ALBUQUERQUE BERNALILLO COUNTY
WATER UTILITY AUTHORITY
WEDNESDAY, APRIL 18, 2012 5:08 P.M.

ALBUQUERQUE BERNALILLO COUNTY GOVERNMENT CENTER
ONE CIVIC PLAZA, NW
ALBUQUERQUE, NM 87102

Before: Kelli A. Gallegos
PAUL BACA PROFESSIONAL COURT REPORTERS
500 Fourth Street, NW, Suite 105
Albuquerque, New Mexico 87102

A P P E A R A N C E S

COUNCILLOR KEN SANCHEZ, Chairman

COMMISSIONER WAYNE A. JOHNSON, Vice Chairman

MAYOR RICHARD BERRY, Member (Excused)

COUNCILLOR REY GARDUNO, Member

COMMISSIONER ART DE LA CRUZ, Member

COUNCILLOR TRUDY E. JONES, Member

COMMISSION MAGGIE HART STEBBINS, Member

TRUSTEE PABLO RAEL, Ex-officio Member (Excused)

MR. ROB PERRY, Admin. Officer, Alternate Member

CHAIRMAN SANCHEZ: I'd like to call this meeting to order on April the 18th of 2012, the meeting of the Albuquerque Bernalillo County Water Utility Authority. I'll let the record show that all members are present, with the exception of Trustee Pablo Rael. He is excused for this evening.

The next order of business will be a silent invocation, followed by the Pledge of Allegiance, which will be led by Rob Perry.

(Whereupon, there was a moment of silence.)

(Whereupon, the Pledge of Allegiance was led by Mr. Rob Perry.)

CHAIRMAN SANCHEZ: And Councillor Garduno should be here shortly.

The next order of business is the approval of the minutes. I make a motion to approve the March 21st, 2012, minutes. We have a motion, and a second by Commissioner De La Cruz. Any questions?

Seeing none, all those in favor signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no.

That carries unanimously.

(6-0 vote. Agenda Item 3 approved.)

CHAIRMAN SANCHEZ: Next item on the agenda is

proclamations and awards, and it's Item A, quarterly employee awards. And I would ask the recipients to move to the front and get the awards, and wait to move through the line of individuals. We've got Robert Marquez. Please come to the podium. Magdalena Bojorcas-Ponce, Joe Bailey, Lorraine Nunez, Floyd Pena, Scott Salvas, and Richard Torres.

And we'll start with Robert Marquez. He will be receiving a $250 award. And Robert's dedication and personal excellence helped him become the top call-taker for 2011 in customer service. His attention to detail and willingness to resolve customer service questions and inquiries efficiently has placed his performance above all fellow team members.

Robert, thank you very much for your effort.

COMMISSIONER DE LA CRUZ: Next we have Magdalena Bojorcas-Ponce, who's going to be receiving $250. Magdalena is the top call-taker for the fourth quarter of 2011. Her attention to detail and willingness to resolve customer questions and inquiries efficiently has placed her performance above that of her fellow team members.

CHAIRMAN SANCHEZ: Congratulations.

Next we have Joe Bailey. He is receiving

$300 plus eight hours. Joe has significantly increased the amount of compost sold. He goes out of his way to resolve customer complaints and to keep the public perception of the Water Authority beyond reproach. Joe was instrumental in analyzing the 503 regulations and preparing the EPA annual report.

Mr. Bailey, congratulations for all your work.

Lorraine Nunez will be receiving $500 plus 24 hours. Lorraine has taken an outdated contract system for on-call construction work and turned it into a system of several contracts bidding and rotating the work assigned. This process is innovative and saves time and money for the Water Authority. This has allowed for a much quicker response to water issues.

Lorraine Nunez, congratulations for all your work.

The next recipient is Floyd Pena, it's $300 plus eight hours. Floyd assisted in the recent customer service division Itron upgrade. The project included an upgrade for software, disassembling the old equipment and assembling and setup of all new equipment, testing the upload and downloading capacities. Floyd is dependable, trustworthy and is

an extremely competent information technology resource to the customer service division.

Thank you very much for your time and service.

The next recipient is Scott Salvas. It's a $250 award. Scott started assisting the water reclamation plant and obtaining the emergency air quality permit to operate the new Kangen engine and the UV emergency generator. These two facilities are vital to the effective operations of the plant. Scott performed the required technical reviews, management and operations of the plant. He is also -- the permit was granted in 2011 thanks to the efforts of Mr. Salvas.

Thank you very much.

Richard Torres is receiving $250 award. Richard has excellent troubleshooting skills and superior job knowledge. Richard caught on very quickly to the advanced treatment process and goes out of his way consistently to make sure the treatment plant stays in compliance with the MPDES permit. Richard had shown a strong work ethic and has a true commitment to the success of the plant.

Richard, thank you very much for your time energy.

And let's have all of you come up and get a congratulations from this authority. Again, to those recipients, thank you for all of your work and effort, and appreciate all your time in work for the Water Authority.

Okay. The next item on the agenda is public comment. Ms. Jenkins, how many individuals do we have signed up to speak this evening.

MS. JENKINS: We have four signed up, Dave McCoy, followed by Elaine Hebbard.

CHAIRMAN SANCHEZ: Okay. Once your name has been called, you can come to the front. You will be given two minutes to speak. A warning bell will go off at one minute and thirty seconds, so let's have you go ahead and proceed and come forward, please.

MR. MCCOY: Good evening. My name is Dave McCoy, Citizen Action. Citizen Action invites the Water Utility Authority to make clear its intentions to the public my initiating a comprehensive emergency response for the Kirtland Air Force jet fuel contamination of Albuquerque's drinking.

The Water Utility Authority should make a motion that would include the following: One, recognize that an immediate full-scale emergency response is necessary; two, the WUA will immediately

retain at a nationally recognized expert to independently evaluate what the City of Albuquerque can do right to set in motion the necessary emergency response plan; three, the emergency plan must be for the purpose of pumping jet fuel out of the ground.

The focus of the WUA should be to stop the movement of the liquid jet fuel plume before it reaches a tipping point toward the Ridgecrest well so that it can be remediated. A proposal for how to stop the liquid jet fuel plume and an emergency plan of action must be provided.

After 12 years of Air Force inaction for characterization and remediation, two-thirds of the jet fuel plume is within the city. No remediation or protection for Albuquerque's wells is occurring. The tipping point has already occurred for the dissolved plume of ethylene dibromide that will reach and contaminate Albuquerque's drinking wells.

Because the jet plume has left KAFB and immediately threatens Albuquerque wells, the WUA as a stakeholder, has a legal authority under the Hazardous Waste Management Act to initiate the above independent actions and pass the expense on to the Air Force. Current operations at Kirtland are calling for more planning, study and installation of 33 more monitoring

wells that do not provide remediation. More monitoring wells only allow the plume to travel further towards KAFB Number 3 and Ridgecrest wells.

The Water Utility Authority should categorically reject the risky proposed pump and treat testing plan that will pull the liquid jet fuel more toward the northern tipping point. I have some handouts here with a little more detail.

CHAIRMAN SANCHEZ: Okay. Leave that with the staff and they will hand it out to the members of the commissioner.

MR. MCCOY: I did. Are there any questions?

CHAIRMAN SANCHEZ: Thank you.

Councillor Garduno.

Mr. McCoy, we have a question for you.

COUNCILLOR GARDUNO: Mr. McCoy, are you saying that the Water Authority should be asking for another study of this?

MR. MCCOY: No.

COUNCILLOR GARDUNO: I thought we already had that.

MR. MCCOY: To. I'm saying that the Water Utility Authority should make a motion that an emergency response plan, boots on the ground, equipment there yesterday, 24/7 drilling, you know

should be made; that you need an independent expert of international or national stature to conduct this, and, if necessary, you might think about going to the EPA and consider that option.

You know, nothing has happened here in 12 years. And there's been political compromise of the New Mexico Environment Department, and there simply is no removal of jet fuel occurring at the present time. The liquid and the dissolve plume, they haven't run the extractors for many months out there, even for the dissolved portion, you know, the soil vapor in the vadose zone.

So I think it's incumbent on the Water Utility Authority to make a plan to take matters into their own hands, as I described, specifically for the purpose of getting the jet fuel out of the ground now, and a plan be put in place. And Shaw is not providing that right now. If you look at their contract, it says their supposed to be doing continuous remediation to the plume. They haven't provided continuous remediation. And Water Utility should suggest that that contract be no longer in place. They have nothing in their remediation arsenal at the present time to stop the jet fuel plume. So the Authority should urge cancellation of that contract and get

their own expert on board. This plume is within the city right now, you know, and we can't afford to have those wells shut down and that's only plan that's in place at the moment, if the contamination hits. And, you know, where's the water treatment plant? Nothing is on board to protect the citizens and the City of Albuquerque from what is an impending disaster.

COUNCILLOR GARDUNO: Mr. Chair, if I may.

Mr. McCoy, we will be having a presentation, as I understand it, according to the agenda, by Kirtland Air Force Base remediation status report. Are you saying that that may not be up to date or won't be...

MR. MCCOY: What I'm saying is that we've got plans for more plans, we have plans for more studies, we have study after study, we have plans that have been rejected by the New Mexico Environment Department, we've had plans that have been approved, but there's nothing out there that's removing the jet fuel. You know, it's not happening.

And more studies -- and I understand, you know, it's good intentions to find out how far that plume has gone. But you're putting in 33 more monitoring wells when you know that plume is going to hit. A dissolve plume; it moves with the groundwater.

There's no way of stopping it. It's a mile long, a half a mile wide and it's very thick and it's at a deep depth and it's dissolve. So it's moving with the groundwater and question is: What are you doing now to stop this, the liquid portion at least? And that's not occurring. And by the time they get and approved plan, a final remediation plan, we're looking at 2014, 2015. Who knows how long it's going to take for this plume to reach your wells.

And if that liquid plume hits a tipping point, like the dissolve plume already has, you're going to be in big trouble. You're not going to save any of those wells out there, and you're going to lose your wells to the north potentially, in addition to the Ridgecrest wells.

So what I'm saying is, plans and studies and all that are not going to get it. What you need is an emergency response right now. You need a really -- an environmental expert that can tell you what that emergency response plan needs to be and it needs to be put into effect. And the Water Utility Authority needs to demand that these state and federal agencies cooperate in this. And if you can't get that cooperation, then you need to go upstairs to the EPA or something, you know.

I mean, this is serious stuff. And you're out of time on it, you're out of time. You've had studies, you've had the opportunity for studies to be done since 1997, when they discovered this. And you're not getting the removal of jet fuel from sitting on your aquifer.

COUNCILLOR GARDUNO: Mr. Chair.

Thank you, Mr. McCoy.

I really believe that when we have that presentation, those are certainly some of the questions that I'd like to ask, and I'd like to reserve that.

CHAIRMAN SANCHEZ: Okay. Let's go on to the next speaker.

Mr. McCoy, thank you for your time.

MS. JENKINS: Elaine Hebbard, followed by Willard Hunter.

MS. HEBBARD: Good afternoon. I'm here to talk about the item on the drought management strategy. I'm asking that it be postponed, any action on it. Right now, on Item 10B, you'll see there's and item developing a water conservation plan for the next ten years. Drought management is a part of conservation, and I would ask that you it would be part and parcel of the topics that would be included in developing a

water conservation plan for the next ten years.

Furthermore, there are some real problems with the indicators that have been chosen, both the gallons per capita per day and the annual operation plan. There are, for example, with the last one, annual operation plan that just finished up last month, we pumped two and a half times more than what we said we were going to, even knowing that we were going into a La Nina year with potential curtailment.

So using those two things as indicators probably are not real robust. I would suggest probably following the permit that was given to the Water Utility for water flows which would be a more robust one because it actually limits you by cubic feet per second. Another one would be with a water pumping plan. And I think that what Mr. McCoy just talked about, with the jet fuels, we're going to need to have a water pumping plan as to how much you can withdraw from various well fields.

So, again, I would like to suggest that matter be postponed, that included in those topics would be dealing with the water budget so you can have some scenarios, and it's in keeping with the public policy, part of the water management strategies. I'd be delighted also to help in the design of those

workshops.

Thanks. Any questions?

CHAIRMAN SANCHEZ: Thank you.

Councillor Garduno.

COUNCILLOR GARDUNO: Ms. Hebbard, are you saying that there's a possibility of causing permanent damage to the aquifer if we continue doing what we're doing?

MS. HEBBARD: Yes. I think that we have the best intentions right now, but that if we had a plan that said okay, we want to be withdrawing from these various wells, and it's actually sort of a planned response strategy rather than ad hoc, which it appears to be right now, would be more in keeping. And that, you could utilize the water budget model that you have, I think. I haven't actually seen the budget model itself. It was developed in-house for in-house use. And I think that it would be great to take it out to the public, and especially to this jet fuel, and show people what some of those strategies might be, so that you can help allay some of those fears.

