,556	524,009	531,462	538,915	546,368	553,821	561,274	568,727	576,180
64"	509,103	516,556	524,009	531,462	538,915	546,368	553,821	561,274	568,727	576,180	583,633
65"	516,556	524,009	531,462	538,915	546,368	553,821	561,274	568,727	576,180	583,633	591,086
66"	524,009	531,462	538,915	546,368	553,821	561,274	568,727	576,180	583,633	591,086	598,539
67"	531,462	538,915	546,368	553,821	561,274	568,727	576,180	583,633	591,086	598,539	605,992
68"	538,915	546,368	553,821	561,274	568,727	576,180	583,633	591,086	598,539	605,992	613,445
69"	546,368	553,821	561,274	568,727	576,180	583,633	591,086	598,539	605,992	613,445	620,898
70"	553,821	561,274	568,727	576,180	583,633	591,086	598,539	605,992	613,445	620,898	628,351
71"	561,274	568,727	576,180	583,633	591,086	598,539	605,992	613,445	620,898	628,351	635,804
72"	568,727	576,180	583,633	591,086	598,539	605,992	613,445	620,898	628,351		

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Performance million capital 11-22-14
\$80 Million Capital

Table 9
Schedule Bill Comparison

Item	2015 Rate			2016 Rate			2017 Rate			2018 Rate		
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Residential 5/8" Meter	19	47.28	56.22	51.95	61.04	71.70	57.93	67.02	77.67	63.83	72.92	83.56
	50	117.45	157.08	125.89	172.21	211.84	137.45	193.77	250.10	157.45	213.77	270.10
	100	217.60	292.71	324.86	420.07	515.48	277.60	373.01	468.42	325.19	420.60	515.48
Business - 1" meter	45	80.97	100.04	124.45	154.05	183.65	104.94	134.54	164.14	104.94	134.54	164.14
	50	129.44	167.57	213.22	272.44	331.66	157.04	206.26	254.88	157.04	206.26	254.88
	75	183.52	254.33	334.55	424.44	514.35	211.72	282.53	353.34	211.72	282.53	353.34
Public Authority - 2" meter	400	921.11	1,205.05	1,584.17	2,067.40	2,550.63	1,024.02	1,307.25	1,590.48	1,024.02	1,307.25	1,590.48
	500	1,121.41	1,509.48	1,992.55	2,575.78	3,151.91	1,231.41	1,618.48	2,035.61	1,231.41	1,618.48	2,035.61
	650	1,421.86	1,914.44	2,524.84	3,232.89	3,941.34	1,531.86	2,020.31	2,528.76	1,531.86	2,020.31	2,528.76
Infiltration - 1" meter	400	645.45	837.15	1,028.85	1,220.55	1,412.25	645.45	837.15	1,028.85	645.45	837.15	1,028.85
	500	1,040.04	1,324.30	1,608.56	2,092.82	2,577.18	1,040.04	1,324.30	1,608.56	1,040.04	1,324.30	1,608.56
	650	1,341.24	1,747.53	2,153.82	2,747.04	3,340.56	1,341.24	1,747.04	2,153.82	1,341.24	1,747.04	2,153.82

Table 10
Increase / Decrease in Sample Bills

Item	2015 Rate			2016 Rate			2017 Rate			2018 Rate		
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Residential 5/8" Meter	16	12.88	2.96	2.52	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
	50	42.54	0.20	3.24	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21
	100	75.11	17.20	15.27	10.23	10.23	10.23	10.23	10.23	10.23	10.23	10.23
Business - 1" meter	25	28.45	7.09	6.27	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19
	50	48.10	11.26	9.78	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54
	75	55.41	15.23	13.20	8.56	8.56	8.56	8.56	8.56	8.56	8.56	8.56
Public Authority - 2" meter	400	277.04	78.64	64.63	43.23	43.23	43.23	43.23	43.23	43.23	43.23	43.23
	500	297.08	98.68	78.67	52.70	52.70	52.70	52.70	52.70	52.70	52.70	52.70
	650	400.78	119.78	99.75	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22
Infiltration - 1" meter	400	205.11	65.67	55.95	38.44	38.44	38.44	38.44	38.44	38.44	38.44	38.44
	500	222.15	78.23	67.50	44.10	44.10	44.10	44.10	44.10	44.10	44.10	44.10
	650	422.55	108.30	94.35	61.38	61.38	61.38	61.38	61.38	61.38	61.38	61.38

