



Buckman Direct Diversion



AGENDA

CITY CLERK'S OFFICE

DATE 5/30/18 TIME 3:41

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**The City of Santa Fe
And
Santa Fe County**

Buckman Direct Diversion Board Meeting

THURSDAY, June 7, 2018

4:15 PM

CITY HALL

CITY COUNCIL CHAMBERS

200 LINCOLN

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF CONSENT AGENDA
5. APPROVAL OF MINUTES FROM THE MAY 3, 2018 BUCKMAN DIRECT DIVERSION BOARD MEETING
6. REPORT ON JUNE 5, 2018 FISCAL SERVICES AUDIT COMMITTEE (FSAC)

INFORMATIONAL ITEMS

7. Monthly Update on BDD operations. (Michael Dozier)
8. Report from the Facilities Manager. (Charles Vokes) **VERBAL**
9. Report on status of the Rio Grande del Norte/Sabinoso Wilderness State Land Exchange and information related to the Buckman Direct Diversion right-of-way. (Melanie Barnes, BLM Deputy State Director) **VERBAL**
10. Report on 3rd Quarter Financial Position for Fiscal Year 17/18. (Mackie Romero)

11. Report on Granular Activated Carbon and Finished Water Quality Study (Charles Vokes, Rick Carpenter) **VERBAL**

CONSENT AGENDA

12. Request for approval of a Budget Amendment Resolution (BAR) to FY17/18 Operating budget to reflect the fiscal agent fee, as per the Project Manager and Fiscal Services Agreement (PMFSA). (Mackie Romero)
 - a.) Reduce budgeted Fiscal Agent Fee by \$236,649.
13. Request for approval of a Budget Adjustment Request to the FY17/18 Operating Budget. (Mackie Romero)
 - a.) Request to decrease Electricity by \$192,000 and transfer \$95,000 to Chemicals and \$97,000 to Other Operating Costs.
14. Request for the approval of Amendment #5 to the Legal Services Agreement in the amount of \$187,000 exclusive of NMGR for FY 2018/2019; (Long, Komer & Associates, PA). (Mackie Romero)

DISCUSSION AND ACTION

15. Request for approval to award RFB No. '18/14/B to Chavez Security, Inc. for the Buckman Direct Diversion Facilities for the total amount of \$179,000 exclusive of NMGR. (Mackie Romero)
16. Consideration and possible approval of Amendment No. 7 to the Project Management and Fiscal Services Agreement ("PMFSA") between the Buckman Direct Diversion Board and the City of Santa Fe to increase the monetary authority for Project Manager approval of contracts from \$50,000.00 plus gross receipts tax to \$60,000.00 plus gross receipts tax. (Nancy R. Long)

MATTERS FROM THE PUBLIC

MATTERS FROM THE BOARD

EXECUTIVE SESSION

In accordance with the New Mexico Open Meetings Act NMSA 1978, §10-15-1(H)(7), discussion regarding threatened or pending litigation in which the BDDB is, or may become, a participant, including without limitation: Discussion regarding Diversion Structure issues. (Nancy R. Long)

End of Executive Session



Buckman Direct Diversion



DISCUSSION AND ACTION ITEMS cont.

17. Consideration and possible approval of Amendment No. 1 to the Legal Services Agreement between Snell & Wilmer, P.A. and the Buckman Direct Diversion Board to increase the compensation under the Agreement by \$1,500,000.00 for a total contract amount of \$1,700,000.00. (Nancy R. Long)

NEXT REGULAR MEETING: Thursday, July 5, 2018 @ 4:15pm, City Council Chambers, 200 Lincoln

ADJOURN

PERSONS WITH DISABILITIES IN NEED OF ACCOMODATIONS, CONTACT THE CITY CLERK'S OFFICE AT 505-955-6520, FIVE (5) WORKING DAYS PRIOR TO THE MEETING DATE

MINUTES OF THE
THE CITY OF SANTA FE & SANTA FE COUNTY
BUCKMAN DIRECT DIVERSION BOARD MEETING

June 7, 2018

1. This meeting of the Santa Fe County/City Buckman Direct Diversion Board meeting was called to order by Councilor Peter Ives, Chair, at approximately 4:15 p.m. the City Council Chambers, 200 Lincoln, Santa Fe, New Mexico.
2. Roll was called and a quorum was present with the following members present:

BDD Board Members Present:

Councilor Peter Ives
Ms. Denise Fort, Citizen Member
Councilor Michael Harris
Commissioner Anna Hamilton
Commissioner Henry Roybal [4:40 arrival]

Member(s) Excused:

Mr. Tom Egelhoff [non-voting]

BDD Board Alternate Members Present:

Commissioner Anna Hansen [County alternate]
Mr. JC Helms [Citizen alternate]
Ms. Ginny Selvin [Las Campanas non-voting alternate]

Others Present:

Charles Vokes, BDD Facilities Manager
Nancy Long, BDD Board Counsel
Kyle Harwood, BDD Counsel
Mackie Romero, BDD Financial Manager
Bernardine Padilla, BDD Public Relations Coordinator
Debra Harris-Garmendia, BDD Fiscal Administrator
Daniela Bowman, BDD
Michael Dozier, BDD Operations Superintendent
Danny Carter, BDD
Michael Kelley, County Public Works
John Dupuis, County Utilities
Jerry Schoeppner, County Utilities
Cheryl Vokes, Citizen
Rick Carpenter, City Water Division

Bill Schneider, City Staff
Alex Puglisi, City Water Division
Melanie Barnes, BLM Deputy State Director
Ron Aldrino, VTCC
Kim Visser-Weinman, Las Campanas Co-op
Mary Erpelding Chacon, Las Campanas Co-op
James P. Bearzi, Glorieta Geoscience, Inc.
Jay Lazarus, Glorieta Geoscience, Inc.
Kerry Howe, UNM

3. Approval of Agenda [*Exhibit 1: Agenda*]

There were no changes offered and Commissioner Hamilton moved to approve the agenda as published. Commissioner Hansen seconded and the motion passed by unanimous [5-0] voice vote. [Commissioner Roybal was not present and Commissioner Hansen served as alternate.]

4. Approval of Consent Agenda

Commissioner Hamilton moved to approve and Commissioner Hansen seconded.

Councilor Harris requested that item 12: "Request for approval of a Budget Amendment Resolution (BAR) to FY17/18 Operating Budget to reflect the fiscal agent fee, as per the Project Manager and Fiscal Services Agreement (PMFSA)."