COUNCILLOR GARDUNO: Mr. Chair.

Also on that, I thought that the administration, or certainly -- Mr. Sanchez, there had been some agreement that we would go out to the public and certainly, you know, have this discussion.

MS. HEBBARD: Well, and I think there. Sorry.

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that, in fact, is also on the agenda. Katherine Yuhas will report on that later on your agenda. And she'll also discuss some of the issues Ms. Hebbard is raising, which we disagree with.

COUNCILLOR GARDUNO: Anxious to hear that.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Thank you, Ms. Hebbard.

MS. HEBBARD: It's hard to explain all of them when you've got two minutes.

CHAIRMAN SANCHEZ: Next speaker, Ms. Jenkins.

MS. JENKINS: Willard Hunter, followed by Geraldine Amato.

CHAIRMAN SANCHEZ: Mr. Hunter, welcome.

MR. HUNTER: Good evening. My name is Willard Hunter, and I want to talk about a national security issue tonight involving this Water Authority although board. Specifically I'm talking about the Kirtland Air Force Base jet fuel leak threatening the security of our community. It is the largest underground jet fuel spill in U.S. history. The Air Force has known about this problem for more than a decade and has done little. The Air Force and NMED have been dancing together for years; that type has passed.

The quality of drinking water for a significant portion of Albuquerque is threatened by chemical contamination from this Air Force leak. You, the Water Utility Authority board need to act now. In the Air Force meetings I've attended, there seems to be a little sense of urgency. I've seen lots of fancy charts and future plans. Well, that time has passed. We need action.

And OSHA website reported a woman ingested four and a half milliliters, not much, of ethylene dibromide and died after experiencing vomiting and nausea, diarrhea and kidney failure. At autopsy, massive liver and kidney damage was seen. And that is one chemical approaching the Ridgecrest wells. If you know a tsunami is coming, you take action. Well, an environmental tsunami is coming and you know it. There is a national security threat right here in river city. It has been caused by the continuing negligence of Kirtland Air Force Base management over the decades. This is an emergency.

You are the Water Authority board and you need to exercise your authority. Thank you.

CHAIRMAN SANCHEZ: Thank you.

MS. JENKINS: Geraldine Amato.

CHAIRMAN SANCHEZ: Welcome, Ms. Amato.

MS. AMATO: I wish to affirm what attorney Dave McCoy spoke of, as well as the previous speaker. And it also references what's not being done with the Sandia Lab unlined chemical nuclear waste dump. There should be immediate excavation, not millions of studies and nothing being done. It's like an inertia but plenty of words. And typical of this area here, the top front page of the Albuquerque Journal will feature pigeons and mention in there that pigeon droppings are polluting the storm water going to the river. Well, this story won't get the top front page of the Albuquerque Journal because there's an inertia there. And it difficult for a local government, who's actually a subsidiary of the federal government to tells the feds anything.

Something needs to be done. There has to be an open uprising I think to get anything done when federal officials refuse to move. There has to be people within the federal bureaucracy as well willing to risk their jobs in order to save their lives. This area here is becoming overwhelmingly polluted with chemical and industrial nuclear both water and in the air and in the land.

And as far and pigeons are concerned, we should bring them back in. All over the world they're

used as a resource. They're a domesticated bird thrown away. If you give them a place to roost those droppings can be used for fertilizer.

And instead of discouraging people from having gardens here and watering every day to keep food growing on their premises, we should be encouraging people to water gardens. And it seems to me, if these moisture going up towards a cloud that might have some, there could siphon some little more rain down. If you just have concrete and asphalt burning in the sun and the heat going up there, if there is any water in those aboveground clouds, they'll just evaporate.

And then we have chemicals on the golf courses. They water it, but they also overdose it with chemicals and herbicides. And those things are not being monitored either.

CHAIRMAN SANCHEZ: Thank you, Ms. Amato.

MS. AMATO: And you're stingy, Mr. Sanchez.

CHAIRMAN SANCHEZ: Your time is up.

MS. AMATO: Four people lined up to speak and you give them a measly two minutes. You're a rude person, and arrogant person and a disrespectful person.

CHAIRMAN SANCHEZ: Thank you, Ms. Amato. Your

time is up.

MS. AMATO: And you shouldn't even be the chair of such an agency here.

CHAIRMAN SANCHEZ: You're welcome. Thank you.

Next item on the agenda is announcements and communications. Item A is the next scheduled meeting, which is May 23rd of 2012 at 5:00 p.m.

And Item B, we have a 2011 water quality report, which will be given by Jane DeRose Baman. And she is here to say a few words.

Welcome.

MS. BAMAN: Chairman Sanchez, Members of the Board, my name is Jane DeRose Baman. I'm the Water Authority's program manager for water quality. And I'm just here to announce that we did issue our water quality report for 2011. It was mailed earlier this month to our water service customers, nearly 200,000, and it's based on a mandate by EPA to issue a consumer confidence report. So sometimes it's referred to as that.

And information about the report as well as other monitoring we've done is available on our website, the Water Authority website, as well as we would appreciate questions from our customers to directed to our water quality information line, which

is (505) 857-8260.

Also I have for those of you who did not receive one or if you would like another copy, we have extra copies on the back table.

CHAIRMAN SANCHEZ: Thank you.

Are there any questions?

Thank you for your time.

MS. BAMAN: Thank you.

CHAIRMAN SANCHEZ: The next item on the agenda are introductions, and it will be the first reading of the legislation, and that is going to be Item A, WUA R-12-9, establishing one-year objectives for the Water Utility Authority in fiscal year 2013 to meet the five-year goals. And Frank Roth will be making that presentation.

MR. ROTH: Mr. Chair, Members of the Board, the FY13 goals and objectives are a part of the Water Authority's strategic planning, budgeting and improvement process, which includes long-range goals, short-term objectives, performance measures, and the Water Authority's participation in the American Water Works Qual-Serve program, which includes benchmarking with other utilities on operations and service delivery, gathering employees' opinions about the operations through a self-assessment, and lastly,

through the peer review, and on-site, in-depth review of the Utility's operations by a team of professional volunteers trained in this program.

This diagram illustrates the improvement process. It starts with the five-year goals and one-year operatives which are integrated and aligned with the matrix in the performance plan which helps guide the operating budget.

Also, every two years we do a customer opinion survey with questions that are tied directly to the matrix in the performance plan. As I mentioned earlier, the Water Authority participates in the three Qual-Serve programs. We also receive external input from the customer advisory committee and internal input from the asset management steering committee to help drive our agenda for improvement, and also to fulfill the Water Authority's mission.

The five-year goals include guiding goal statements, which describe the long-term desired outcome in each goal area. And to measure the progress in each goal area, we have performance measures, 25 in all, to show us where we are and where we want to go.

So with the performance objectives in front of you tonight, they are tied, as I mentioned earlier,

to our performance measures. They identify performance gaps in operations and service delivery when we benchmark with other utilities. We address those performance gaps through the budget process by allocating and prioritizing resources and then develop improvement processes in order to be more efficient and effective in our operations and service delivery. And these are the one-year objectives, which are policy directives from the board to help address those performance gaps identified during the benchmarking process.

So the FY13 objectives, there's 46 in the five goal areas. They show implementation of plans and programs that the Water Authority is working on. They incorporate areas in improvement identified in the Qual-Serve process. They are integrated with the performance plan, as I mentioned earlier, with the performance identified through the benchmarking process, and some are carryovers from this fiscal years and our past fiscal years as many of the plans or programs are done in phases. Or if we're doing operational improvement, we only set targets for each year to reach a certain level of performance.

So I thought it would be good to show just a couple of examples of how the objectives and

performance measures are tied together, so I picked the water supply and operations goal. Here you can see that we have a few objectives related to plan maintenance to increase our plan maintenance, our groundwater and surface water facilities, as compared to total maintenance or the plan maintenance to corrective maintenance ratio. And this is tied to our plan maintenance ratio performance measure, these two objectives.

Another one is to maintain water use at 150 gallons per capita, which obtaining community input on setting a new reduction goal. And this is tied to the water conservation saving performance measure. And also Katherine Yuhas will be talking about this later in the meeting.

Two other objectives I'd like to point out are reducing water loss through our leak detection program. This is tied to our water loss and water integrity performance measures. So we have objectives to reduce water loss in our small diameter system using our different leak detection methodology, and then also next year conduct a pilot project on looking at different methodologies on our large diameter water lines. So these are just a few examples of the objectives that are being introduced and how they're

tied to our performance measures.

And so in summary, through our performance improvement process, it includes the five-year goals and one-year objectives with the objectives and performance measures measuring our progress along the way in each of the goal areas and to help guide the budget process, which is the next agenda item, unless you have any questions.

CHAIRMAN SANCHEZ: Are there any questions?

Seeing none, thank you for your time.

Next item on the agenda for introductions is Item B, WUA R-12-10. That is appropriating funds for operating the water authority for fiscal year beginning July 1 of 2012 and ending June 30th of 2013.

Mr. Sanchez.

MR. SANCHEZ: Mr. Chairman, Members of the Board, I'll cover Items B and C, the operating and capital, with your permission.

I won't dwell on the budgeting process since Frank Roth just explained that to you.

In terms of the highlights, first and foremost, no rate increases proposed or incorporated into this budget document. That includes a 2 percent step adjustment for employees, based on existing collective bargaining agreements. $2 million is added

to our rate reserve fund, which, if you recall, for those of you have been on the board for some time, it is intended to be there as a safety valve in the event of huge revenue fluctuations or as an attempt to postpone rate adjustments.

Thirty million is for our CIP basic rehab program, three million for our non-basic capital projects. It continues the board approved conservation surcharge for high residential water users, which represent the top 7 percent of our customers. It also includes a 30 percent discount to residential customer using 150 percent of less of their conservation average.

In terms of our assumptions, nominal growth in the surface area. We're assuming a 2 percent decrease in consumption based on conservation. Growth and operating expenses include only essential items. Increased capital spending for our south side reclamation plan going forward. In terms of comparing FY12 and FY13 that's before you, revenue increases by about 1.1 -- decreases, actually, by $1.1 million, from sixth-tenths of 1 percent. Expenditures go up by four million, or by 2.2 percent. At the end of FY13, we project to have $10 million fund balance. In FY12, we ended up with a $2.2 million fund balance, which

was due in large part to expenses to bringing the San Juan Chama project online.

In terms of expenditures, personnel, the 2 percent step adjustment cost about $452,000. Eleven -- FY12 midyear position annualized, $645,000. Operating expenditures, increase in barricade and paving cost, about $2.1 million. And $700,000 to improve the actual costs for postage, filing of liens, training and unemployment compensation.

In terms of internal services and transfers, our debt service cost increased by $5 million and UEC transfer to CIP for three million for growth=related projects. And that's essentially reimbursing developers who have fronted the cost of utility extensions that are development agreements. As others connect to that, we receive revenues from that and transfer that into that fund.

In terms of a pie chart about how our revenues are derived, interest of about $750,000; miscellaneous revenue of 1.8 million, which includes things like sale of compost, connection fees, not UECs but the fees themselves; water revenue of 83 million; water resources management of 4.5 million, which is a dedicated conservation part of our rate; sewer revenue of 62 million; CIP employees, which is a transfer of

$650,000; solid waste transfer of 1.1 million, which is the solid waste contribution for the Water Authority sending its billing and staff-related costs and collections; franchise revenue of about 7.1 million; and San Juan Chama related rate of 30 million. So the total is $191million.

In terms of how that breaks down to expenses, debt service to the largest component, $66 million; wages and benefits, 47 million; operating expense, 45 million; transfer to other funds, 8.2 million; franchise fee, approximately 6.5 million; risk charges, 3.2 million; other, which is fuels, radio and other capital, 2.3 million; indirect overhead paid to the city, 1.5 million; workers' compensation, 754 million, for the total 181 million, plus the fund balance of 10 million gives you the 191 in terms of the revenues.

In terms of our finance plan going forward, you can see 2013 highlighted. That tracks with the numbers we just provided. Going forward into about 2017 through 2021, you can see that our fund balance falls below one-twelfth. Last year, the board approved in our rate ordinance having one-twelfth as our fund balance target as opposed to $10 million or 7 to 8 percent. And the rating agencies lately have

said, "You really need to shore up that fund balance." So you can tell going forward, with nothing changing, our fund balance starts to fall far below the one-twelfth.

In terms of CIP, there's an appropriation of 42 million, 33 million for our basic water and sewer program, 30 million is for rehab and replacement, two million is for implementing a financial ERP system going forward in FY14, three million for special project, two million of that is for automated meter infrastructure, starting the phases going forward, one million is for steel line replacement, four million is to close out the San Juan Chama project, 2.3 million for the surface water treatment plant, and 1.7 million for habitat restoration of the bosque that's required as part of our permit.