Table 11
Capital Improvements Project

Project Name	Total Project Cost	Funding									
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capital Improvements	\$ 80,000,000	\$ 1,150,000	\$ 8,300,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000	\$ 6,600,000
City Purchase Price	\$ 26,000,000										
Private Purchase	\$ 100,000,000										

Project Name	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Rate	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Power (Fuel)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Real Estate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Income Tax	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Table 8
Sample Bill Comparison, continued

2021 Year	2020 Year			2019 Year			2018 Year			2017 Year			2016 Year			2015 Year							
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3					
\$ 57.20	\$ 47.54	\$ 47.20	\$ 37.53	\$ 59.05	\$ 49.45	\$ 49.12	\$ 37.53	\$ 60.94	\$ 51.41	\$ 51.09	\$ 37.53	\$ 62.87	\$ 54.40	\$ 53.89	\$ 37.53	\$ 64.85	\$ 55.45	\$ 55.19	\$ 37.53	\$ 66.87	\$ 57.44	\$ 57.21	\$ 37.53
\$ 67.80	\$ 73.04	\$ 72.53	\$ 57.26	\$ 80.73	\$ 75.98	\$ 75.46	\$ 57.26	\$ 82.63	\$ 73.10	\$ 72.58	\$ 57.26	\$ 84.50	\$ 75.98	\$ 75.46	\$ 57.26	\$ 86.37	\$ 77.93	\$ 77.41	\$ 57.26	\$ 88.24	\$ 79.41	\$ 79.18	\$ 57.26
\$ 178.95	\$ 146.26	\$ 146.26	\$ 117.42	\$ 183.77	\$ 153.33	\$ 154.54	\$ 117.42	\$ 185.62	\$ 155.76	\$ 156.97	\$ 117.42	\$ 187.95	\$ 158.00	\$ 159.21	\$ 117.42	\$ 190.24	\$ 160.23	\$ 161.44	\$ 117.42	\$ 192.53	\$ 162.63	\$ 163.84	\$ 117.42
\$ 253.41	\$ 271.10	\$ 271.16	\$ 217.60	\$ 344.18	\$ 308.25	\$ 293.62	\$ 217.60	\$ 355.80	\$ 319.87	\$ 305.15	\$ 217.60	\$ 368.48	\$ 332.75	\$ 317.90	\$ 217.60	\$ 381.16	\$ 345.01	\$ 330.26	\$ 217.60	\$ 393.85	\$ 357.78	\$ 355.51	\$ 217.60
\$ 136.83	\$ 116.60	\$ 116.00	\$ 89.37	\$ 141.25	\$ 118.26	\$ 117.26	\$ 89.37	\$ 145.88	\$ 122.06	\$ 122.27	\$ 89.37	\$ 150.51	\$ 128.85	\$ 127.87	\$ 89.37	\$ 155.14	\$ 137.71	\$ 136.73	\$ 89.37	\$ 160.37	\$ 146.57	\$ 145.59	\$ 89.37