The movant and seconder agreed to the amendment and the motion passed by unanimous [5-0] voice vote. [Commissioner Roybal was not present and Commissioner Hansen served as alternate.]

5. Approval of Minutes: May 3, 2018

CHAIR IVES: Any changes from staff?

CHARLES VOKES (Facilities Manager): Mr. Chair, on page 12 where the attest to is, it should be the Santa Fe City Clerk instead of County Clerk.

COMMISSIONER HAMILTON: On page 12? So it should be Yolanda Vigil?

MR. VOKES: Right.

COMMISSIONER HANSEN: Santa Fe City Clerk. And then –

CHAIR IVES: Let me just see if there are any more from staff. Any other changes from staff?

MR. VOKES: No, Mr. Chair.

CHAIR IVES: Any changes from the Board? Yes, Commissioner.

COMMISSIONER HANSEN: On page 9, second line, "...I do not believe that they're going to take the trail, the flat..." it is actually the FLAP Trail. Which is Federal Lands Access Program. It should be capitalized F-L-A-P. Okay? And

we had a really nice ceremony out there on Saturday. Thank you, Councilor Ives for being there.

CHAIR IVES: A pleasure and what a delight that was. And thank you for helping to coordinate all of that through the County which played a significant and major player role in putting all of that together.

Any other changes to the minutes? There being none, what is the pleasure of the Board?

Commissioner Hansen moved to approve the minutes as corrected. Commissioner Hamilton seconded and the motion passed by unanimous [5-0] voice vote.
[Commissioner Roybal was not present and Commissioner Hamilton served as alternate.]

6. Report on June 5, 2018 Fiscal Services Audit Committee (FSAC)

MACKIE ROMERO (BDD Financial Manager): Mr. Chair, members of the Board, the Fiscal Services and Audit Committee meeting was held on Tuesday, June 5th. In attendance was myself, BDD Financial Manager, Debra Harris-Garmendia, BDD Fiscal Administrator, Charles Vokes, BDD Facilities Manager. From the City we had Councilor Harris, Andrew Erdmann, City Water Resource Coordinator. From the County we had Commissioner Hamilton; Stephanie Schardin Clarke, County Finance Director, John Dupuis, County Utilities Director, Joe Gonzales, County Utilities Administrative Manager, and from Las Campanas, Ginny Sullivan and Mary Chacon.

I provided an update on the audit and financial statements for fiscal year 16/17 which is expected to be submitted to the state auditor by June 15, 2018. I will continue to provide updates to the partners and to the Board until our report has been reviewed and approved and released by the State Auditor. Once the report has been released I will present the results to the Board.

In FSAC we discussed all financial agenda items which I will also present to you later in this agenda. And if there are any other additional comments from the Board members who attended FSAC – that is my update.

CHAIR IVES: Very good. Any questions from the Board on the update provided or supplements by folks in attendance?

MS. ROMERO: Okay, thank you.

CHAIR IVES: Very good, thank you for that update and report. Oh, and I would simply note that Andrew's last name is Erdmann.

MS. ROMERO: Okay, thank you.

INFORMATIONAL ITEMS

7. Monthly Update on BDD Operations

CHAIR IVES: Welcome back, Michael.

MICHAEL DOZIER (BDD Operations Superintendent): Thank you. Mr. Chair, members of the Board, the raw water diversions averaged 8.898 million gallons a day. The drinking water deliveries through 4A/5A averaged 7.616 million gallons a day on average. Raw water deliveries to Las Campanas averaged 1.065 million gallons a day.

And onsite treated and non-treated water storage actually must be revised. It should be 0.217 million gallons a day on average.

The BDD is providing approximately 69 percent to the City and County water systems and I stand for any questions.

CHAIR IVES: Very good. Questions from the Board? Commissioner.

COMMISSIONER HAMILTON: Would you mind repeating that correction that you just gave.

MR DOZIER: It would be 0.217 million gallons a day.

COMMISSIONER HAMILTON: Thanks.

MEMBER FORT: Mr. Chairman. A question, perhaps for you and perhaps for Mr. Vokes. When do we expect Albuquerque to stop taking its Rio Grande water or San Juan-Chama water?

MR. DOZIER: So we just got word that we may possibly be going all the way into August. So if that happens, there is a possibility we won't have to shut down this summer.

MEMBER FORT: And what flow would we expect from Albuquerque? What would that be in terms – would it be Albuquerque plus the Irrigation Districts?

MR. DOZIER: Yes, we would at least have to be over 300 cfs with the native and then whatever they provided. If I'm guessing, it would have to be over the 300 for us to at least keep running.

MEMBER FORT: Perhaps we could have more discussion about that with you as well, Mr. Vokes.

MR. VOKES: I would defer to Mr. Carpenter because he's our expert on all things Rio Grande. If I can get Rick to come up.

RICK CARPENTER: (City Water Division): I'm sorry, Board member, what was the specific question?

MEMBER FORT: I was asking for an update on when we expect the City of Albuquerque to turn off San Juan-Chama water but it sounds like perhaps they won't. Can you just give us some background on how they're thinking about it?

MR. CARPENTER: Sure, I would be happy to Mr. Chair and Board members. It was mostly based on when MRGCD was projecting when they would run out of irrigational and Albuquerque didn't want to call for water if there wasn't carriage water in the river already. That was supposed to be somewhere around mid to late June maybe early July. What has happened recently is MRGCD has revised their projection and now they're projecting that they will run out of water on August 15th. So Albuquerque may call for their water. We are hoping that between BOR and Albuquerque and MRGCD and possibly us, they'll be enough water left in the river that we can actually divert much longer, possibly through the entire summer.

MEMBER FORT: Thank you.

CHAIR IVES: And I would only supplement that with statements made yesterday at Public Utilities because it was indicated that the carriage, at least for raw water, was 325 cfs, if I remember correctly, set by –

MR. CARPENTER: I don't remember the exact number. There's a – it's called a diversion curtailment, it's in our environmental impact statement, I think it's 350 or 325 the BDD begins to reduce its diversions. And I think anything below 250 not only through our permit but just physically, we can't divert the water.

CHAIR IVES: Other questions from the Board? Very good. Thank you.
MR. DOZIER: Thank you very much.