In terms of CIP planned spending, 9.9 million for basic pipe renewal, 5.1 million for basic plant renewal, three million for growth projects, two million for the financial enterprise system, 15 million for the south side water reclamation plant, one million for steel line replacement, four million for special projects and two million for the automated meter infrastructure, for the total of $42 million.

Going forward, some of our financial challenges are the substantial improvements we need to make at the south side reclamation facility. We've talked about an estimate of $250 million over the next decade to get our plant up to where it needs to be to be fully compliant with our discharge permit, EPA regulations and certainly the Isleta Pueblo expectations that we meet their conditions for that water use. Also increasing and maintaining our reserve to one-twelfth as opposed to 7 to 8 percent. The increasing cost of power, fuel and chemicals are a constant challenge because they tend to rise at double digits. And also financing our asset management plan, Dave Price soon will talk about where our CIP spending needs to be. Historically, we've been about 41, $42 million, and we really need to be in the 71 plus million dollars annually, not only to take care of our backlog, but to stay in front of the risk going forward of our capital infrastructure.

At this point, I'd like to call up Dave Price. He's the chief engineer responsible for our capital program. After Dave, Paul Cassidy will talk about bonding ratings and the expectations. And then I'll close with what we project going forward.

MR. PRICE: Mr. Chairman, Board Members, my name

is David Price. I'm the manager of the water resources planning and engineering division for the Water Authority.

I'm going to talk a little bit about our asset management plan and the CIP program. First I want to talk about what assets we're talking about. The drinking water assets, they include the San Juan Chama drinking water plant, our wells, booster pumping stations, reservoirs, water pipelines. Wastewater assets includes the sewage collection pipelines, sewerage lift and vacuum stations, the south side water reclamation plant and our soil amendment facility.

Other assets include the reclaimed water assets. We have a north side nonpotable water system that's been in service for almost a decade now. And we're just completing the construction startup of the south side nonpotable water system that will be treating the effluent from the wastewater plant, filtering it, disinfecting it and allowing it to be used for parks in the southeast portion of the city.

The compliance division also has assets including the analytic laboratory and the south side water reclamation plant, and also they have a small process laboratory up at the San Juan Chama water

treatment plant.

You might recall at last April's board meeting, Mr. Stomp presented the asset management plan that was developed by for the Water Authority by our consultant, GHD. This plan, this study went on for about two years. They did a very thorough evaluation of all of our assets, including over 200,000 asset. They scheduled what the renewal needs are for each of those assets on an annual basis.

Our asset management plan uses a concept of risk for prioritizing the renewal of our different assets, and risk is simply the probability of failure of an asset multiplied by the consequence of failure. For instance, a pipe, an old pipe has a high probability of failure. Its location within the city influences its consequence of failure, a pipe in front of a hospital or through a business district has a higher consequence of failure. It would be more disruption if that pipe fails. So we try to target those higher risk assets for renewal first.

This is the pie chart that categories our different assets into four different categories, including water, drinking water pipes. The replacement cost of those would be about $1.9 billion. Our wastewater or sewer pipes, they have a replacement

cost of about $1.8 billion, and then our sewer plant and our water plants, which includes The drinking water plant, plus all the wells and whatnot, each have a replacement cost of about $6 billion. So we have a total -- if you were to go out and try and replace all of our assets right now, it would cost over cost over $5 million.

This i kind of a busy chart. It comes from the GHD asset management plan. What it shows is the -- their estimated or recommended asset renewal spending by year for the next hundred years. And you can see it's color coded, and those refer to the four colors on that previous pie chart that looks at the field water, field sewer, plant water, plant sewer. But the overall chart, the thing that looks like a mountain, a set of mountain peaks, is the overall -- it's the sum of those different components. And it's just shows the amount of spending that they think we need to do on an annual basis for the next hundred years to keep our system in good working order.

They estimated an average renewal need of $76 million over that hundred-year period; that's in 2010 dollars. And as Mr. Sanchez just mentioned, we're currently spending about $41 million, so there's a $35 million gap between what we should be spending

what we actually are spending.

Quality behind an asset management results in failures of our assets. For instance, sewer collapses and waterline breaks. You can see here a couple of examples where sinkholes have developed due to a sanitary sewer pipeline failure. You see in the one picture we actually see a City of Albuquerque utility vehicle. It's been swallowed up by the sinkhole.

This is from -- these are two photos from last April, when we had an interceptor collapse along Broadway, which backed up sewage in the interceptor and it came out along Broadway and Pacific Avenue here. This is actually raw sewage pouring onto the city streets.

Here is a recent waterline break at a charter school nearby, and it made the news pretty dramatically. And the other photo is actually nearby essentially at the corner of 5th and Marquette, right outside the city hall. It was last December when he had to actually shut down city hall for a day in order to restore water service.

One of the issues is our level of service that the Water Authority provides to its customers will go down if we don't keep up with our asset

management.

In addition to the hundred-year asset management plan and GHD prepared for us, we are also doing what we call tactical ten-year asset management plans, which are much more focused on different categories of our assets and only look at a ten-year period, and look at it in much more detail, evaluating the actual conditions that the -- of the different assets. And we've so far completed a ten-year asset management plan for our sewer interceptors and also our small diameter water and wastewater pipelines. And these asset management plans are actually being used to target the higher risk assets for renewal in fiscal year '12.

Currently underway is the sanitary sewer lift and vacuum station asset management plan, and then an asset management plan for water storage reservoirs. And in the coming years, we'll start one for our water booster pumping stations, our large diameter water pipelines and our wells.

Also at last April's board meeting, Mr. Stomp presented the decade plan. It was just recently developed. This identifies our capital improvement projects for a ten-year period. We develop one every two years, and it incorporates data

analysis from the asset management plans, both the GHD plan and the two 10-year asset management plans we've so far developed. And then it's directly linked to the Water Authority's financial plan.

This chart just shows our spending, our projected spending for the next ten years; again, based on the decade plan that's been approved and it shows a column for each fiscal year, starting with fiscal year '12 all the way through fiscal year '21. And it's color coded. The blue portions of the columns at the bottom are the moneys targeted for rehab the south side water reclamation plant. And then the red portions of the bars are for the other assets. And at the very top, you can see a little bit of green, and that's the $1 million special funding that's used for rehabbing steel waterlines.

You can see that in the initial several years, we have a budget of about $41 million. It goes up and down by year a bit, but then in 2017 we start ramping up by $3 million a year. And eventually, by 2028, at this rate, we'll reach that $76 million renewal spending requirement that GHD identified in their asset management plan.

This chart just shows our current status as of last month, March, of our committed renewal

spending on our asset renewals. The top horizontal line is $44.1 million. That's just our total renewal budget plus the $1 million special funding. The green horizontal line is the budget for fiscal year '12 for the renewal of the south side water reclamation plant. And then the blue horizontal line is for the other non south side water reclamation plant we have.

You can see that we've so far committed about $37 million renewal spending for this year. Our commitments for spending on the south side reclamation plant, as indicated by the green curve at the bottom, we're a little bit behind schedule on that. We hope to ramp up that spending for next fiscal year. But we are compensating for that by spending a little bit more this year on our non-south side water reclamation plant spending.

Just some of the examples of what we're spending our money on this year. For groundwater and surface water production facilities, treatment, pumping and storage, about four and a half million dollars; drinking water pipelines, about $9 million; sanitary sewers, five million; lift and vacuum stations, about 1.1 million; odor control stations, one and a half million; the south side reclamation plant, 12 million; and the franchise fee compliance is

about $3 million, and what that involves in anytime the city or county is installing storm drains, oftentimes our infrastructure is in the way and we have to move it and we have to actually pay the city's contractor to move our infrastructure.

Asset infrastructure renewal backlog. During development of the 2012-2021 decade plan, staff identified a backlog of over $355 million in unfunded renewal projects. Essentially, these are projects that we've identified but we don't have the budget to do in the next decade. That included unfunded sewer pipelines at 70 million, unfunded drinking water pipelines at 141 million, unfunded drinking water plant facilities, 119 million, unfunded lift and vacuum and odor stations, seven million, and the unfunded soil amendment facility assets, about six million.

This is a chart that actually Frank Roth helped me develop. It just shows our backlog based on information that was developed by the GHD's asset management plan. And, again, it shows -- it's similar to what staff came up as a backlog. It actually show our backlog is actually higher when you look at it from an asset management standpoint. And the chart just shows -- at the bottom there is our backlog, and

you can see how it grows or gets lower as we progress, and it reaches about $200 million at 2021. Again, these are projects that we've identified that need to be rehabbed, we just don't have the budget to do it.

And you can see in 2017, our actual budget, the bars at the top of the chart actually start to ramp up at $3 million a year. And at 2028, it reaches that $76 million a year figure. But you can see even over the 20-year period, we never get rid of the backlog. We're always going to have a backlog currently.

This is the same graphic, but shows what would happen if we advanced the increase in our CIP spending by two years, from 2017 to 2015. Again, that would be -- in 2015, increase our CIP renewal budget by $3 million and then advance it by $3 million every year after that until we reach $76 million. And you can see a dramatic drop in the of backlog. It never gets much above $100 million. And then by 2027, the backlog is basically taken care of.

With that, do you have any questions?

CHAIRMAN SANCHEZ: Are there any questions?

Councillor Garduno.

COUNCILLOR GARDUNO: Did you have a question, Mr. Perry? Go ahead.

MR. PERRY: Mr. Sanchez, this question might be directed to you as well. It seems that the capital program is in no bay capable of keeping up with the needs as the current projections are for a hundred-year need and reaching the $76 million per year. But that changes in 2028, I understand.

MR. SANCHEZ: Mr. Chairman, Mr. Perry, I think what Dave Price lis alluding to is to get to that $76 million threshold, we need -- we cannot bridge that financial gap in a short term. So our plan would be over a decade to incrementally add $3 million to our capital spending.

So right now we're assuming 2017, $3 million, 2018 would be $6 million, 2019, $9 million, and it would keep compounding. If we can get to that $76 million figure and maintain that going forward, we not only could take care of the backlog but we stay current with our rehab and replacement going forward.

MR. PERRY: And how does the revenue side of picture keep up to be able accommodate that type of commitment on the capital side?

MR. SANCHEZ: Mr. Chairman, Mr. Perry, I think that's the end of the presentation. I can answer that now, if you'd like.

MR. PERRY: No, I don't want to take

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Mr. Cassidy's thunder away. Thank you.

CHAIRMAN SANCHEZ: Councillor Garduno, then we'll have Mr. Cassidy come up and give his presentation.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

I had a simple questions, and I think it was partially answered. But how -- are we going to have to bond for this gap, if you will?

MR. PRICE: Mr. Chair, Board Member Garduno, I'm really not the best person to answer that.

MR. SANCHEZ: Mr. Chairman and Councillor Garduno mit would be a combination. The board policy for our basic capital program is 50 percent is funded with bonds and 50 percent is matched with cash. So going forward, that would continue to be the case. And it's a 12-year term for financing, except for special projects like the San Juan Chama Water Treatment Plant or the south side reclamation plant, which are 20-year term projects -- 25 year, I'm sorry.

COUNCILLOR GARDUNO: But those are cumulative. In other words, those bonds have to go out to be able to garner that money?

MR. SANCHEZ: Correct. And Mr. Cassidy in this next presentation will show you our total indebtedness and the rate of repayment and what our debt structures

will look like over time.

COUNCILLOR GARDUNO: And rate structures?

MR. SANCHEZ: Yes. Well, our debt structure.

CHAIRMAN SANCHEZ: Let's go ahead and proceed and conclude the presentation, then we'll open it up for questioning.

Mr. Cassidy.

MR. CASSIDY: Good evening, Mr. Chair, Members of the Board. What I'm going to begin with is a summary of the current outstanding debt of the Water Authority. And just for the purpose of those viewing and in the audience, the bonds and loans that the Water Authority obtains are repaid from net revenues generated from operation of the water and sewer system, the Authority's system, not from property taxes, not from gross receipts taxes. So we need to set rates and charges sufficient to pay principal and interest, pay operating expenses and pay for capital replacements, as Mr. Sanchez just described.

You have board policies in place that require a number of things to happen. We try to target that 50 percent of your capital needs on basic needs program, just replacement, normal expansions to be paid with Authority cash generated from rates and balance from bonds.

The basic need program -- I'll actually go to the slides here. We have 690.9 million of outstanding bonds, with an average rate of a little over 4 percent. It's fixed rate debt. There's no variable rate debt, no interest rate swaps on any of the debt. We do have senior lien debt and subordinate lien debt, all of the debt or loans that we take out from state or state agencies, we put it at subordinate lien level so that debt that is outstanding in public investors hands and rated by rating agencies enjoy a senior lien.