\$ 290.29	\$ 341.33	\$ 338.94	\$ 185.59	\$ 393.76	\$ 351.05	\$ 340.87	\$ 185.59	\$ 406.38	\$ 369.07	\$ 368.31	\$ 185.59	\$ 418.90	\$ 381.10	\$ 380.34	\$ 185.59	\$ 431.42	\$ 395.81	\$ 395.25	\$ 185.59	\$ 443.94	\$ 408.54	\$ 407.98	\$ 185.59
\$ 1,471.54	\$ 1,472.96	\$ 1,472.96	\$ 821.11	\$ 1,485.84	\$ 1,482.17	\$ 1,482.01	\$ 821.11	\$ 1,499.72	\$ 1,496.05	\$ 1,495.82	\$ 821.11	\$ 1,513.64	\$ 1,510.00	\$ 1,509.77	\$ 821.11	\$ 1,527.56	\$ 1,523.93	\$ 1,523.70	\$ 821.11	\$ 1,541.48	\$ 1,537.85	\$ 1,537.62	\$ 821.11
\$ 1,718.24	\$ 1,468.00	\$ 1,416.02	\$ 1,021.41	\$ 1,773.75	\$ 1,465.51	\$ 1,413.57	\$ 1,021.41	\$ 1,829.26	\$ 1,468.00	\$ 1,416.02	\$ 1,021.41	\$ 1,884.77	\$ 1,470.50	\$ 1,418.54	\$ 1,021.41	\$ 1,940.28	\$ 1,473.00	\$ 1,420.52	\$ 1,021.41	\$ 1,995.79	\$ 1,476.00	\$ 1,422.50	\$ 1,021.41
\$ 2,786.59	\$ 1,810.53	\$ 1,797.84	\$ 1,421.86	\$ 3,248.88	\$ 1,863.00	\$ 1,850.82	\$ 1,421.86	\$ 3,714.17	\$ 1,904.26	\$ 1,892.08	\$ 1,421.86	\$ 4,179.46	\$ 1,944.45	\$ 1,932.27	\$ 1,421.86	\$ 4,654.75	\$ 1,984.64	\$ 1,972.46	\$ 1,421.86	\$ 5,130.04	\$ 2,024.83	\$ 1,990.29	\$ 1,421.86
\$ 1,207.81	\$ 1,070.90	\$ 1,062.00	\$ 846.46	\$ 1,328.42	\$ 1,113.28	\$ 1,105.23	\$ 846.46	\$ 1,453.34	\$ 1,237.41	\$ 1,229.36	\$ 846.46	\$ 1,578.26	\$ 1,362.29	\$ 1,354.24	\$ 846.46	\$ 1,703.18	\$ 1,487.22	\$ 1,479.17	\$ 846.46	\$ 1,828.10	\$ 1,612.14	\$ 1,604.07	\$ 846.46
\$ 1,584.71	\$ 1,362.57	\$ 1,316.88	\$ 1,040.79	\$ 1,848.24	\$ 1,372.71	\$ 1,320.48	\$ 1,040.79	\$ 1,973.16	\$ 1,415.25	\$ 1,362.57	\$ 1,040.79	\$ 2,108.08	\$ 1,458.22	\$ 1,397.26	\$ 1,040.79	\$ 2,232.99	\$ 1,497.20	\$ 1,445.24	\$ 1,040.79	\$ 2,357.91	\$ 1,536.16	\$ 1,483.21	\$ 1,040.79
\$ 2,056.07	\$ 1,702.97	\$ 1,686.00	\$ 1,341.24	\$ 2,471.46	\$ 1,776.71	\$ 1,764.62	\$ 1,341.24	\$ 2,646.38	\$ 1,819.70	\$ 1,807.61	\$ 1,341.24	\$ 2,821.30	\$ 1,862.76	\$ 1,850.67	\$ 1,341.24	\$ 2,996.22	\$ 1,907.81	\$ 1,895.72	\$ 1,341.24	\$ 3,171.14	\$ 2,000.90	\$ 1,988.85	\$ 1,341.24