8. Report from the Facilities Manager

MR. VOKES : Thank you, Mr. Chair, members of the Board. A quick report. I'll just report on the vacancy status. We are still sitting at the number six which is our administrative assistant, actually four operators, two charge and two BDD operators, and then our water resources coordinator. And Mr. Dozier and Debra and Mackie are working on their positions and we're still evaluating the water resource coordinator position. I'll take any questions on that or other topics.

CHAIR IVES: Questions.

MEMBER FORT: Mr. Chairman, Mr. Vokes, I've got a question on another topic but relating to – and I had missed the previous meeting – are we going to send out some sort of Survey Monkey to set up a time to do water quality in the Rio Grande to have our study session? Where does that stand?

MR. VOKES: Mr. Chair and Member Fort, I believe Mr. Harwood is working on that. He did send out a survey and I think that that date that was selected was not useable so I think it is his intention to bring that forward again.

KYLE HARWOOD (BDD Counsel): What he said. [laughter] I think we will be looking for a date in July at this point. There were some schedule conflicts with some of the folks that the Board had identified. So despite getting out the Doodle when I did, I subsequently heard back from some of the folks that had been identified as essential presenters that their dates in June were mutually uncomplementary so I'll be doing that again next week for new dates. Thank you.

MEMBER FORT: Thank you.

CHAIR IVES: Other questions from the Board? Very good. Thank you for that report, Chuck.

9. Report on the Status of the Rio Grande del Norte/Sabino Wilderness State Land Exchange and Information Related to the Buckman Direct Diversion Right-of-Way [Exhibits 2 and 3: Maps provided by BLM]

CHAIR IVES: Welcome.

MELANIE BARNES (BLM Deputy State Director): Thank you.

CHAIR IVES: It's been so long since a few of us have seen you on Saturday.

MS. BARNES: Yes, good afternoon, Mr. Chairman and members of the Board. It is good to see you again, Commissioner Hansen and Councilor Ives. I am Melanie Barnes, the Deputy State Director for Lands and Resources at the Bureau of Land Management, New Mexico State Office here in Santa Fe. And as you mentioned, I am here to give you an update on a proposed land exchange we have with the State Land Office.

I have maps I would like to hand out, with your permission, that would assist in explaining the update. The reason I am here to speak to you about it is because three of the rights-of-way held by the Buckman Diversion – the Direct Diversion Board are

located on a parcel that is proposed to be exchanged. It is currently BLM that's proposed to be exchanged to the New Mexico State Land Office. This exchange hasn't happened yet. It is under consideration. The purpose of the exchange is to consolidate federal land holdings within the Rio Grande del Norte National Monument in Taos County and also federal land holding in and near the Sabinoso Wilderness in San Miguel County, New Mexico. You can see on the maps that you're receiving – there are on the smaller map that's on 8.5 by 11 paper [*Exhibit 3*], the lands that are red are lands that are currently State Land that would be obtained by the BLM and would become federal. Right now on the map, the yellow is the BLM land so as you can see that would make essentially all of the Rio Grande del Norte National Monument BLM land. Currently, there are inholdings of both private and state land within the Rio Grande del Norte Monument. The current State Land Commissioner Aubrey Dunn proposed this exchange to the BLM as mutually beneficial to both agencies because the State Land Office has a role of generating income for the State Land Trust Fund which funds education and various needs around the state and it is the Commissioner's opinion that lands other than the lands within the Rio Grande del Norte Monument and near the Sabinoso Wilderness would better be able to generate such revenue for the schools.

On the BLM side it is beneficial because we have the bureau manages land all over the west that are essentially lands that were not homesteaded under the Homestead Act so these are very scattered all over the west. And ever since new legislation in 1976 we have been under direction to consolidate federal land management ownership for efficiency of management and particularly to dispose, which means to sell or exchange of scattered parcels. And that's where you can see on your map that there are blue squares around the itty bitty parcels of BLM land all over the state which would be transferred to the State Land Office under the current proposal. They are so tiny that that's why there are big blocks around them and they're lettered. They're very small; many of them are only 20 and 40 acres.

In total, the current proposal is that the BLM would receive 43,000 acres, more or less, from the State Land Office in the Rio Grande del Norte Monument and the Sabinoso Wilderness area and the State Land Office would receive about 70,000 acres scattered around the state. The reason I say "about" is because it would be a value-for-value exchange not acre-for-acre. So we don't know – we won't know until we receive an appraisal exactly which acres would be exchanged. The BLM as a federal agency is only able to accept fair market value for the parcels. And we're currently at the stage of getting that appraisal and we still don't know. It will probably be some months before we have that information.

Moving forward, we are currently evaluating on the BLM side this proposed exchange under the National Environmental Policy Act because we are a federal agency and it would be a federal action. We are evaluating impacts to cultural resources, socioeconomics which would of course include providing water to the residents of Santa Fe County, that's very important, as well as many other resources and that is also ongoing.

More specifically about the rights-of-way on the Buckman Direct Diversion holds, the procedure for that is that when there are federal right-of-way holders or BLM right-of-way holders and there's lands that are slated to potentially be exchanged, a letter is sent to the right-of-way holder notifying them that the exchange is being considered

and what that means for the right-of-way holder. And Buckman Direct Diversion Board received such a letter in October 2017 and the Board responded timely to that request with the option that was selected which was to transfer the right-of-way to a right-of-way in perpetuity and what that means is that the right-of-way, all three of them which is fiber-optic, the water treatment plant and a solar facility, would all essentially be assessed for their current value under the appraisal which is ongoing and is included in part of our larger appraisal of everything you see on the map there. There three rights-of-way will be appraised and that value will be requested from the Buckman Direct Diversion Board prior to the closing. However, there are a number of things that have to happen before we get to that point. I wouldn't say it is imminent at this point. But a few other things about the perpetual right-of-way is that it would mean that although the right-of-way would be under the exact same terms and conditions that they are now, so whatever stipulations are attached to the right-of-way would still be in effect, the right-of-way would be held by the State Land Office rather than the Bureau of Land Management and also it would be the State Land Office that would enforce any of those terms and conditions that are on that current right-of-way.

Another thing though, should the Buckman Direct Diversion Board wish to in the future to expand those rights-of-way, you know, extend them or should need a new right-of-way that fell in State Land Office lands, the Direct Diversion Board would need to apply to the State Land Office in that case, if the exchange goes through.