We have a senior lead debt broken down to 669 million, 20.4 million a subordinate lien and 1.5 million a super subordinate lien debt. $173 million of the $690 million of debt is for basic needs, those normal things that you have to do every year to fix and replace. That's the 12-year maturity debt. Final maturity currently on all of that debt is 2023. The average rate is about 3.74 percent. The average life of that debt is just under five years, about four years.

We have, however, $495 million of special needs project debt, senior lien debt that's rated that was originally issued with a 25-year final maturity. The average life of this debt is a little under ten

years. The average rate, 4.63 percent and the final maturity 2037. I'm sorry for the detail.

We do have -- and I'll get to a graph that will help you put this all in order in your minds. But we do have the subordinate lien debt that's been taken out for various purposes through the New Mexico Environment Department or the New Mexico Finance Authority drinking water loan program or the water trust board for various special needs projects, like the valley utilities project or the Santa Barbara project or the Carnuel project. And the Carnuel project, that loan of 1.5 million was accompanied by a state match of 3.9 million.

Here's the picture that we need to get to. And what we've done here is break down the basic needs debt, the special needs debt by principal and interest. And this probably doesn't work, but the dark blue area is the principal that matures on your basic needs debt. The light blue is the interest on that debt over the times 2012 to 2024, and in the special needs debt for San Juan Chama and also the very costly projects that we've put in place as a community, the dark brown is the principal payment, the light drown is the interest on that debt, and you'll notice over time, as principal pays down,

interests decreases and principal increases.

We've also layered in here, if you can see it, debt for future basic needs borrowings that we anticipate every two years. As was described to you, we try to finance about 30 or a little -- thereabouts every year for basic needs. But we really borrow ever two years about 60 to $62 million. Those are layered in to show you that, over time, our debt service requirements, principal and interest, will grow. And what this is going to do, along with your operating expenditures, is drive your rate structure and rate increases. Hopefully, you know, that is obvious. And if it's not, we'll be happy to slow down and go back.

So we do have publicly sold debt and we do apply for ratings from Standard & Poor's and Moody's & Fitch, I think as you all are very aware, last July Fitch, which rated us at the A-plus level downgraded the Water Authority primarily because of declining debt service coverage numbers, that is when you compare your net revenues available for debt service to your actual principal and interest payments. We fell below a covenant we made to bond holders; that is that coverage would be 1.33 times debt service. We fell below that, and also our liquidity really fell substantially as well.

The board, however, having put in place the two rate increases that you have done, one was effective July 1st, 2011 and the other July 1st, 2013, has helped, and, you know, as we monitor the cash, we're rebuilding liquidity again. But we did have that rating downgrade, if you will, last July. But Fitch still, you know, rates us in a double A category, which is still a high quality rating. And other utility groups across the country that have similar righting would be the District of Columbia, Houston, Fresno, Pima County, Arizona, and San Diego on Fitch. Standard & Poor's, this last month, as I think all of you are now aware, did also downgrade us from a very stellar Triple A rating to a Double A plus for the same reasons, declining debt service coverage and weak liquidity, and also the fact that you haven't timely put rate increases into place the way we may wanted to have put them in place had we known what was going to happen with the declining expansion of housing markets and so forth. You know, a lot of our revenues do come from UECs, and when housing development stops, our revenues decline.

With that said, City of El Paso, San Antonio and Los Angeles Department of Water and Power have a Double A plus rating, same as our rating now, as does

the U.S. government; they have Double A plus from Standard & Poor's. Not that we want to compare ourselves.

Moody's has rated us historically as Double A-1. El Paso, Phoenix, Tucson, Denver and Dallas have a similar rating from Moody's. We included on this page the definitions of those ratings. And again, we're in among the highest rating categories, even so. Again, you know, for bragging rights, you always to be Triple A. For borrowing purposes, you want to be Triple A. Having a Double A plus, Double A-1 rating will still allow you to access the public markets, but that doesn't correct our need to rebuild liquidity and meet our debt service covenant coverage, covenant requirement that we made historically to bond holders and we're measured against in the public market.

So we created this next graph to put this hopefully in a little more perspective. There is a solid yellow line across the top, and this is the board's policy. We want our debt service coverage target to be 1.5 times coverage. And, again, this is net revenues, not counting noncash items, depreciation measured against your annual debt service requirement, 1.5.

Our legal covenant, if you will, in all the

bond resolutions, is the green line at 1.33, and you can see the red line is the coverage that we actually achieved, and you see we fell below the green line in three years. In 2012, you know, we hope to be above that. Your staff has said that we will indeed be above that.

And then there's a dotted red line that shows how we're going to get back to the 1.5 times coverage. And this does include all the future borrowings. If I could, there are a number of other key ratios the rating agencies target and look at when they're rating us, and investors look at when they buy your bonds. One is the age of plant. And what we've done here is compare, for the last six years, where our age of plant, the calculation that determines how old our system is, compares to Triple A, Double A and A rated utilities across the country. And this is where we outperform a lot of the other Double A and Triple A rated credits. They have a 13-year average life and ours is nine and ten years.

This reflects the fact that you've spent a lot of moneys, especially San Juan Chama, rebuilding the system. As this goes up, it's a bad number. The senior debt service coverage number, the senior lien debt service coverage is shown here, and most Double A

and Triple A rated utilities are over two times coverage, seeing two and a half times coverage. In the last three years, we've been below what we've historically done. Again, this is the reason we were downgraded, because our coverage has fallen.

Projected water rate increases I think tells the story of what got us here. We have been adopting a rate strategy that results in an average rate increase over time of about 2 percent; whereas, Triple A rated and Double A rated utilities are 5 and 6 percent on average, historically.

The next chart, which is the ten-year bond principal payout reflects how much of our debt is repaid within ten years. And when we issue debt, we amortize it every year and we want it to pay off as rapidly as possible. And your 12-year rule on basic needs really helps this. And you can see, I think that number -- about 52 percent of our debt is paid off within ten years, which is really admirable.

From a liquidity standpoint, there are a couple things here that are of concern. The days cash on hand calculation shows that in 2011, we fell to 77 days cash on hand when our Double A and Triple A rated counter parties or comparables or peers were many times above that. Our day's working capital also

declined, reflecting the fact that we do need additional revenues. Our operating margin, however -- and I'll highlight this for those of you who can't see it on the screen here -- you know, we're about 35 percent, which is great. And what we're spending that money on is capital and debt service. And our reserves have diminished and need to be rebuilt.

With that said, I'll stop there and stand for questions or turn it over to Mark.

CHAIRMAN SANCHEZ: Are there any questions?

MR. SANCHEZ: Mr. Chairman, if I could answer Mr. Perry's question. Going forward, this is the finance plan. Assuming we maintain our reserves at one-twelfth going forward for the next decade, assuming we start spending $3 million a year for our asset management ramp-up program in 2015, and that we maintain a $10 million annual spending for our south side reclamation plant, assuming those three items, we see the need for a rate adjustment in 2016 and 2018.

We have never managed for rating from Standard & Poor's, Fitch or Moody's. The reason for that is the rating agencies, as Mr. Cassidy showed, they want you to have almost a year of cash on hand. That would require staggering rate increases for our customers just to satisfy a particular rating agency.

They have always looked at us in terms of board policies, in terms of our water supply and in terms of delivering what we say we're going to do in the future each year. Councillor Jones, Councillor Garduno -- I'm sorry, De La Cruz, were with us at this last rating agency presentation and they could attest to the some of the dialog and the feedback we got from the rating agencies.

However, we've always tried to manage on the margin, quite frankly, and only go to the ratepayers when absolutely necessary. That has come to roost basically in this last year and the rating agencies have sent a signal saying: You're still highly rated, but you need to shore up a few things going forward if you don't want additional downward pressure on your rating. And I think today, we're still very highly rated. There's nothing to be ashamed of. But going forward, we do see a need unfortunately for rate adjustments into the future.

Now, if you ask what's the consequence of not doing it, would it affect our day-to-day operations? Not substantially. However, the deferred maintenance of our capital projects, as Mr. Price showed, would just continue to mount going forward. So we would see more emergencies, more of our capital

spending would be shifted to operating expense in terms of emergency repairs with water and sewer line repairs, and more distribution in the roadways and our reserves would continue to decline.

At this point we'd be happy to answer any questions. But quickly, let me just give you some comparable, because as we're looking for additional revenues, in your mind you have to be asking the question: Are we bloated in bureaucracy? How do we compare to other utilities?

As Frank Roth mentioned earlier, we benchmark ourselves against other water and wastewater utilities in the western United States, serving a population of a half a million plus. When we do that, our water operation maintenance costs are comparable to peers, despite the fact that we're literally operating two water systems. We have a groundwater based system and a surface water based system.

On the wastewater side, we're less than our peers, and when we look at our customer water accounts per employee, we're higher than our peers, meaning we manage more accounts than they do. So we're more efficient. And the same holds true on the wastewater side. When we look at our rate structure and how we compare to metropolitan areas in New Mexico and in the

region, you can see Santa Fe and Rio Rancho are substantially more than we are today and they have rate increases that they're proposing going forward. Colorado Springs, substantially higher. We're comparable to El Paso and slightly more than Denver and a little bit higher than Phoenix, although Phoenix is highly subsidized.

So this is a low water user. When you look at a high water user, the picture is almost the same. The difference is Colorado Springs jumps to the top and Phoenix exceeds El Paso as well as Denver based on their tiered rate structure.

At this point, all three of us would be happy to answer any questions you might have. Again, this is for introduction only. There is nothing before you to approve. These rate increases in the future, we do see a need for that if we are to get a better handle on our capital program and maintain our reserves going forward.

CHAIRMAN SANCHEZ: Are there any questions?

Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman.

Mark, what percentage of the total, if that's the appropriate question, will apply itself to

the south side reclamation plant?

MR. SANCHEZ: Of the total increase going forward?

COMMISSIONER DE LA CRUZ: As projected.

MR. SANCHEZ: Well, if you assume $30 million over the next decade going to additional basic rehab spending, and approximately $200 million will go to the south side reclamation facility, the lion's share of it is. However, most of that will be bonded; that will not be cash.

COMMISSIONER DE LA CRUZ: And that will be within the next decade?

MR. SANCHEZ: Oh, yes. If we don't ramp up our spending at the south side reclamation plant and do the improvements that we have planned, we'll see EPA sanctions because we will violate our discharge permit.

COMMISSIONER DE LA CRUZ: Can you generally describe the improvements that you're talking about.

MR. SANCHEZ: For those of you that have visited the plant, it's literally everything incrementally going forward. We return, on average, 55 million gallons of water a day back to the river, so that's -- every time someone flushes the toilet, there's a septage hauler that brings sewage that's pumped from a

septic tank. We have to treat all of that and return it to the river. And unfortunately, unlike the water treatment plant that we can turn off, we cannot shut off the sewer treatment plant. There is no way to stop the gravity flow of sewer and returning that to the river. So the consequence of that is permanent exceedances in terms of contaminants to the river, which it's not in our interest to do that, and not in the downstream users' interest of us doing that.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair. So from your presentation, and I see here the finance plan, spending is proposed for 2012, 2014 '16 and 18, is that correct, at 5 percent?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that's correct. However, the 2012 and the 2014 are rate increases that have already been approved. 2016 and 2018 have not.

COUNCILLOR GARDUNO: Right. And you're thinking that that will take care of the need, as it were, that you just described?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, we believe that's the case. And in going forward, the

reason you don't see a rate adjustment after 2018 all the way through 2021, if you go back to Mr. Cassidy's graph of our debt service payment over time, as our debt declines, it will provide additional revenue going forward to fortunately help us push out additional rate increases into the future.

So we think at this point we could probably go at least four years after 2018 without the need for an additional rate adjustment and spending the $76 million a year and taking care of the south side reclamation plant and maintaining a one-twelfth fund balance, which we need to do.

COUNCILLOR GARDUNO: And, Mr. Chair, if I could.

So going forward, you feel comfortable that this will take care of it. However, is there any contingency for, heaven forbid, some kind of a catastrophic situation.

MR. SANCHEZ: Mr. Chair, Councillor Garduno, yes. It's the rate reserve fund. If you recall, some years ago this board -- and we had that conversation about our conservation efforts, about climate change that could effect our revenues, about the downturn in the economy, so each budget cycle we put in $2 million in a rate reserve fund which accumulates over time, and that's kind of our rainy-day fund for these

emergencies outside of the rate reserve, so outside of our fund balance.

COUNCILLOR GARDUNO: Right. And I remember the conversation, but it's not that many years back. So two million a year doesn't accumulate that quickly. Do we know where we're at at this point?

MR. SANCHEZ: Well, keep in mind, spent the rate reserve fund to postpone our rate increase to 2012, so today, we would probably have about $4 million after this budget.