Table 10
Increase / (Decrease) in Sample Bills, continued

2021 Year	2020 Year			2019 Year			2018 Year			2017 Year			2016 Year			2015 Year							
	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3					
\$ 1.81	\$ 1.67	\$ 1.67	\$ -	\$ 1.85	\$ 1.81	\$ 1.82	\$ -	\$ 1.80	\$ 1.84	\$ 1.86	\$ -	\$ 1.93	\$ 2.00	\$ 2.00	\$ -	\$ 1.89	\$ 2.04	\$ 2.04	\$ -	\$ 2.00	\$ 2.00	\$ -	
\$ 2.78	\$ 2.88	\$ 2.88	\$ -	\$ 2.84	\$ 2.84	\$ 2.84	\$ -	\$ 2.80	\$ 2.80	\$ 2.81	\$ -	\$ 2.87	\$ 2.87	\$ 2.87	\$ -	\$ 2.87	\$ 2.87	\$ 2.87	\$ -	\$ 2.87	\$ 2.87	\$ -	
\$ 5.83	\$ 5.89	\$ 5.90	\$ -	\$ 5.81	\$ 6.02	\$ 6.03	\$ -	\$ 5.85	\$ 6.00	\$ 6.01	\$ -	\$ 5.81	\$ 6.05	\$ 6.05	\$ -	\$ 5.81	\$ 6.05	\$ 6.05	\$ -	\$ 6.05	\$ 6.05	\$ -	
\$ 12.53	\$ 13.91	\$ 13.92	\$ -	\$ 10.27	\$ 11.03	\$ 11.17	\$ -	\$ 11.04	\$ 11.40	\$ 11.41	\$ -	\$ 11.27	\$ 11.65	\$ 11.66	\$ -	\$ 11.53	\$ 11.81	\$ 11.82	\$ -	\$ 11.80	\$ 11.80	\$ -	
\$ 4.32	\$ 4.48	\$ 4.49	\$ -	\$ 4.42	\$ 4.58	\$ 4.59	\$ -	\$ 4.51	\$ 4.58	\$ 4.59	\$ -	\$ 4.58	\$ 4.79	\$ 4.79	\$ -	\$ 4.74	\$ 4.85	\$ 4.85	\$ -	\$ 4.85	\$ 4.85	\$ -	
\$ 9.77	\$ 9.50	\$ 9.51	\$ -	\$ 9.28	\$ 9.71	\$ 9.72	\$ -	\$ 9.60	\$ 9.59	\$ 9.59	\$ -	\$ 9.82	\$ 9.85	\$ 9.85	\$ -	\$ 9.85	\$ 9.85	\$ 9.85	\$ -	\$ 9.85	\$ 9.85	\$ -	
\$ 44.57	\$ 46.16	\$ 46.24	\$ -	\$ 45.50	\$ 47.21	\$ 47.26	\$ -	\$ 46.55	\$ 48.25	\$ 48.31	\$ -	\$ 47.72	\$ 49.42	\$ 49.43	\$ -	\$ 48.92	\$ 50.42	\$ 50.47	\$ -	\$ 49.95	\$ 51.54	\$ 51.59	\$ -
\$ 64.25	\$ 66.25	\$ 66.30	\$ -	\$ 65.51	\$ 67.47	\$ 67.54	\$ -	\$ 64.73	\$ 66.68	\$ 66.74	\$ -	\$ 65.90	\$ 67.85	\$ 67.91	\$ -	\$ 65.16	\$ 67.11	\$ 67.16	\$ -	\$ 66.42	\$ 68.37	\$ 68.42	\$ -
\$ 69.93	\$ 71.29	\$ 71.38	\$ -	\$ 70.38	\$ 72.07	\$ 72.05	\$ -	\$ 70.61	\$ 72.48	\$ 72.57	\$ -	\$ 71.87	\$ 73.74	\$ 73.83	\$ -	\$ 71.57	\$ 73.43	\$ 73.51	\$ -	\$ 72.11	\$ 73.96	\$ 74.04	\$ -
\$ 40.67	\$ 42.14	\$ 42.18	\$ -	\$ 41.61	\$ 43.00	\$ 43.13	\$ -	\$ 42.57	\$ 44.00	\$ 44.08	\$ -	\$ 43.55	\$ 45.01	\$ 45.06	\$ -	\$ 44.53	\$ 46.00	\$ 46.05	\$ -	\$ 45.51	\$ 47.00	\$ 47.05	\$ -
\$ 55.26	\$ 56.19	\$ 56.25	\$ -	\$ 54.92	\$ 56.74	\$ 56.82	\$ -	\$ 54.71	\$ 56.52	\$ 56.59	\$ -	\$ 55.49	\$ 57.30	\$ 57.35	\$ -	\$ 55.27	\$ 57.08	\$ 57.13	\$ -	\$ 56.05	\$ 57.84	\$ 57.89	\$ -
\$ 54.90	\$ 57.25	\$ 57.23	\$ -	\$ 58.40	\$ 60.74	\$ 60.82	\$ -	\$ 58.19	\$ 60.53	\$ 60.61	\$ -	\$ 58.98	\$ 61.32	\$ 61.39	\$ -	\$ 59.77	\$ 62.11	\$ 62.18	\$ -	\$ 60.56	\$ 63.00	\$ 63.07	\$ -