One thing I did want to mention, so if you look at your larger map [*Exhibit 2*], this map, you'll see blue crosshatched areas and a red crosshatched area. The red crosshatched area is an area on the west side, west of the treatment plant and that section the BLM would like to retain because the El Camino Real de Tierra Adentro runs across that section and we have responsibilities under the National Historic Preservation Act to manage that trail. However, because the F1 portion that is blue crosshatched is still considered to be part of the exchange and still under consideration because the State Land Office frequently administers rights-of-way of this sort. This is probably more complex than the typical right-of-way, I acknowledge, but they manager rights-of-way and have a right-of-way management program and could meet the Direct Diversion Board's needs.

So, where we are now is that we are essentially awaiting an appraisal and it has taken more time that we expected and it's not clear whether or not the BLM will be able to meet the State Land Commissioner's timeline for completing this project. So we're assessing that right now and we'll update the public as soon as the two entities have made a decision on how to proceed. So that's where we are right now. I don't expect that there will be a lot of change within the next couple of months.

With that, I am happy to take any questions or any further explanation.

COMMISSIONER HAMILTON: Sort of the obvious question, when do you expect the appraisals to be completed? Do you have an ETA, as they say?

MS. BARNES: We're hoping October, early October. And that would be our goal in order to complete it by December but right now -- we just got the statement of work in for the appraisals today and it wouldn't be until probably November or December before we get the appraisal.

COMMISSIONER HAMILTON: Was that -- what was the original target for actually implementing this swap if it goes through?

MS. BARNES: It was to complete it before December 2018. Which is why we're reassessing our timelines and goals right now.

COMMISSIONER HAMILTON: All right, thanks.

CHAIR IVES: Commissioner.

COMMISSIONER HANSEN: Okay, so my first question is to Ms. Long, who gave the authority to go forward with this transfer?

NANCY LONG (BDD Board Counsel): To seek the application for perpetual status?

COMMISSIONER HANSEN: Yes.

MS. LONG: We brought that to the Board, I believe, last December to proceed with the applications.

COMMISSIONER HANSEN: Okay, I don't remember that. But we didn't have a January meeting.

MS. LONG: I think it was December because the applications were due. We had a pretty short timeframe so we brought it to the Board and recommended that we seek the perpetual status should the exchange occur. The applications are only in the event that the exchange occurs. So we wanted that placeholder there that we could convert to perpetual status if the exchange were to take place. If the exchange does not take place by the end of the year, then those applications will just be moot at that point.

COMMISSIONER HANSEN: I'm happy to see that the El Camino Real de Tierra Adentro is not part of the exchange. But it does concern me that this large area is moving to state land and that we as a county will lose PILT money which I have mentioned before. And I'm concerned about that because we use that PILT money to maintain the roads in that area and, so what's going to happen then? We're not going to have that money to maintain the roads. One of the major complaints the City always has is that the road – they'd like it to be better. Maybe the City maintains those roads and we don't at all. Is that true, Mr. Carpenter or who can answer that question for me?

MR. VOKES: Member Hansen, currently we have an agreement with the County to where the main Buckman Road is maintained by the County and the leg from the plant down to Dead Dog we have been maintaining with the BDD staff and equipment. That's been the agreement that was reached.

COMMISSIONER HANSEN: Okay. Anyhow, it is like \$3 to \$4,000 a year that's removed from County rolls and maybe that's not a significant amount of money but it's still after, you know, 10 years it's \$30,000 or more. So I'm concerned with this exchange and I have real hesitations about and feel like, is it really in the best interest of the Buckman Direct Diversion? Is it really in the best interest of Santa Fe County and the City of Santa Fe to be state land? Is it not better that it is BLM land? Those are questions that I have and I know I can't get answers right at this moment but I am concerned about those issues.

COMMISSIONER HAMILTON: Mr. Chairman.

CHAIR IVES: Yes.

COMMISSIONER HAMILTON: Just as a follow on to that because Commissioner Hansen has raised this a couple of times and it is never – what would be the venue to discuss that substantively? Is the exchange an all or nothing thing? Is there a venue to talk about Commissioner Hansen's concerns in some detail?

CHAIR IVES: Well, certainly as part of any federal exchange process there are opportunities for the public to participate as there would be for organizations/entities like the County and the City. So those exist. I don't know where those are in the process of evaluating this potential exchange. One thing that would be helpful in part simply because the numbers are so unfixed, because I have no idea what PILT monies the County gets in connection with this property or any other property. So I don't know if the County would be willing to do a calculation to try and fix what that amount is or assess what that amount might be if these particular parcels are lost –

COMMISSIONER HAMILTON: That's a good idea.

CHAIR IVES: -- really to just determine from the County's perspective if it really is a concern. Of course, potential advantage is getting permanent easement which has compensating value certainly for the BDD. So in terms of evaluating and weighing the cost benefit of the exchange as far as it impacts the BDD, the City and the County, we have a capacity to look at that issue but we should be a lot clearer I think what that cost benefit really is before we do that.

Quick question, just in terms of the appraisal evaluation of these particular right-of-way segments, is that also not going to be complete until presumably November as part of the entire appraisal process or would there be any possibility of getting some indication of where that appears to be heading prior to that time?

MS. BARNES: Mr. Chairman, it's my understanding that it is all one package and we would get it all at once in November or December.

CHAIR IVES: So we might not have a full capacity to look at some of those issues for a while yet but that would give us time to understand the rest of the cost benefits a little better.

MEMBER FORT: Mr. Chairman, is the December deadline based on the vacancy-ing an office by the current holder of it? What was the purpose of that?

MS. BARNES: Mr. Chairman, members of the Board, the reason for that deadline, you're correct, is because of the change of Commissioner and that's because of rules under state law that prevent one State Commissioner from obligating a future State Commissioner to spend money or to take certain actions. That's my understanding of it as it has been explained to me by the State Land Office. And I understand it affects their budget too. They can only spend half their budget from July 1st on based the state budget year.

MEMBER FORT: I see, maybe. Thank you.

CHAIR IVES: Councilor.

COUNCILOR HARRIS: Thank you, Chair. So, I'm must curious I don't need to know all the terms and conditions but I heard you say or I thought I heard you say, Ms. Barnes, essentially if this exchange were to occur that the same terms and conditions would apply.

MS. BARNES: That is correct.

COUNCILOR HARRIS: But then there would be no payment to the County as described by Commissioner Hansen, so that goes away, I assume that goes away. There's no offsetting payment from the State Land Office or credit of any sort?

MS. BARNES: Mr. Chairman, there would not. It only comes from federal lands and it's being reduced by about \$4,300 for all of the parcels in Santa Fe County it's not just for that parcel.