COUNCILLOR GARDUNO: But going to 202, we would only have --

MR. SANCHEZ: Well, going forward, we don't anticipate using that here, so, you know, if you had a decade of rate reserve fund, that's $20 million. So that's our contingency plan for a huge swing in some emergency situation.

COUNCILLOR GARDUNO: And the hope is that we don't have smaller swings yearly or bi-yearly.

MR. SANCHEZ: Correct. And we feel 99 percent confident with the numbers we're presenting to you today. These are not estimates. The assumptions going are forward are that we can maintain or expenditures at no more than 2 percent, even though power, fuel and chemicals are rising exponentially.

We still identify and budget efficiencies each year. We are constantly looking in the organize, trying to do things differently and better and cheaper, but as effectively. And we're assuming our revenues, outside of these rate adjustments, are about one and a half percent.

COUNCILLOR GARDUNO: And, Mr. Chair.

Mr. Sanchez, what worries me is that -- these are, I'm sure, solid numbers and based on, you know, not predictable but projections. But if these disasters were to happen, you know, consecutively for five years, where you're needing to spend five million, there goes your 20 million that you had hoped for in reserve that hadn't been accounted for.

And what I worry about is that we're getting into the kind of debt that someday, 2020, we're going to have to go to our ratepayers if we don't take care of it now and say, "You know what? We're going to have to ask for 20" -- a la PNM, we're going to have to ask for a 25 percent increase.

MR. SANCHEZ: Mr. Chair, Councillor Garduno, actually, it's the opposite. There are many ways to push that debt out into the future. We do not subscribe to that philosophy, we've never recommended that to the board. There's many creative financing

techniques that would allow us to not have rate adjustments. But that would in fact push that debt -- that mount of debt would grow, it would not decline. And as Mr. Cassidy showed you, our debt is declining, even though we're highly leveraged. And the main reason for that is the San Juan Chama project. We had to borrow $500 million to bring that project online. But the consequence of not bringing it online would have foregone the equivalent of $5 billion in water rights and it would not allow us to preserve thew aquifer for future drought. I mean, I think we're doing the right thing, but it comes at a cost.

COUNCILLOR GARDUNO: Mr. Chair, that brings me to another concern that I have, which is the San Juan Chama project, which is, again, sort of the predictable with present day knowledge.

But with future knowledge, that may not be an asset that we can go to if there is a back claim. Is that true?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, I'm not sure I'm following you.

COUNCILLOR GARDUNO: Well, if one of these days the Colorado compact says, "You know what, New Mexico, California, Nevada? You're not getting what you used to get," just because that's the way it is, and it

doesn't matter what piece of paper we present, it's not going to, you know, stand because there's no water.

MR. SANCHEZ: Well, Mr. Chair, Councillor Garduno, I think that will occur at some point in the future. There will be variability in supply. Not because of the compact, just because of the Colorado River. And that's part of the strategy, that we will maximize surface water and minimize groundwater pumping. When that occurs, we will have to pump more. There's no question about that.

But to give you the context, the entire Colorado River supplies seven states and about 15 million acre feet of water. We have rights to 48,200 acre feet. So that's a fraction of 1 percent of that total. New Mexico gets about 11 percent roughly of the upper Colorado as part of that compact. So the compact in and of itself will not have shortages. It's if there's a shortage of Colorado River water due to climate change or variability, then there will be equal sharing of shortages.

COUNCILLOR GARDUNO: And percentage of shortage is still referencing the shortage.

MR. SANCHEZ: Certainly.

COUNCILLOR GARDUNO: It doesn't matter that we

have 11 percent, but if we had 11 percent of a bucket and now we have a cup, 11 percent is not that much.

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, on the flip side, we're very fortunate that we have two supplies of water for this area that we can use going forward. I think the prudent strategy that we have undertaken is minimizing our pumping, allowing the aquifer to recharge itself, which we've documented by USGS. That is occurring at a pretty rapid clip and because of what we're going.

COUNCILLOR GARDUNO: And, Mr. Chair, I promise it's the last statement, question.

Which brings us back to earlier discussion about what happens to the groundwater if it's contaminated and we can no longer draw from it and we're in the scenario that I just described?

MR. SANCHEZ: Mr. Chair, Councillor Garduno, I assume you're talking about Kirtland Air Force Base. Worst case scenario, this contamination proceeds, contaminates one of the Ridgecrest wells. We either shut that well off, we can treat it at the wellhead; it's not uncommon, there's technology to the that; or we can relocate the well. Those would be the strategies. Now, that one well is not our water supply. It is simply one well and one source of our

groundwater portfolio. We move water daily from east to west, north to south. Our system can accommodate that. On average we consume 90 million gallons of water a day. And regardless of variability of wells, that consumption and that production occurs, and that would occur in the future.

CHAIRMAN SANCHEZ: Thank you. I have one question regarding the rate increases. We are looking at one in 2013 and that is a 5 percent increase to the ratepayers. And then again now we are looking at 2016 and 2018. What is going to be the average dollar amount per ratepayer in those increases if we do go through as a board and request those increases.

MR. SANCHEZ: Mr. Chairman, today the average water and sewer bill is about $45, and that does not include the solid waste component that we bill for with the city. Each increment of 5 percent would be rounding up about $3. So next year that $45 average bill would be 48. If the board were to agree with our projections and the needs, in 2016, it would be 51, and in 2018, it would be $54.

CHAIRMAN SANCHEZ: And I have one question for Mr. Cassidy, or Mr. Sanchez, maybe you can answer that question. Looking at the 495.7 million for the San Juan Chama project, we're looking at an average annual

rate of 4.63 percent, are any of these bonds callable, and can we get a better rate? Because I know it's a long term bond.

MR. SANCHEZ: Mr. Cassidy is probably the better person to answer that.

MR. CASSIDY: Mr. Chairman, there is debt that is callable. I think there is one that's option redeemable 2013. We've been monitoring that with your staff. And you can expect, over the next four or five months, we'll come with a recommendation to refinance that. And as other debt becomes callable and it makes sense to do it, we'll also recommend to the board. But we actively monitor for you and happy to share it you need it.

CHAIRMAN SANCHEZ: Okay. Thank you.

Any other questions?

COUNCILLOR GARDUNO: One very quick question. And this is just edification.

Storm drain, is that Water Authority or is that city or who does that go to?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that's City of Albuquerque. The storm system is the City of Albuquerque's. We operate two pump stations on behalf of the city, but the storm drain system, as a whole, is owned and operated by the city.

COUNCILLOR GARDUNO: And I know that if you do that -- then are you charging back to the city the cleaning up of that storm drain water, or how does that work?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that storm drain water does not flow through the south side reclamation facility. It goes directly into the river.

COUNCILLOR GARDUNO: That was my concern. Are we ever going to look at that?

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Okay. Let's go ahead and proceed to Item C, WUA R-12-11.

Mr. Sanchez, go ahead and proceed.

MR. SANCHEZ: Mr. Chairman, I believe we've covered both of those items.

CHAIRMAN SANCHEZ: Okay. Next item is Item D, WUA R-12-12, and we have Allan Porter that will make that presentation.

MR. PORTER: Mr. Chairman, Members of the Board, this is a presentation of the first reading of a development agreement with the Eagle Vista, Limited Liability Corporation, for water and sewer services for the Eagle Ranch Road apartment complex development Eagle Ranch -- Eagle Vista, LLC, recommend desires a

200-unit apartment complex on the site just north of the Eagle Ranch Road and Irving Boulevard intersection this site is located outside the Water Authority's service area. Eagle Vista has requested the water and sewer service from the Water Authority. They have gone through our availability process that is included in the development agreement.

The water system to this site will consist of a public extension of non-master planned water, and it will be a private wastewater collection system that discharges to our system in the Eagle Ranch vicinity. The development agreement is required to allow the proposed work to proceed. All costs of required infrastructure will be borne by Eagle Ranch, LLC, and there will be no reimbursement by the Water Authority for the water and sewer infrastructure constructed. All UECs and water supply charges will be imposed on this development.

The proposed development agreement outlines the terms and conditions to enable this project to proceed and it is recommended by staff for board approval. Do you have any questions?

CHAIRMAN SANCHEZ: Are there any questions? This is to only for introduction, so it will not be voted on this evening.

COUNCILLOR GARDUNO: Is that correct?

CHAIRMAN SANCHEZ: That's correct. There's no motion.

COUNCILLOR GARDUNO: Okay.

CHAIRMAN SANCHEZ: Okay. Let's go ahead and proceed to approvals of the consent agenda. There are no consent agenda items this evening.

Our next item on the agenda is approvals. And that is WUA R-12-7, adopting the drought management strategy as the Water Authority drought management policy. I move approval.

COMMISSIONER DE LA CRUZ: Second.

CHAIRMAN SANCHEZ: We have a motion and a second. And to make that presentation will be Katherine Yuhas. Welcome.

MS. YUHAS: Thank you, Mr. Chair, Members of the Board. The drought management strategy is being updated tonight for several reasons. And the first is that the original drought management strategy was written when the Utility was a part of the city. And so many of the water use reduction methods that were proposed at that time are not things that the Authority has the ability to enact. Another reason is that the drought management strategy called for an update every five years, so it's timely for us to do

it now. We want it to conform with the 2007 water resources management strategy. And, finally, we had droughts in 2006 and 2011 when we used the drought management strategy and we learned things from that, so it's seemed appropriate to move forward with the new strategy.

We worked with the customer advisory committee on development of the new drought management strategy starting last fall, and we met with them for a brainstorming session before we ever even wrote anything, and they helped us come up with both the criteria and the water use reduction methods. And then we worked with them again when a draft had been put together and they were very helpful in developing the chart that we've used for the criteria, which you have in your packet.

What I would like to say about the two criteria is that by developing two criteria, we have the ability to get our customers involved in being part of the solution of drought management. In the drought management strategy everything that we do to reduce water use during a drought is about getting our customers to use less water, and so it makes sense to have one of the criteria be how well are our customers doing at reducing their usage, are they responding to

the message that we're putting out there.

The other criteria is to maintain that same environmental criteria that we had previously, which is the criteria of groundwater pumping. And that actually is a more stringent groundwater pumping standard than was in the original drought management strategy. And when you couple those two together on your chart, you can see that, you know, you find where you are in terms of groundwater pumping, you find where you are in terms of GPCD and then you follow that along to figure out what stage we're going to be in.

For instance, last year, using the current -- this proposed drought management strategy, we would have been in Stage 1 drought. That is not what we did last year. Last year we never got to Stage 1. Last year we were just in a drought advisory. So this strategy would be a little more stringent than what we did last year.

And with that, I'll stand for any questions.

CHAIRMAN SANCHEZ: Are there any questions?

Commissioner Hart Stebbins.

COMMISSIONER HART STEBBINS: Thank you, Mr. Chairman.

Ms. Yuhas, I notice that using the criteria

on percentage of groundwater pumping goal, that under these new criteria, we wouldn't reach Stage 1, in some cases, until we're more than 140 percent. That doesn't seem as if it puts a lot of emphasis on our groundwater pumping goal. And we talk on this board about the aquifer as our savings account, as water for future generations. Why wasn't there more emphasis put on the rate at which we're pumping out of the aquifer?

MS. YUHAS: Mr. Chair, Commissioner Hart Stebbins, this actually puts more emphasis on the rate at which we are pumping water out of the aquifer. We worked with CH2M Hill on developing this criteria, and by using a percentage rather than a flat amount, which is what the old strategy did, this actually links it more tightly.

So for instance, if the goal was to pump 20,000 acre feet out of the aquifer in a given year, we would have enter drought stages when we got to 24,000 acre feet, which is, you know, only 4,000 acre feet more. That's really not that much, given that the old strategy looked at 10,000 acre feet before you went into an additional strategy.

COMMISSIONER HART STEBBINS: Thank you. And I appreciate that this is a great improvement over what

we have in place now. I think just in terms of moving forward, it seems that you're putting a greater emphasis on the gallons per capita per day than the percentage -- than the pumping goal, how much we're over the pumping goal.

Again, it seems that if we're not going to Stage 1 until we're already at 140 percent in some case, that we're not really making as big an effort to protect the aquifer.

MS. YUHAS: Mr. Chair, Commissioner Hart Stebbins, I think that this puts them in equal, you know, importance in terms of the response we're getting from our customers. And the reason we included GPCD is because if our customers are doing a great job in terms of reducing their water use and responding to drought, which is what we did see in 2006 and 2011, we see that our customers do a00 good job with a conservation message that we get out to them, then we don't to be penalizing them with additional very difficult measures. Some of these things are going to be very hard on our customers if we implement them, and so we want to make sure that we're having a balance.

COMMISSIONER HART STEBBINS: So what are the steps? So we go to Stage 1. What does the entail?