Table 1
Water Customer and Service Demand Summary
Source: Budget Customer Counts - MW-01 8008-519 07

NUMBER OF WATER CONNECTIONS

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Measured Water:																
Residential	14,462	14,807	14,793	14,891	15,000	15,200	15,352	15,506	15,661	15,817	15,971	16,126	16,281	16,436	16,591	
5/8"	322	365	328	391	385	348	348	348	348	348	348	348	348	348	348	348
3/4"	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
1"	90	10	40	10	10	11	11	11	11	11	11	11	11	11	11	11
1-1/2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Total	14,884	15,033	15,183	15,333	15,488	15,643	15,800	15,958	16,117	16,276	16,436	16,595	16,754	16,913	17,072	
Business:																
5/8"	1,691	1,705	1,720	1,735	1,750	1,777	1,795	1,813	1,831	1,849	1,867	1,885	1,903	1,921	1,939	
3/4"	605	605	605	605	605	605	605	605	605	605	605	605	605	605	605	
1-1/2"	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	
2"	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	
3"	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
4"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
6"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
8"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
10"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Business Total	3,514	3,529	3,544	3,559	3,574	3,589	3,604	3,619	3,634	3,649	3,664	3,679	3,694	3,709	3,724	
Industrial:																
5/8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1-1/2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Industrial Total	-															
Public Authority:																
5/8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-1/2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Public Authority Total	0															
Private Fire Protection Service:																
5/8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-1/2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Private Fire Protection Service Total	0															
Interdepartmental:																
5/8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-1/2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interdepartmental Total	0															
Instrumented Total:																
5/8"	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	
3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-1/2"	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	
2"	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	
3"	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
4"	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
6"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Instrumented Total	307															
Unmetered Total:																
5/8"	14,148	14,502	14,473	14,580	14,783	14,935	15,087	15,240	15,393	15,546	15,699	15,852	16,005	16,158	16,311	
3/4"	322	365	328	391	385	348	348	348	348	348	348	348	348	348	348	
1-1/2"	90	10	40	10	10	11	11	11	11	11	11	11	11	11	11	
2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unmetered Total	14,560	14,917	14,881	14,988	15,191	15,343	15,495	15,648	15,801	15,954	16,107	16,260	16,413	16,566	16,719	
Total Connections:	33,958	34,479	34,610	34,842	35,072	35,302	35,532	35,762	36,000	36,238	36,476	36,714	36,952	37,190	37,428	

Table 4
 Summary of Major Size and Construction - Other 4

Category	Item	Quantity	Unit	Rate	Total	Other	Total
Major Water Revenue	Water	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Sanitary	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Public Agency	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Private Utility	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Industrial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Commercial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Residential	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Unmetered Water	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Water	1,000,000	Gal	0.000000	0.00	0.00	0.00
Major Sewer Revenue	Sewer	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Sanitary	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Public Agency	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Private Utility	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Industrial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Commercial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Residential	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Unmetered Sewer	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Sewer	1,000,000	Gal	0.000000	0.00	0.00	0.00
Major Storm Revenue	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Sanitary	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Public Agency	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Private Utility	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Industrial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Commercial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Residential	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Unmetered Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
Major Other Revenue	Other	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Sanitary	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Storm	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Public Agency	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Private Utility	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Industrial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Commercial	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Residential	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Unmetered Other	1,000,000	Gal	0.000000	0.00	0.00	0.00
	Other	1,000,000	Gal	0.000000	0.00	0.00	0.00