COUNCILOR HARRIS: \$4,300 for all the parcels in Santa Fe County that would be affected by this exchange.

MS. BARNES: Yes, it is less than 1 percent of the annual PILT payment to Santa Fe County.

COUNCILOR HARRIS: Okay, all right, that is good to know. That's the type of information that I think my colleagues are asking for. But certainly on the plus side that Chair Ives spoke to, it's a perpetual easement or perpetual right-of-way, correct? So what – without going through all the details what are the really terms and conditions that should be of the most concern to this body besides access and money and those are big ones?

MS. BARNES: Mr. Chair, I haven't reviewed the specific terms and conditions but in general they refer to things like preventing erosion and limiting the spread of evasive and noxious weeds, preventing hazardous waste spills if there's any operations or pipelines of some such or if the right-of-way is ever abandoned to reclaim it and put that land back the way it was. Those are generally the types of terms and conditions that the Bureau of Land Management attaches to rights-of-way.

COUNCILOR HARRIS: So most of those terms and conditions apply to the behavior of this body, Buckman Direct Diversion, who would hold the easement. Okay, all right.

MS. LONG: Yes, and if I could just add, I'm looking at some of our permits here, Councilor Harris, and there are provisions such as weed control, we may come and do an inspection, some rehabilitation obligations but they are generally what looks to be the general kinds of conditions you would expect to see that we do abide with so it shouldn't be a problem going forward even if the State Land Office were monitoring it.

COUNCILOR HARRIS: Very good, thank you. Thank you, Ms. Barnes.

CHAIR IVES: Yes.

COMMISSIONER HANSEN: So what charge would there be for us having the perpetual easement?

MS. BARNES: Mr. Chairman, members of the Board, we don't know yet, Commissioner Hansen, until we receive the appraisal but it would be a one-time payment to the Bureau of Land Management and then the right-of-way would belong to the Buckman Direct Diversion Board forever is my understanding.

COMMISSIONER HANSEN: What would we have to pay the state?

MS. BARNES: Oh, you wouldn't have to pay the state in the future, no.

COMMISSIONER HANSEN: In the future there would be no payment to the state?

MS. BARNES: No.

COMMISSIONER HANSEN: Only a payment to the BLM.

MS. BARNES: Yes, you would be relieved, the Buckman Direct Diversion Board would be relieved of further financial obligations for right-of-way payments to the State Land Office is my understanding.

COMMISSIONER HANSEN: You have no idea of the amount?

MS. BARNES: I do not. I apologize.

COMMISSIONER HANSEN: Okay, thank you.

MS. BARNES: Thank you very much, Chairman and members of the Board.

CHAIR IVES: One more question maybe.

COMMISSIONER HAMILTON: So is the formula for the payment agreed upon or is it a direct based on appraisal of acreage value and calculation of the acreage of the right-of-way because it's a limited use? Do you know what I'm asking?

MS. BARNES: Mr. Chairman, my understanding is that it would be based on both the value of the land but I think because of the right-of-way it is the value of the improvement upon the land that the Buckman Direct Diversion Board has put in place. However, I am not entirely sure. I can clarify that though.

COMMISSIONER HAMILTON: Thank you.

MS. BARNES: Thank you members of the Board.

CHAIR IVES: Thank you very much for your presentation.

10. Report on 3rd Quarter Financial Position for Fiscal Year 17/18

MS. ROMERO: Mr. Chair, members of the Board, this report is to briefly update the BDD Board and our partners on our third quarter financial position. I have provided in the packet a budget overview, this is page number 2. The budget overview includes expenditures through the third quarter plus projections which includes all encumbrances to date. As you can see from the budget overview, we are projecting a shortfall in two of our major categories that is chemicals and other operating costs. With our budget request that was approved from the consent agenda this will allow us to transfer funds to cover this shortfall from our other categories. The report projects that we are going to spend 85 percent of our approved operating budget with expenses through the third quarter to date we have totaled \$4,894,819. Of this amount we have billed our partners through the first quarter and that's through September. There is a delay in our billings and we are working diligently to get this second quarter out to our partners by Monday and then to continue our billing process.

On page 3, I have provided a cash position report and a cash and a budget overview for our Other Funds. As of the third quarter, we have spent \$674,625 of the funds that were authorized from the major repair and replacement fund. And if there's any specific questions about the report, I would be happy to answer your questions.

CHAIR IVES: Clarification. You stated initially that this was an update to date but –

MS. ROMERO: Those expenditures were through the third quarter.

CHAIR IVES: Okay, thank you. Questions from the Board? Very good. Thank you for your report.

MS. ROMERO: Thank you.

11. Report on the Granular Activated Carbon and Finished Water Quality Study

[Exhibit 4: TREAT Study and GAC Disposition slides, Glorieta Geoscience]

MR. VOKES: Mr. Chair, members of the Board, I would like to provide the Board with an update on the BDD TREAT Study and on the work we've done in the

month since I last reported to the Board. Recall that I discussed some of the background of this study, which is a part of the DOE MOUs with the National Laboratory. The study is actually a series of sampling and analysis events, was designed to provide information on the efficiency of the treatment processes with respect to the contaminants that may be present in the Rio Grande source water.

The study is intended to collect a minimum of two sets of samples per year over a period of three years to provide data during different seasons and different source water conditions. The samples are collected from the Rio Grande and four to five other locations following different treatment processes within the Water Treatment Plant. We've completed four studies to date: March, May, and September of 2016, and April 2017. There are approximately 100 different contaminants analyzed including metals, organic and inorganic compounds, pharmaceutical products, personal care products, PCBs, and radiological compounds. Many of these compounds are not regulated by the EPA or the NMED.

The initial results of the study have shown that the regulated and non-regulated contaminants present in the Rio Grande are reduced to or removed to below any applicable Safe Drinking Water standards, and in many cases to below the analytical detection limits by the BDD treatment processes.

Last month I reported that the results show that some of the contaminants may not be entirely removed by the treatment processes within the Plant. There are also some trends in the data that warrant continued consideration and further analysis. Last month I was unable to discuss specifics because the data was still in the process of being validated for accuracy, known as Quality Control, or QC. That process has been completed, and now we can tell you what we know, what we think it means, and what we recommend should be done going forward. Let me emphasize that water supplied by the BDD is safe and continues to meet and in many cases surpasses the state and federal drinking water standards.