Do you have that?

MS. YUHAS: I do.

COMMISSIONER HART STEBBINS: Like Stage 1, Stage 2, Stage 3.

MS. YUHAS: If you just wait one second. I'm sorry that I don't have that up here.

The very first stage is a drought advisory, and if you look on your chart, that's the areas that green. In a drought advisory, we would enter into -- no matter what water usage patterns are, a drought advisory is what we did last year, and all that is is raising awareness with our customers. It's switching all of our messaging to look out, it's a drought, reduce the usage, getting that up on the billboards and on TV.

We would do that without approval from the board whenever the majority of Bernalillo County is Stage 3 drought. And the reason that stage doesn't require board approval is that we're anxious to get that message out as soon as possible. We don't want to have to wait for a board meeting, we want to get it done.

All of the next stages, the drought warning, the drought watch and the drought emergency are all board approved, of course. And the first one, we

would be enacting a doubling of water waste fees and we would be offering a Drought Smart class rebate. That would be a $20 credit on customers's water bills for attending a Drought Smart class. And we are unique among I think all the cities in the nation in having positive measures in place in our drought management strategy for our customers, to give them assistance in doing the right thing during drought. So that's the one that would take place during a drought warning.

As we move to the next drought stage, we would add more measures that are mandatory to this list. The first of those would be doubling the surcharges. Now, the surcharges are what a customer gets on their water bill when they're using more than their winter average. And so those are going to go up and that's going to be pretty hard on our customers. We would also change the time-of-day watering restrictions. Right now, they're 11:00 to 7:00. That would change from 9:00 a.m. to 9:00 p.m., no watering during those time periods.

We would also stop offering variances to the time-of-day watering restriction. The time-of-day watering restrictions can have a variance if you are installing sod or reseeding. Of course during a

drought, it's not appropriate top sod or reseed, so we wouldn't offer a variance except for athletic fields, and that would be for the public schools and for the parks department, and we've talked with them about that variance. We have someone from the public schools on our customer advisory committee.

And finally, we would be distributing low-flow showerheads to our customers and advocating five-minute showers. And that's the positive incentive for them at that level.

Finally, when we get to a drought emergency, we would be tripling surcharges. Yeah, I hope we don't get to a drought emergency. I hope we don't have to do that. And we would be reducing the mandatory day-of-the-week watering restrictions by one day per week. So for instance, if we're in July, normally you could water three days per week in July, we would only allow you two days per week.

And finally, the positive incentive in a drought emergency is we would have a 20 percent reduction rebate. And that would be structured for our customers so they could sign up to voluntarily reduce their usage by 20 percent and get some amount of rebate. The exact structure of that rebate program would depend on when it was enacted, you know, what

time of year and how we would base that in terms of, you know, how much they needed to reduce and compared to what period and the amount of the money we'd give them.

CHAIRMAN SANCHEZ: Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman.

Ms. Yuhas, this is a program that clearly affects the public. How was the public allowed to be involved and helped develop this, or at least to review it?

MS. YUHAS: Mr. Chair, Commissioner De La Cruz, we put out a public notice before the last board meeting, in March, to let our customers know. This has been on our website for months now. It was advertised as part of the customer advisory committee meetings and we did have members of the public attend those meetings when the board was hearing -- when the committee, I should say, was hearing those, and members of the public participated in those discussions.

COMMISSIONER DE LA CRUZ: And so with the ideas that you received, were any implemented?

MS. YUHAS: Mr. Chair, Commissioner De La Cruz, most of what you see here is a result of input from

the customer advisory committee at their meetings. Much of this was developed by them. That whole chart that you see of the drought stage criteria, that was put together at a meeting. I didn't even draw it. It was a member of the committee who did it. So, really, this has been a very collaborative process for us.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you.

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

Ms. Yuhas, I want to compliment the entire community in the service area for doing a lot of what you have asked folks to do, and I think it's done things. But it's one of those things where it's kind of double-edged sword, I guess. The more we conserve, the less money we bring in, the less money we have to pay the debt we've just been talking about.

So, I mean, I certainly would not, you know, encourage folks to not conserve because we need money, but how are we going to, you know, come to that nexus of those two things?

MS. YUHAS: Mr. Chairman, Councillor Garduno, you have asked a really big question of me with that one. Certainly, there needs to be a balance in terms

of water usage. And one of the things we looked at with the drought management strategy is that during drought, we are trying to manage not just the river or not just the aquifer but the aquifer, the river and our entire community and the needs of the people here. We have enormous infrastructure that people have put money into. We have parks, we have landscaping, we have people who want to turn on their swamp coolers so they're not too hot. And we need to be able to provide at some level for all of that. And this tries top take that into account in addition to maintaining the environmental issues also.

COUNCILLOR GARDUNO: Thank you. What about shorter showers, but more expensive? That's something that sort of the bothers me, because I don't know -- you know, I certainly want to encourage all of us to conserve, but maybe the -- instead of 5 percent, it will have to go to higher percentage.

I don't know, Mr. Sanchez, if you want to even entertain that thought. Thank you.

CHAIRMAN SANCHEZ: Let's go ahead and proceed. I mean, that will be a policy decision if there's a rate increase.

We have a motion and second on the floor to adopt WUA R-12-7. All those in favor, signify by

saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no.

That carries unanimously.

(7-0 vote. Agenda Item 9 approved.)

CHAIRMAN SANCHEZ: Thank you, Ms. Yuhas.

Next item is other business. The first item is the Kirtland Air Force Base jet fuel spill remediation status report, and to give that report will be Colonel Connelly.

Welcome, sir. Go ahead and proceed.

COLONEL CONNELLY: Mr. Chair, Members of the Board, thank you for having us tonight. Unfortunately, I am here to talk about fuel on the aquifer which originated from Kirtland Air Force Base. But I'm also here to tell you that the Air Force is taking full responsibility for this. And I'm also here to tell you that we're getting after it and taking measures to get it cleaned up.

So on my first chart -- and what really brings me here, I think what you requested me to come here for is to brief you the results of our fourth quarter round of sampling in our groundwater and our soil vapor concentration wells. But I'm going to focus on the results of the groundwater monitoring

right now.

And the first chart you see is a map of the EDB plume, ethylene dibromide, which is the constituent that goes into solution and stays in solution and travels away from the origin of the fuel spill seemingly the longest. On this is chart you can see the horizontal line on the map going horizontally across the middle of the map. That Gibson Boulevard, just to orient you. And then to the south of that is the neighborhood Siesta Hills. Then it continues south across Bullhead Park. And then you can see the darker line there, boundary of Kirtland Air Force Base. And as you can see, the plume then extends about three blocks north of Gibson Boulevard. So I just wanted to orient you to what you were looking at on the map. And you are seeing the extend of EDB that is registering above the maximum contaminant limit of .05 micrograms per liter, or parts per billion.

The lighter blue dots are locations of our groundwater monitoring wells. And then the dots that are black with the yellow ring inside them represent monitoring wells where we've actually seen raw fuel, fuel in its liquid form, floating on the surface of the aquifer in the fourth quarter, in the shallow wells. So that's what this chart is.

CHAIRMAN SANCHEZ: Let's go ahead and proceed.

Councillor Garduno, did you have a question?

COUNCILLOR GARDUNO: I have a question, because I don't know if I'm oriented or if I heard you wrong. But did you say the diagonal line is Gibson?

COLONEL CONNELLY: The horizontal line, sir, is Gibson.

COUNCILLOR GARDUNO: At the very bottom. Okay. Thank you.

COLONEL CONNELLY: The horizontal line going across the middle of the chart, straight across the mid way of the chart is Gibson.

One more time on this, on this chart. In each of these light blue dots, in most of those light blue dots, you're seeing a location where there are actually three wells, a shallow well, which is at the surface of the water table, an intermediate well, which is about 15 feet deeper than the shallow well, and then a deep well, which is about 50 feet into the aquifer itself. So there are three wells at most of those locations. You're seeing the results of the shallow here.

The next slide is the results of the intermediate wells. Those, about 15 feet below the surface of the aquifer. We're showing you also the

EDB concentrations we're seeing in the intermediate level there. The outermost line just outside the shading area represents the maximum contaminant limit observed for EDB in the intermediate level.

And then continuing on to the deep wells, there are only two deep wells, and those are the light blue dots you see, one on either side of Gibson Avenue that had any EDB at all detected.

So with EDBs not the only thing down there, of course, we have raw fuel and the constituents of the raw fuel. What this map shows you, and it doesn't show you very well because we've got everything overlaying on it all at once, but we have, of course, all the BTEX compounds, benzene, ethylene, tolulene, xylene. And those are all referenced there, but the key to those compounds is that it appears to us that micro degradation, bio degradation is occurring, and so we're not seeing those constituents travel as far from the original fuel site as EDB. So we think biodegradation is acting to be keep those constituents contained.

We also put total petroleum hydrocarbons in the gasoline range organics and the diesel range organics on there, the GRO and DRO. Those are not regulated. Those have no standards. But we like to

test for them because they're indicators that -- if you find a TPH, DRO or GRO, it tells you you better be testing in this location for your constituents of concern, your benzene, your tolulene, your xylene. And by the way, we did test at all of those locations for those constituents of concern and they are reporting as you see here.

In every lotion where we found the TPH DRO and GRO, we did not find BTEX in every one of those locations. So it's just and indicator for us. And we don't find it everywhere we find those items.

I want to call your attention to the big, huge green blob to the northwest of the fuel area. We suspected that was a data anomaly in our fourth quarter sampling. Took a peek at the first quater sampling and we were right, it does not show up in our first quarter sampling. So you can essentially disregard that big ugly green blob there.

So this chart sort of ties everything we're doing together. We have the characterization activities that we've undertaken with the 78 groundwater wells, additional soil vapor wells. We're doing direct push technique sampling along our former fuel offloading rack. So all along the lines that were leaking, we've taken soil samples. And we've

also done some new log well testing. It's a proprietary method of characterizing subsurface soil vapor in greater measure than just regular soil vapor monitoring.

Of course you also know we're doing additional groundwater wells for EDB testing. And this all goes into the evaluation phase. All this stuff is feeding back to us. All the while we're evaluating these characterization efforts, and along the bottom, while we're doing this characterization, we're still doing some initial treatment. And we have been doing some initial treatment for years. It isn't as robust as I know laypersons would want us to do, and for me, I can't wait to get after this stuff. I've been here since July of 2010 and I'm amazed at the progress I've seen since I've been here. I'm excited about the technologies we're getting ready to put in place and to start sucking some of this fuel out of the ground.

And it's all aiming at the final remedy. Our goal here is to come up with a final design to -- the final long term design to get this stuff out of the groundwater and prevent drinking water well contamination, which so far we've done.

Looking at the path forward, we are getting

ready to install three -- additional monitoring wells at three locations in the sort of northeastern portion of the plume area. Because you can see our fourth quarter reveals that there's a data gap, because this thing is going to the northeast and then all of a sudden, it stops. We've got to know what else is going on up there. So to do that, we asked the New Mexico Environment Department to install three additional wells at those locations. You can see two on either side of Louisiana and one near or our Kirtland Air Force Base Well Number 3.

The New Mexico Environment Department agreed that that was a good idea, and they said, in fact, "Why don't you drill three wells at each location, shallow, intermediate and deep." We completely agree with that because it will us reveal the presence of a phenomenon known as a plunging plume. But I don't care about the reason. It's prudent and we're going to do it.

And we're going to allow the data from those wells to help us figure out what we do next, more wells, let us figure out where we're going to put those wells. So we're going to continue our characterization efforts. We're also going to continue our remediation efforts and we're going to

continue working with the New Mexico Environment Department on an iterative approach to get this thing characterized. All the while, we're pressing ahead with our remediation efforts.

In fact, we just recently installed -- okay. So I just talked about the installation of the additional monitoring wells. We're going to start that drilling by mid June. We are just drilled two soil vapor extraction wells right in sort of the sweet spot of the fuel plume on Kirtland Air Force Base. We hit the area of highest soil vapor concentration, which also corresponds to the highest levels of raw fuel on the water table that we've seen. And we're going to start running those soil vapor extraction units on Monday.

We're also working toward a very robust soil vapor extraction unit, so we're going to put those engines that we've had running for quite some years back on on Monday. By the fall, and we're hoping to do it earlier, we're going to have a newly designed, more robust soil vapor extraction system pulling a greater amount of fuel out of the ground right there at that location.

And then finally, we're going to start our soil excavations here pretty quick that our sampling

revealed where we need to dig up the soil and treat it, along our old fuel offloading rack.

So with that, Mr. Chair, I will entertain questions.

CHAIRMAN SANCHEZ: Are there any questions?

Commissioner Hart Stebbins.

COMMISSIONER HART STEBBINS: Thank you, Mr. Chairman.