Table 3
Operations & Maintenance Expenses - City Ownership

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees	\$ 1,587,920	\$ 1,766,664	\$ 1,919,593	\$ 1,928,734	\$ 2,044,458	\$ 2,167,126	\$ 2,297,154	\$ 2,434,983	\$ 2,581,082	\$ 2,735,947	\$ 2,900,103	\$ 3,074,110	\$ 3,256,556
Employee Pensions & Benefits	\$ 1,014,131	\$ 1,006,457	\$ 1,018,954	\$ 1,080,091	\$ 1,144,897	\$ 1,213,591	\$ 1,286,408	\$ 1,363,590	\$ 1,446,493	\$ 1,532,136	\$ 1,621,058	\$ 1,712,601	\$ 1,807,279
Purchased Power	\$ 1,292,803	\$ 1,371,266	\$ 1,426,117	\$ 1,463,162	\$ 1,542,468	\$ 1,604,188	\$ 1,668,355	\$ 1,735,089	\$ 1,804,493	\$ 1,876,673	\$ 1,951,739	\$ 2,029,809	\$ 2,111,001
Chemicals	\$ 99,336	\$ 101,478	\$ 110,612	\$ 120,567	\$ 131,418	\$ 143,246	\$ 156,138	\$ 170,190	\$ 185,508	\$ 202,203	\$ 220,402	\$ 240,238	\$ 261,859
Materials & Supplies	\$ 54,940	\$ 106,887	\$ 50,000	\$ 52,000	\$ 54,080	\$ 56,243	\$ 58,493	\$ 60,853	\$ 63,296	\$ 65,797	\$ 68,426	\$ 71,166	\$ 74,012
Contractual Services	\$ 2,531,505	\$ 2,638,411	\$ 2,654,785	\$ 2,891,443	\$ 2,718,357	\$ 2,745,541	\$ 2,772,986	\$ 2,800,726	\$ 2,828,733	\$ 2,857,021	\$ 2,885,591	\$ 2,914,447	\$ 2,943,591
Rent	\$ 1,400	\$ 1,200	\$ 1,236	\$ 1,273	\$ 1,311	\$ 1,351	\$ 1,391	\$ 1,433	\$ 1,476	\$ 1,520	\$ 1,566	\$ 1,613	\$ 1,661
Transportation Expense	\$ 214,284	\$ 216,802	\$ 218,768	\$ 220,956	\$ 223,165	\$ 225,397	\$ 227,651	\$ 229,927	\$ 232,227	\$ 234,549	\$ 236,894	\$ 239,263	\$ 241,656
Insurance Expense	\$ 208,088	\$ 194,234	\$ 156,161	\$ 162,407	\$ 168,904	\$ 175,660	\$ 182,695	\$ 189,994	\$ 197,593	\$ 205,497	\$ 213,717	\$ 222,266	\$ 231,156
Regulatory Commission Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bad Debt Expense	\$ 21,164	\$ 22,159	\$ 22,881	\$ 23,604	\$ 24,328	\$ 25,059	\$ 25,789	\$ 26,522	\$ 27,257	\$ 27,995	\$ 28,735	\$ 29,477	\$ 30,222
Miscellaneous Expenses	\$ 36,127	\$ 45,847	\$ 47,222	\$ 48,639	\$ 50,098	\$ 51,601	\$ 53,149	\$ 54,743	\$ 56,386	\$ 58,077	\$ 59,819	\$ 61,614	\$ 63,462
Taxes other than Income & Property	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Property Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Income Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortized Intangible Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
City of Missouri Admin Fees	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Other Expenses	\$ 47,202	\$ 99,403	\$ 100,259	\$ 104,269	\$ 108,440	\$ 112,778	\$ 117,289	\$ 121,981	\$ 126,860	\$ 131,934	\$ 137,212	\$ 142,700	\$ 148,408
Total Operating Expenses	\$ 8,108,939	\$ 8,263,834	\$ 8,636,065	\$ 8,916,146	\$ 9,210,447	\$ 9,515,779	\$ 9,844,987	\$ 10,187,011	\$ 10,546,786	\$ 10,925,342	\$ 11,323,765	\$ 11,743,203	\$ 12,184,878

Table 4
Expense Inflation Parameters

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Salaries & Wages Employees	65%	57%		5%	5%	5%	5%	6%	6%	6%	6%	6%	6%
Employee Pensions & Benefits		9%		4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Purchased Power				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Chemicals				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Materials & Supplies				1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Contractual Services				3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Rent				1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Transportation Expense				1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Insurance Expense				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Regulatory Commission Expense				2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bad Debt Expense				1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Miscellaneous Expenses				3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Taxes other than Income & Property				5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Property Taxes				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Income Taxes				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Amortized Intangible Plant				2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Depreciation				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
City of Missouri Admin Fee				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other Expenses				4%	4%	4%	4%	4%	4%	4%	4%	4%	4%