Because of the complexity of these issues and the sheer volume of the data, we've assembled a group of internal and external subject-matter experts to help us understand and interpret the data, develop key issues to be addressed with the existing data and with future TREAT studies, and develop and design modifications to future sampling efforts to address those issues. This expert panel is also involved with looking at the disposition of the biofilter granulated activated carbon, or "GAC," and is making recommendations as to its disposal and regulatory status. The panel is being led by our consultant, James Bearzi, with Glorieta Geoscience, Inc. He's here with us tonight to help answer any of the questions you may have. In a few minutes I'll be turning the presentation over to him to brief you on the work of the panel, and specifically what was found in the TREAT studies and many of the more technical issues. And of course, Mr. Bearzi will stand for any questions you may have.

The BDD staff will continue to report on the progress of the TREAT sampling and the panel's work as information is available or as requested by the Board. I would recommend that the raw data table which has undergone a rigorous quality control process, be posted on the website, along with a document Glorieta has prepared explaining the quality control procedures they used.

If it is acceptable to the Chair and the Board, I'd like to turn it over to Mr. Bearzi for his presentation. Much of what he has to say will likely answer many of the questions

you may already have. When he is done, we'll both stand for questions as the Board desires. Thank you, Mr. Bearzi.

JAMES BEARZI (Glorieta Geoscience): Good afternoon. My name is James Bearzi. I am a senior environmental geologist with Glorieta Geoscience. My colleague and the president of our company Jay Lazarus is passing out handouts right now. I'm going to use this, there's a little point for all the screens there's a red dot so I can move forward with this.

About six weeks ago we were approached by the Board to provide some technical assistance on interpreting the TREAT study and the disposition of the granulated activated carbon. There's a bunch of acronyms that you're going to hear but first I just want to introduce myself a little bit. I've got about 30 years experience doing this kind of thing. Some of you have run across me in the past in legislative committee hearings doing – testifying, doing technical work primarily as a regulator with the New Mexico Environment Department where I served about half of my career, about 12 years, as chief of the Hazardous Waste Bureau. So I have a lot of experience on the management and on the policy end and also on the technical end of this kind of stuff. But in the interest of time let's move along.

So what are the main issues? Like all good scientists, the main issue is acronyms and I often forget that TREAT is an acronym and I was reminded of this by Mr. Carpenter a couple of days ago. TREAT is a study and it stands for the removal efficiency and assessment of treatments. So I'm going to use TREAT as an acronym. There's another acronym that I'm going to use which is GAC, that's granulated activated carbon. They're related issues but as I and the expert panel that delved into this they're really, we should treat them separately and quite frankly we've been focusing on the TREAT aspect which is about water testing rather than the GAC aspect which is solids testing for the last month or so. For both of these issues the TREAT and the GAC, primary issues are really kind of the same. You're going to hear more acronyms: QA/QC, quality assurance and quality control. I don't want this to be professorial. Like some of you I've taught at UNM as well, I try to pull myself back from that. Quality assurance is the process that you put in place at the front end to make sure that the data provide the kind of answers you want, achieve the quality that you have, that you've established the objectives you need for your study – it's everything at the front end. Quality control is everything at the back end when you get the data to make sure that the data are accurate and they actually represent what you think it is suppose to represent. So I want to address that. I want to address sampling and analysis because that's really important for any kind of study of this kind. With the complexities that are involved and really the very large data sets that are generated. I also want to help everybody understand what we think the data tell us right now. You have data; what does it mean? What are the implications and what are some of the sources of some of the chemicals that we might be seeing and perhaps most importantly what do we do next? One of the things that the management of the BDD did was set up this expert panel that Mr. Vokes referred to earlier. Outside and internal experts to provide some third-party, independent oversight recommendations and actually do some of the work too.

So let's introduce the expert panel. There are six members on it. Many of these folks you're aware of. I'm on this and I'm with Glorieta Geoscience. I'm a consultant to the Board so I work for you and I'm the lead. Now what that means is really I try to

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coordinate meetings. I try to make sure everybody has information. I try to achieve consensus. I do the kind of things that good meeting managers should do and I also try to approach the technical issues in a way that the expert panel can digest and provide the most meaningful valuable information. Bill Schneider, a hydrologist with the City, is on the expert panel. He has a lot of experience as well as a consultant and as a public servant. Alex Puglisi you know, also with the City and has a lot of experience as a public servant. Daniela Bowman, BDD staff, the compliance officer, she's on the panel. Jerry Schoeppner, the Santa Fe County hydrologist who also has a lot of experience in the public sector and most of his time in state government in similar positions to the kind I had. We also have Kerry Howe who is a civil engineering professor with UNM who is involved early on with the development of the project even before a spade of dirt has been turned. They're all in the audience and if they could raise their hands – all the folks back there. And all of this work is being overseen by Rick and Chuck.

Let's get right to what do the results tell us? This was going to be a big build up and it was going to be the last slide but I think everybody is kind of chomping at the bit for what we're going to see here. I think the biggest thing is that safe water has been, continues to be delivered to customers by many, many factors. The water is below state drinking water, what NMED has and federal MCLs, these are the maximum contaminant levels that are allowed before something bad happens. Those of you who have seen me over the years you know that if there's something bad to be said, I'm going to say it. So I don't hold back so that's an important point. But it doesn't mean that important questions haven't been raised about chemicals detected by the analytical laboratories through the TREAT study. So let's talk about the TREAT first which, again, is water samples from within the treatment works and also raw water that comes in. One of the main questions and this goes to the QA/QC that I talked about earlier, are the results real? I'm going to talk a lot and it's going to perhaps sound arcane about detection limits, what the laboratories can actually see and detect and then what they can quantify. So we want to understand are the results real? That's a significant question and if they are real, and some of the results certainly are real some are questionable; what are the potential sources out there? What if any additional sampling should be done to confirm the previous results? And I'll explain later about why. Some of it we've seen the triggers are that you go out and resample. There's enough questions and that's just what you do in this kind of business and maybe some of this is not just repeating the TREAT study or modifying it, maybe there's some route sampling that needs to be done going forward. Let's talk about some of the uncertainties in the TREAT study data. As Mr. Vokes said earlier there was a big data table that we've been working on and when I say big data table it's an excel spreadsheet that was populated from the data that the laboratory provided that has sample date and the result and the detection limit and all that kind of stuff. An important post-data receipt step is to do quality control on it. The spreadsheet that you're actually looking at to make decisions on, does it accurately reflect what the laboratory submitted. So Glorieta Geoscience took on that task. We're going to QC these data and we did and we completed that. And we found some errors and they've corrected them. And this is not a remarkable thing with a data set this big there are bound to be some errors. We took a look at it. We looked at every lab sheet. We corrected all the data. We made comments. We submitted it back to BDD staff so they could take a look. They even found some other inconsistencies that we could resolve through mostly having

to do with detection limits and so now as Mr. Vokes said, there is a data table out there that have been QC'd that is accurate.