And thank you for being tonight to share this information with us. I was recently looking at the contract that Kirtland has with Shaw Environmental. And I understand that's a performance based contract.

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, yes, it is.

COMMISSIONER HART STEBBINS: Okay. And at least the draft that I saw, the one that was online, contained a number of benchmarks, and some at a year. And I guess I'm not really clear what the date was for notice to proceed. Can you tell me that?

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, it was 30 September of 2010.

COMMISSIONER HART STEBBINS: So one of the benchmarks, one of the performance measurements was at one year there would be a complete installation of

interim measures to contain the NAPL footprint so it doesn't expand or move. So that would have been due by September of 2011. Do you feel that Shaw has met that goal.

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, the Air Force submitted a work plan in November of 2010 to do just that, to the New Mexico Environment Department. In response to some of their comments, we modified that plan in July of 2011, and have actually yet to receive approval to do that. But it is KK there's reason for it. There are technical reasons for it, which we've actually only recently come to fully understand. And we need to allow our soil vapor extraction results to sort of tell us whether that's the next prudent approach or not. Because it is thought that this very robust SVE unit we're going to install hopefully before the fall will start changing the dynamics of this fuel plume immediately and dramatically, potentially negating the need for that, which would alleviate that contractor of that requirement by direction of the regulating agency.

COMMISSIONER HART STEBBINS: Okay. Thank you. So if you were to describe the containment plan as it exists, you've got a new well that's been drilled,

you're saying it's going to go online Monday, is that the extent of the existing -- what you would refer to as an initial treatment plan? Is that sort of what's in place now for the NAPL?

COLONEL CONNELLY: Commissioner Hart Stebbins, yes. That would -- that would -- when they start operating on Monday, they would be the extent right now of that. It isn't the extent of everything we've ever done.

COMMISSIONER HART STEBBINS: I understand. And then you've got the more robust, the more powerful SVE unit that would be coming in in the fall sometime. And would that be implemented in the fall? Is that the plan? Is it that would actually begin drawling out the fuel sometime in the fall of 2012?

COLONEL CONNELLY: Yes, ma'am, absolutely.

COMMISSIONER HART STEBBINS: Okay. Great. And then I wanted to just switch to the dissolve phase question. And I know that's the one that has sort of recently been in the -- been given a lot of attention. What is the plan? So I know that right now you're in the phase where you're still characterizing that. You've had a discussion, you're going to install some new monitoring wells. Is there any talk about the containment plan? I mean, right now it looks from

your data that it's within about 3300 feet of our closest well, and not really clear actually the extent, right? So right now you know that it has gone at least that far, but do you have a well that has come up clean yet, where you can actually say we know it has not reached this point?

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, we thought we did. In the north, along -- you'll see just to the very north of that plume, there's a well at Florida and Anderson. That's clean right now for EDB. But that doesn't help us because it doesn't look like that's the direction of travel. So the answer is no, ma'am, we need to get some in the ground to help be our sentries. We need to know in those locations identified where -- whether there's EDB present or not.

Now, there are different theories on what this EDB is doing. It clearly is going into solution and migrating away from the site. We don't know at what rate it's doing that. If it does, it should be traveling at the speed of travel of the regional groundwater movement. We don't know if it -- once it gets out there, does it somehow become static? We don't know those things and we need to find that out.

COMMISSIONER HART STEBBINS: Great. Thank you.

And, Mr. Chairman, just one more question.

Has there been discussion of an interim containment plan for the dissolve phase, so EDB specifically?

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, yes. That's LNAPL containment system you've heard. And essentially the theory is that you place this extraction well at the toe, of the historic northern toe of that observed liquid NAPL product, and you get those water flow nets coming into that well thereby catching anything that's going into solution from that liquid phase fuel and up the well.

But there are lots of catches with that. What do you do with the water? What does that do to the liquid fuel sitting behind it? Does it make it start moving? There's some evidence that it could do that. So that's why we're going to work with NMED before we implement that. We're going to look at the results of the soil vapor extraction and see what it does to this thing, and then we'll let the data advise us on when and if we start -- we implement that containment system.

COMMISSIONER HART STEBBINS: Okay. Thank you. Bus as far as the product, the fuel constituents that have already dissolved into the groundwater, are there

strategies for that kind of remediation or an interim plan for addressing that, or is it really going to be at this point keeping more from getting into the groundwater?

COLONEL CONNELLY: You mean removing it?

COMMISSIONER HART STEBBINS: Right. Or what you've described, if you can stop the spread of the plume it's going to hopefully slow the spread of the EDB.

COLONEL CONNELLY: Mr. Chair, Commissioner Hart Stebbins, it's -- there's no plan to actually go in and remove the dissolve constituents. The plan is run these SVEs and slow the rate at which the dissolve contaminants dissolve and go into solution.

COMMISSIONER HART STEBBINS: Thank you very much.

COLONEL CONNELLY: Thank you, ma'am.

CHAIRMAN SANCHEZ: Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

Thank you -- for some reason I can't remember if it's colonel.

COLONEL CONNELLY: Yes, sir.

COUNCILLOR GARDUNO: Colonel Connelly, thank you for being here. Looking at not -- I think it's your last -- it's your last slide, there's kind of a time

-- well, not a timeline, but an explanation of when things might happen. What bothers me is that the SVE unit installation says fall 2012, but it's design in progress. Does that mean that it's going to be finished by then or it's going to take till then to design it, or it may take longer than that?

COLONEL CONNELLY: Mr. Chair, Councillor Garduno, that is our -- that is our target, to have it in place and running.

COUNCILLOR GARDUNO: So if it's not ready by then, again, we won't be extracting anything until that happens?

COLONEL CONNELLY: We will actually. We have -- beginning Monday, this coming Monday, the 23rd, we are going to put those soil vapor extraction unit -- internal combustion engine unites on our two soil vapor extraction wells we've dug.

The difference between the running of the soil vapor extraction units in the past to now is that those soil vapor extraction units have been sitting on top of just monitoring wells trying to pull fumes out of the ground. Monitoring wells were not meant for that; they were never built and designed to do that. So it wasn't very efficient. We weren't really doing as good a job as we could. So we dug these two new

ones, like I said, in the sweet spot and we designed them specifically for this eventual large scale soil vapor extraction system. So now, by putting these internal combustion engine unites back on those two new wells, until we get the big robust one in place, we're still going to be pulling product. And our estimate we should be able to pull about 200 gallons a day per well with those internal combustion engine units. So starting Monday, we're expecting 400-ish gallons a day coming out of the ground.

COUNCILLOR GARDUNO: I don't know how quick my math is, but that's about 60 or 70 years at that rate.

COLONEL CONNELLY: Again, sir, it's an interim measure. We're going to put this big one on. We're hoping to bump that up to about 1,000 gallons a day and then have a look at what the fuel plume is doing, how that effects the fuel plume. And then, again, this is another -- the key to this is that this especially is an iterative approach. This could be part of the final remedy, we don't know yet. But one thing is for sure, it's an interim measure to start pulling things out of the ground.

But if it proves to be really successful, we'll start looking at other areas around it that have also high concentrations of soil vapor and maybe punch

some new wells. But we've just got to let the data tell us what's going on there. And we'll work with NMED and we'll start doing that. So this is -- I don't think this is anywhere near close to the final remedy, sir.

COUNCILLOR GARDUNO: Mr. Chair.

Colonel Connelly, fall 2012 is what we just talked about. But then if you come down to the next column, horizontal column, it says summer 2012 is soil excavation. So you're going to start soil excavation this summer.

COLONEL CONNELLY: Mr. Chair, Councilman Garduno, yes, we are. We've already done some soil excavation in the immediate vicinity of the fuel offloading rack, but now we've sampled along those old lines and found out where we had leaking lines and we have high concentrations of soil vapor by using those push soil testing methodologies, and where we had those hits, we're going to dig it up and we're going to do that this summer.

COUNCILLOR GARDUNO: And, Mr. Chair.

This is complete soil excavation; in other words, you're going to go trench and remove all that soil?

COLONEL CONNELLY: That is correct.

COUNCILLOR GARDUNO: And how far out into the city, or just stay within base?

COLONEL CONNELLY: Mr. Chair, Councilman Garduno, no, no. This is strictly within the confines -- it's all on base and it's strictly within the confines of along those lines where the old fuel lines were from our previous system.

COUNCILLOR GARDUNO: So just in that vicinity?

COLONEL CONNELLY: Yes, sir. Yes.

COUNCILLOR GARDUNO: And then I wanted to ask also about why aren't we removing liquid fuel?

COLONEL CONNELLY: Mr. Chairman, Councilman Garduno, we -- by removing -- when you say why aren't we removing liquid fuel, if you're referring to sticking a well down there and starting to pump fuel out, to do that, you've got to pump a lot of water out. It's called pump and treat. And the technology shows and the experience of the New Mexico Environment Department and its difficult bureaus have shown that it doesn't work very well.

The way to do it is to start drawing as much vapor out as you can because you need to coax that raw fuel to essentially turn into vapor so it will come out. And there are methodologies by which we pump it real hard and leave it sit for a second and let it all

build back up, and then we pump it real hard again. You know, we're creating a vacuum and we're coaxing it out of it's liquid form into its gas form, and the technology is such that it removes thousands of gallons in short order.

Clearly, there -- I mean, it's estimated there are millions of gallons down there, so, again, this is the interim measure. We don't know what the final remedy is going to be here, but our regulator prefers the SVE, we prefer the SVE because we're just going to get better results. The fuel is coming out of the ground quicker, and, frankly, with less other effects like, you know, discharge problems and contaminated water problems coming up out of the ground. This doesn't have all those problems and it removes a lot more fuels. So this is the method we prefer and we think we're on the right track.

COUNCILLOR GARDUNO: At what depths are you doing this, do you know?

COLONEL CONNELLY: Yes. These wells were drilled clear to the water table, because the fuel sitting on the --

COUNCILLOR GARDUNO: So 500, 500 feet.

COLONEL CONNELLY: Yes, that's correct.

COUNCILLOR GARDUNO: Are there any pump that can

do that, can draw from that depth? I was told that 250 is pushing any kind of pump.

COLONEL CONNELLY: Well, Mr. Chairman, Councillor Garduno, your drinking water wells are drilled far deeper than that, and they're pumping --

COUNCILLOR GARDUNO: No, no. For doing what you want to do, do we have the technology and the soil vapor extraction pumps that can do that, they can draw from that far --

COLONEL CONNELLY: Oh, we absolutely do. Absolutely. And in fact, as we -- it's essentially going to be one big system that's going to be plumbed to these different wells, and it's -- just to give you an idea, it's going to move ten times the air that just those internal combustion engine SVE units will move. So it moves an incredible amount of air through that unsaturated zone, which is pretty porous, and it allows for the capture of those vapors to be brought to the surface and treated.

COUNCILLOR GARDUNO: Now, from other presentations, and I think I've heard it recently, that a couple of the Kirtland Air Force Base water wells, water supply wells were shut off. Is that true? Do we know?

COLONEL CONNELLY: Mr. Chairman, Councilman

Garduno, it's -- none of our wells are shut off as a result of this, as a result of the bulk fuel plume.

COUNCILLOR GARDUNO: So you're still drawing from 1 and 3.

COLONEL CONNELLY: We are.

COUNCILLOR GARDUNO: Aren't they in the --

COLONEL CONNELLY: I may need to correct the record.

UNIDENTIFIED AUDIENCE MEMBER: The closest wells are 3, 14 and 15.

COLONEL CONNELLY: Have we shut any down?

UNIDENTIFIED AUDIENCE MEMBER: 1 and 3 failed. They're 50-year-old wells and we shut them down years ago.

COLONEL CONNELLY: So I do not need to stand corrected. So no wells were shut off as a result of this fuel spill. Three is the one closest to it and it, so far, is a non-detect for any constituents.

COUNCILLOR GARDUNO: All right. Another thing is I wanted to say thank you for being at that meeting last night at Cesar Chavez. The thing that was disappointing to me was that only ten minutes was allowed for questions, and I don't think people had an opportunity to really ask the questions they wanted. So I was wondering if we could someday separate DOE

and Kirtland Air Force Base presentation so that, you know, more time would be allowed for questions. Because I think the community was disappointed, understandably, that they didn't have the time to ask some fairly pointed questions, I think, and some questions that needed to be asked.

COLONEL CONNELLY: Mr. Chairman, Councilman Garduno, you're not the first one I've heard that from. Your point is taken, sir. And we do allow for our citizens advisory board meetings to focus pretty much exclusively on this subject, which are held quarterly. But I take your point, sir.

COUNCILLOR GARDUNO: And then, Mr. Chair.

Colonel, did you say that NMED has not approved some of permits that you've asked for?

COLONEL CONNELLY: They've not approved some of our work plans, sir.