Source: Mountain Water - Revenue Summary - MW-019484-MW-019506

	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-13	Feb-13	Mar-13	Apr-14 Total
Consumption												
Residential	139,214	219,427	360,417	494,125	393,925	176,227	79,086	74,406	75,883	72,418	71,902	75,883
Business	128,838	146,167	175,952	209,276	189,883	142,217	105,519	100,714	99,181	98,018	100,682	1,903,446
Industrial												
Public Authority	42,070	36,262	38,215	61,560	32,639	25,535	54,312	21,763	26,513	29,562	31,446	29,568
Private Fire Prot												430,035
Interdepartmental	24	16	18	23	17	16	12	12	18	13	15	24
Irrigation	31,124	69,720	94,603	128,301	105,624	32,977	2,181	133	-	-	-	344
Total	341,270	471,592	669,210	893,285	721,388	376,972	241,060	197,023	201,090	201,011	204,023	212,028
Revenue from Volume Charges												
Residential	\$ 276,714	\$ 495,233	\$ 714,913	\$ 980,146	\$ 782,695	\$ 346,018	\$ 155,118	\$ 148,050	\$ 146,448	\$ 141,352	\$ 140,574	\$ 4,267,262
Business	\$ 286,297	\$ 290,052	\$ 349,150	\$ 415,282	\$ 376,208	\$ 279,218	\$ 207,209	\$ 200,878	\$ 193,659	\$ 193,341	\$ 197,239	\$ 2,958,533
Industrial	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Public Authority	\$ 85,488	\$ 71,982	\$ 75,838	\$ 122,166	\$ 65,169	\$ 50,120	\$ 106,689	\$ 43,574	\$ 51,769	\$ 57,723	\$ 61,795	\$ 790,292
Private Fire Prot	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interdepartmental	\$ 67	\$ 71	\$ 50	\$ 105	\$ 123	\$ 57	\$ 24	\$ 24	\$ 25	\$ 25	\$ 29	\$ 601
Irrigation	\$ 66,522	\$ 138,320	\$ 187,735	\$ 254,555	\$ 208,192	\$ 64,429	\$ 4,281	\$ 264	\$ -	\$ -	\$ -	\$ 924,298
Total	\$ 685,088	\$ 935,658	\$ 1,327,685	\$ 1,772,253	\$ 1,432,387	\$ 789,842	\$ 473,321	\$ 392,791	\$ 391,902	\$ 392,441	\$ 399,638	\$ 8,940,986
Connections												
Residential	14,548	14,691	14,797	14,779	14,817	14,805	14,893	14,978	15,009	15,074	15,068	14,883
Business	3,485	3,487	3,492	3,501	3,521	3,531	3,544	3,554	3,563	3,573	3,577	3,534
Industrial												
Public Authority	61	61	61	61	61	61	61	61	61	61	61	61
Private Fire Prot	552	552	553	553	554	557	557	556	559	559	561	557
Interdepartmental	3	3	3	3	3	3	3	3	3	3	3	3
Irrigation												
Total	18,749	18,794	18,836	19,055	19,483	19,563	19,695	19,780	19,794	19,547	19,270	19,325
Average Usage												
Residential	9.50	14.94	24.47	33.43	26.59	11.90	5.31	4.97	5.02	4.80	4.77	12.50
Business	36.87	41.92	50.39	59.78	53.84	40.28	29.77	28.34	27.84	27.71	28.14	37.81
Industrial												#DIV/0!
Public Authority	689.57	594.46	626.45	1,008.18	538.34	418.61	890.36	356.77	434.64	484.62	515.51	587.48
Private Fire Prot												
Interdepartmental	8.00	5.33	6.00	7.67	5.67	5.33	4.00	4.00	4.33	4.33	5.00	5.64
Irrigation												135.10
Total	18.20	25.09	35.53	46.88	37.64	19.27	12.24	9.95	10.16	10.28	10.59	20.40