Now quality assurance is a little different. That's at the front end and it depends on the objectives of the study. If your objectives are compliance sampling for Safe Drinking Water Act standards that is one kind of objective that requires certain kinds of quality of data that has a certain kind of laboratory with detection limits and all that kind of stuff, sampling protocols. If you're looking to do a fate and transport study of contaminants out there in the environment in soils or whatever, that would be different kinds of objectives with different kinds of QA. This study was originally, the TREAT study was originally intended to collect data to determine how efficient removal is happening through the treatment process and perhaps those data and the study could be used later on by engineers to try and optimize things if that's needed. Those QA procedures need to be really strong for a study like this. What the TREAT study showed is that the finished water is below any federal or state MCL – remember that maximum contaminant level that the feds and the states have determined are safe. But there were measurable but not in all cases necessarily quantifiable concentrations of some chemicals. So we want to suss out that that means. We want to make sure that the sampling procedures that were used didn't introduce their own levels of contamination or cross-contamination or anything like that. We want to make sure that the laboratory was correct. We want to make sure that everything is in place. That is why you document all of that on the front end. And we want to make sure that the sample analysis is robust and so on that bullet that's really on the analytical laboratory. Very early on the BDD staff recognized that there could be some irregularities with the analytical laboratory. In addition remember, you've got to pay for it too, so there's also procurement issues with the analytical laboratory.

Changing laboratories in the middle of a study is a challenge so then you're beginning to introduce more uncertainties. The first two TREAT studies in 2016, all of the samples – most of the samples were analyzed by Hall Environmental in Albuquerque and they subcontracted out the radionuclides. The second two in September of 2016 and April 2017 were sent to a different laboratory, ALS, that did everything except for the April '17 BDD staff split samples to send metals' analysis to both ALS and Hall. So you can imagine there's a lot of complexity and the labs don't do everything the same way. They have different detection limits and so on and so forth. So we need to suss that out as well.

So let's use an example, and let's use the example of plutonium. Let me slow down and just walk you through what you're looking at here. On the x-axis are seven samples and these are just the detections of plutonium. I'm not putting on the non-detects. So you can see in the September 2016 TREAT study there were potentially four detections of isotopic plutonium and these are samples in the treatment works. In SS1, which is the raw water intake; SS2, which is after conventional treatment; SS3, which is after membrane filtration; and, SS4 which is after GAC filtration, which you can think of as finished water. It is not the compliance point for Safe Drinking Water Act purposes but it is essentially finished water. In April, there were three potential hits. SS2, which is after conventional treatment; SS3A, which is a new sampling point which is after membrane filtration and after ozonation; and, SS4 after granulated activated carbon. So

these are the results. The y-axis is concentrations and these seven clustered of shapes are the results.

One way to look at this and this is really one of the points I want to make, you can see that – oh, the legend, I'm sorry. The blue says method blank corrected result. The triangle says non-corrected result. The error is a red bar and the yellow thing is a minimum detected detection concentration. Mr. Chairman, you're looking at this how I would. I'd have to take my glasses off and do all of that betraying the age of my eyeballs. But one of the points I want to make is this. Because the red line on this represents the level below which the laboratory can't quantify the data. It is only estimated. So all of those chicken scratches that you see right now, it's below really what the laboratory's instrumentation can see. To me, as a longtime scientist and to many others, this just raises a question: It doesn't say it was there. It doesn't say it wasn't there. What does it say? It's at such low detection levels the laboratory had various problems that I'm not going to go into seeing at that level. They had potentially introduced some contamination of the sample. We don't know that for sure. When you get at these levels, you don't correct the data, you don't change the data, you don't add stuff, you don't subtract stuff. You got out and you resample. You set up high quality data objectives. You have a sampling analysis plan and you go and resample and you confirm. And these are just some things – these are numbers that cause you to go do that. You don't correct the data. You don't do anything. These data suggest go out and resample. That's what you do.

I do want to point out though that these numbers are below, again, what the lab can actually see and that is below the detection limit. So if you hold your page like this, you would need a page 12 ½ feet tall to get up to the minimum – the MCL for alpha activity. So that's where we're talking about numbers, which is pushing the laboratory's instrumentation to the max, and that's no exaggeration.

With that, the two bullets at the bottom – in any study you have to balance data quality with detection limits. It is not true, not appropriate for any kind of study, the best results are those with the lowest detection limits. It's not true. The best results are those with the lowest detection limits where you also have confidence in the data quality when you're done. So going forward, you have to appropriately balance those detection limits with data quality, because it does no good to the people who analyze the data and it does no good to the people who have to make decisions on the data when all you hear is: we don't know; there's too much uncertainty. You hear too much of that. You need answers. We need answers. We have to make sure that there's appropriate data quality.

How do you do that? The second bullet. We need to resample. These data do rise to the level of saying we need to resample with rigorous quality assurance in place on the front-end to make sure that the quality of data that we get answers the questions that we have.

Let's look at another example. This one – I apologize, gets really busy, but you should recognize at the bottom this cartoon. This is the cartoon of the treatment works that's actually been posted on your website for some time. It's in the stormwater reports, so I'm not going to go through that, except to say, these show the sample locations for the TREAT Study. There's a river sample that's from the river. There's S1 which is at the raw water intake. There's S2, which is after conventional treatment; S3, after membrane

filtration; S3A, which is after ozonation; S4, which is after the GAC contactors, so everybody knows what we're doing.

So we're looking at zinc here. So this is a metal. And this one reveals a couple things. Now, one, okay, so this is April, and I know for metals we split samples so I have to somehow illustrate that we have two different laboratories looking at the same sample. So I have one lab in red and one in blue, and I'm showing both totals and dissolved. It's like, oh, man, this is where my eyes glaze over. Please, hang with me on this.