COUNCILLOR GARDUNO: So is that holding you up?

COLONEL CONNELLY: Mr. Chairman, Councilman Garduno, no. We discussed the issue of the containment system and we understand NMED's methodology in delaying us from doing that. They want the SVE units to do their thing and they want to see what the plume does in response to those. It's expected the plume is going to -- the plume is going

to react very quickly to this. We expect some wells on the periphery will start coming up below the MCLs. I mean, it's just conjecture but we think the plume may contract some. That's the theory. We're just going to wait and see what happens.

If after we've seen the results of the soil vapor extraction activity that we -- that it would be prudent to install a containment system to halt the migration of EDB from the plume, then that's something we'll work with the NMED to address at that point.

COUNCILLOR GARDUNO: And your plans have in them?

COLONEL CONNELLY: They do. Actually, sir, that extraction well is already dug, it's already installed. New Mexico Environment Department has given us the go-ahead to perform what's called enhanced well development on that, which will allow us to examine the porosity of the surrounding strata so we know how much water we're going to be able to pull out of that thing.

So although they haven't said, no, you're not doing it, and they said, no, you're not going to turn it on, they haven't said you're not doing it all. They've allowed us to proceed so that if and when that decision eventually comes, that well is going to be

ready immediately to turn on and start doing its thing.

COUNCILLOR GARDUNO: Mr. Chair.

Colonel, do you think NMED understands the gravity of this situation?

COLONEL CONNELLY: Mr. Chairman, Councilman Garduno, I do. There's no question in my mind they understand the gravity of this thing.

COUNCILLOR GARDUNO: Why would they not, I wonder -- this is the conjecture on my part, and I know that things don't happen in minute, especially in government, but why would they not okay a plan they would think would work to do something that is absolutely necessary right now, not in a while or when bureaucrats get a chance to look at plans, but right now? We've heard, and I think you would agree, estimates of eight million gallons, concerns that this may not be able to be taken care of at the speed that it's being dealt with, and concerns that if we don't act, that we may be at a tipping point, at a place where there's no turning back. Those Ridgecrest wells will have to be closed off.

And i know that I asked the director and he assured us that if they were closed off that we still had plenty of other straws in the aquifer, but it

seems to me that's not good science. And if this is the biggest fuel spill in the country, not in the area or in the last ten years, but in the country ever, I would like that the Air Force would be putting every single effort into making this and going somewhere else, maybe EPA, to move NMED off the dime.

Thank you, Mr. Chair.

Thank you, Colonel.

CHAIRMAN SANCHEZ: There's still another question, Colonel.

Commissioner Hart Stebbins.

COMMISSIONER HART STEBBINS: Thank you, and I apologize. First I wanted to say thank you, really my sincere thanks, and I think from all of the board, for being here tonight, and for Kirtland's addressing our concerns. I think you have taken our concerns very seriously, and Tom Berardinelli has always been very responsive whenever we have a concern, a question, and I think that we all feel that we are partners with you in this. We share the same concerns, we share the same goal, and it's certainly my intent to be as supportive as possible. And you have always included us at the table as a stakeholder when you're making decisions about where to go next and I really appreciate that.

And at this point you include our staff at the technical committee meetings. But I also understand that you have what you call a tiger team where you are making some technical decisions before they get to the technical committee. Would it be possible for our staff to be a part of that tiger team, to be part of those discussions on, you know, which way this is going to go?

COLONEL CONNELLY: Mr. Chairman, Commissioner Hart Stebbins, that tiger team -- actually, the word tiger team I believe is Secretary Martin's term. It is NMED's tiger team with us. Don't know if that's possible, but we will certainly raise that issue with the New Mexico Environment Department and see what they think.

COMMISSIONER HART STEBBINS: Well, thank you for clarifying that. And I'll raise with the secretary as well. So thanks again for being here.

Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you.

Thank you, Colonel, for your time.

COLONEL CONNELLY: Thank you.

CHAIRMAN SANCHEZ: Next item is Item B, the new water conservation goal. And to make that brief presentation will be Katherine Yuhas.

MS. YUHAS: Mr. Chair, Members of the Board, I heard that, brief presentation. Okay.

As you know from last month, we reached our goal of 150 gallons per person, per day, and so now we're in the process of figuring out what we'd like to do for the next ten years.

And so for the next three months, I'll be meeting with various stakeholder groups and getting lots of input on where we want to go from here, what do we to conserve for, how do we want to conserve, what should the goal be, and I'll be analyzing those approaches and putting together some presentations for the public, along with surveys for the public to complete.

Then we'll be holding public meetings from July through December, district coalitions, neighborhoods. We'll be having something online for customers who can't get to a meeting. We'll have some focus groups. All of that to generate the final presentation at a town hall meeting next spring. From that town hall meeting, we'll develop a conservation plan for the next ten years and I will bring it to you all sometime next spring for approval.

CHAIRMAN SANCHEZ: I wasn't expecting it to be that brief.

Are there any questions?

Thank you, Ms. Yuhas.

Next item is the water loss, the non-revenue water presentation, and to make that presentation will be Angelique Maldonado.

Welcome.

MS. MALDONADO: Thank you. Mr. Chair, Members of the Board, my name is Angelique Maldonado. I am the research analyst for the Water Authority. And I'm going to be talking about our water balance and our water audit in relation to non-revenue water. I'm sure you all gave heard the term "unaccounted-for water," which is the way that we used to gauge, or at least it was a performance indicator for our infrastructure efficiency. And recently we have merged away from that and we are focusing a little more on the non-revenue water. It's a little more of an appropriate term and indicator.

So in terms of a water balance or water budget, they're typically done on large scale, according to a specific watershed. This water budget and water audit is more focused on our distribution system. It still takes into account inputs and outputs. So to narrow the scope, we're going to focus on our drinking water resource inventory, which is

focusing on our well fields and our San Juan Chama water.

So a little bit of history so you can be a little bit more reassured that non-revenue water is not something completely new that has not been tested. In 1990, the United Kingdom developed and applied these new policies and practices, which lead to leakage reduction. Between '97 and 2000, and International Water Association, in conjunction with the American Water Works Association established the best management practices for watering auditing methodology. In 2003, the water loss control committee advocated the use of this methodology in the Journal of AWWA. Then in 2010 established their own software that walks you through and outlines the process of the water auditing methodology.

So performance indicators, the reason why we went away from unaccounted-for water, it was only based on two numbers, production and consumption, only focusing or metered use. So there was a lot of margin for estimating leakage and estimating numbers along those lines, quantifying volumes that were just based in large on estimates. So that was proven to be obsolete and reliable and imprecise, and AWWA touches on a form of gamesmanship where it reflect poorly on

the water industries, where underestimate those leaks can be detrimental to your system. So non-revenue water is a more elaborate approach where they take into account into apparent and real losses. Apparent losses would be more on the line of metering and accuracy data issues, or real losses, which are physical losses, leaks and like breaks. And then it also takes into account unbilled meter volumes and unbilled unmetered volumes.

So to look at our production, you can see here that we're focusing on our system totals for groundwater production and drinking water production. So I've just included 2010 and 2011 numbers here because we just employed the 2010 numbers with the new water auditing software.

Billed meter consumption, you can see that there's a little bit of a difference in footprint. 2010, the explanation there was that was when we took New Mexico Utilities under our wing and incorporated all of those service points, so there was a little bit of a jump in billing and then it kind of stabilized and went back to our normal footprint.

So unbilled meter consumption focuses on authorized usage where -- where we're allocating it with arsenic treatment, surface water treatment, high

hydrant flushing, pressure reduction whenever they're going to work on a line, where they have to reduce the pressure and turn on a hydrant, reservoir storage and also reservoir drainage.

The graph here is just illustrating our well wash. Every time we turn on one of our wells, it has a run time to prime the pump, so there is an amount of water that gets lost for operational purposes. So even though it's non-revenue, it's still for operational purposes.

Billed unmetered is going to focus on customer billing inaccuracies, estimated accounts and stocked meters. Unbilled unmetered is broken into the two categories, which is authorized and unauthorized. Authorized, we're focusing on firefighting, which is on the order of -- well, at least in 2010, it was on the order of 136 million gallons. And in 2011, it was 192 million gallons. And this is -- these modest estimates, and really not even so much an estimate. The way that we calculated these numbers were based on the water audit methodology and their manual for loss control programs.

Field operations, that would be considered authorized, unbilled, unmetered, would be in the event that we did have to open up a fire hydrant and we

didn't put a meter on to meter the line. Unauthorized would be theft, unreliable customer meter reads, meter tampering, illegal use of hydrants, misuse of fire lines, or employing a bypass on your meter.

So our water losses, as I said before are broken down into apparent loses, which include theft, metering inaccuracies and data handling errors. Real loses are leaks and overflows, et cetera. So this is going to give you a little idea of our loss prevention and leak detection, where we focus on our metaloid pipes and age of pipe, and then we also look at our distribution failures in terms of line breaks and leaks.

So this is the spreadsheet that is the output from the water auditing methodology. So this is from 2010 and it focuses on a kind of top-to-bottom approach. So if you look in the left column, with out own sources, it's going to focus on our drinking water source, groundwater and surface water, and then it starts to break it down in large by revenue water and non-revenue water. And you can see how it gives us the ability to parse out the volumes of data that are known. So it's not so much like 14 percent unaccounted for water.

So you can see here that in going through

the process and incorporating all our metered use, unmetered use and real losses and apparent losses, our non-revenue water was down to 6.5 percent of production, which is very good. In 2010, when the AWWA put this software out, they invited us to participate in statistical analysis and a survey where we benefit because they validate our data. So it's validated by a third party, and just that reassurance.

So 2011, the numbers similar from the top-to-bottom approach. You can see here that our non-revenue water did increase a little. It's at 8.2 percent, and mostly that is attributed to real loses and apparent loses. And the real losses, which is kind of encouraging, is that the real losses actually decreased, but the apparent losses increased. So my explanation for that is there is a little bit of lag time when it comes to billing data. And in the event there was a discrepancy on a customer meter reading bill and they call it in, we verify, validate the numbers, and if we have to go back and rebill, then if it was our error and we overcharged, then we take the loss. So that is where those metering inaccuracies or billing inaccuracies come into play.

So long term, because the water audit actually is not something that's just cut and dry, you

know, done January 1st, it actually takes time, it's an ongoing process, but it's just a reassurance that we're taking the initiative to provide stewardship so you can see and quantify the values and the volumes of water and how we're applying them, and a little bit more reassurance that it's not so much of unaccounted-for water of 14 percent.

So that's the pepped of my presentation. Any questions.

CHAIRMAN SANCHEZ: Are there any questions?

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

And maybe both of you can answer this. I notice that you had fire hydrants or firefighting. What kind of water are we using in fire hydrants these?

MS. MALDONADO: The firefighting --

COUNCILLOR GARDUNO: I mean, is it potable water or is it --

MS. MALDONADO: OH, it's potable water. We do have some reuse hydrants that they use for just strictly reuse purposes, but that's separate from our distribution system.

COUNCILLOR GARDUNO: So I don't know, Mr. Sanchez, is that an area that we ought to look at?

Because I can't imagine -- I don't know what the gallons of use it is, but if it's potable water, it seems to me like nonpotable water would put out a fire just as well.

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, I would agree, however, we have over 15,000 fire hydrants. So piping nonpotable water to those hydrants would be quite expensive and take quite a long time.

COUNCILLOR GARDUNO: Right. But there must be some distribution points that could be interrupted, you know, and go to a fire hydrant as opposed to, I don't know, residential, you know, commercial use.

I just -- you know, all the time that I've been on the water board, that has been a nagging question for me, why do we use absolutely pristine water to put out a fire. And I don't know where we go with it, but it's a question.

MR. SANCHEZ: I think we see more of the reuse in our future in terms of parks and open space, and I think the logical extension of that would be evaluating some segment for firefighting as well.

COUNCILLOR GARDUNO: Thank you.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: And I have one quick question

regarding the non-revenue water from 2010 to 2011. That went from 6.52 percent to 8.22 percent. How do we compare to other parts of the country?

COUNCILLOR O'MALLEY: Regionally, other systems that are participating in this methodology specifically, they're on the order of 12 to 15 percent, so -- comparable to the system our size. So we're going really well, we're doing really well. And on a high note, when we had the third-party validation, AWWA was pretty impressed with our rates because they were regionally low, significantly low.

CHAIRMAN SANCHEZ: Do we have any other questions for Ms. Maldonado?

Thank you very much for your presentation.

MS. MALDONADO: Thank you.

CHAIRMAN SANCHEZ: If there's no further business before this Water Authority, this meeting is adjourned.

(Proceedings adjourned at 7:38 a.m.)

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

REPORTER'S CERTIFICATE

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I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this matter and that I have no interest in the final disposition of this matter.

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