One of the issues that this revealed is that in some cases dissolved is greater than the totals. Now, a total is an unfiltered sample. It goes off to the lab and you're looking at all of this particular metal that's in the sample. Dissolved means you're filtering it in a sense. You're preserving it in a different bottle, or sometimes the lab does that, and the dissolved should be less than the totals because the dissolved is a component of the totals. Right? You've got dissolved and suspended, stuff sitting on the bottom and scum and sludge. Whatever. Right?

But that's not the case. Let's just look at these red numbers right here, at the very beginning. This one up here – I know it's really tiny, but the top one, the total red, is 0.017. These units happen to be milligrams per liter. That's totals. Below, the dissolve, is 0.26 over ten times. Okay. So in our business, 110 percent, 120 percent dissolved over totals, that's – okay, it will raise an eyebrow, but it can happen; lab error. But not ten times. So there's a potential issue here.

Now, BDD staff recognized this as a potential issue and this is one reason why samples got split to two different labs for this April 2017 study. So that's something we have to figure out, and this goes to the quality assurance at the front end. We've got to make sure that our labs know what they're doing and TREAT 4 – with splitting it between labs, helped get some answers to figure that piece out going forward.

Here's another piece. If you look at the second dissolved red one here at S3, it says 0.0073. Now we're going to treat it some more. And now we get 0.0087. It's larger. Shouldn't it be lower? And in the first two TREAT studies, the metal concentrations generally went down every time like they should within the uncertainty of the method. But the last two got a little funny and BDD staff recognized that and even added this additional sampling location, S3A. But let's have a little perspective here. The numbers that we're talking about are miniscule compared to the MCL for zinc, and this is a secondary one, which means it's isn't health-related, it's aesthetic, is 5 milligram per liter. We're looking at 73 ten-thousandths of a milligram per liter. So these numbers are really tiny.

So I come back to detection limits, how you've got to balance that out with data quality. We're definitely not looking at numbers that are any kind of a health hazard or make the water not safe. We're looking at numbers that do what? You go out and resample. You don't correct. You don't change – you don't do any of that. You need to go resample with solid quality assurance in the front end. And then of course laboratory selection is crucial, and that's a challenge for any organization. It's especially challenging for government where you're working under price agreements and your expert panel is going to be working with staff to pin that down and make sure that it works right.

So let's real quick look at some potential sources. As I was looking over my shoulder my team would probably be going, Let's get going Bearzi. You're talking too much.

For radionuclides, it's everything you guys have probably thought about too. It could be in the raw water. Rio Grande, there are many studies about plutonium in the Rio Grande upstream of LANL. It's in the Rio Grande. And LANL's a potential source too. Keep in mind, we're looking at miniscule levels. How miniscule? Well, the kinds where the second bullet comes into play. Background in soils. What do you mean background in soils? Plutonium, background in soils? Well, there's documented background concentrations now that exist since the 50s and the 60s because of above-ground atmospheric testing of nuclear weapons, both the northern and the southern hemispheres. So there is plutonium in the soils. Could come from that. There could be laboratory in-sampling error as well. So we have to take a look at that as well.

What about for metals? And particularly the trends in the metals. I mean metals are good for you in the water, but too much could be toxic. Could be normal plant operations from the BDD plant, including return flows and maybe at a future meeting or maybe you've already heard about how the plant works and that it's – other than the NPDES permit from the raw water intake back to the river, it's a zero discharge system, so waters that come out of a treatment that don't go into the water supply get returned to the equalization tank at the front end of the conventional treatment and so on and so forth. So maybe some of the metals are concentrated or being released. Maybe it has to do with different flow rates, depending on when you sample it. Maybe it's pH changes, because the plant operators appropriately add things to increase and decrease pH through the treatment. Could be the treatment products themselves, or once again, laboratory and sampling error. Pharmaceuticals.

CHAIR IVES: Let me just stop you, because we actually do have timing issues in this room, which we need to vacate by 6:00 p.m. and we have an executive session we need to do as well as public comment and several other action items. So I'm going to ask you – I appreciate the background and I think it's fascinating and good for people to know, but let me ask you to cut to the chase.

MR. BEARZI: Cut to the chase. GAC issues are part of this. I don't want people to forget about that. But in brief, on the GAC – I went to the next slide – on the GAC, many of the same issues apply. We have to quality control the data and all of that stuff. And you guys can read this at your convenience.

So what do we do next? That's cut to the chase. All of these data raise enough questions where we need to get prepared for TREAT 5, for the next event. But we need to make sure that all of these acronyms that scientists love that stand for different documents that make sure that quality assurance is in place at the front end, that they're robust, that your experts are in agreement with it. We need to utilize existing data that the plant has that we haven't mined yet – pH, turbidity – and we need to resolve the GAC issues.

So laboratory selection, the disposition of the GAC, your expert panel is on the case and is going to be helping staff and management, the technical issues throughout this and that's the take-home message. Stay tuned for TREAT 5. Stayed tuned for more briefings as Mr. Vokes said earlier.

I appreciate your indulgence, Mr. Chair and the Board. It's dense stuff but I don't think it's really over anyone's head. Thank you.

CHAIR IVES: Questions? Commissioner?

COMMISSIONER HAMILTON: [Speaking away from microphone]
This is really interesting and I have actually some things to add. But what I want to ask you is – I'm assuming that TREAT 5 might actually be different, the sampling might actually be different – a different location for example.

MR. BEARZI: It is likely, because the data quality objectives will be different, because we have one new objective: confirm or refute the previous stuff. Absolutely.

COMMISSIONER HAMILTON: [Speaking away from the microphone]
The GAC concentrations [inaudible] might be separate samples based on what is recommended; so that's a possibility?

MR. BEARZI: Yes. Absolutely.

MEMBER FORT: I've got a couple questions. In making up the panel, and perhaps this is better addressed to Chuck, was there consideration of having a public health person or someone from toxicology? Again, we've heard quite a bit about the MCLs being the standards. I'm pretty familiar with them and it wouldn't necessarily be something that everyone in the public would consider adequate. In particular I'd like to bring in some California standards. But did we consider having some public health expertise?

MR. VOKES: Mr. Chair, Member Fort, the experts actually kind of formed the panel. I called out and I said we need to get a panel of experts in. Certainly if the Board wants to suggest us adding that component we can certainly look at that.

MEMBER FORT: I'd like to suggest it and I think it doesn't come up so much at the stage that it appears the panel is now but it certainly does come up at the stage – we don't have a list of contaminants that weren't detected and we don't have the MCLs. We don't have the California standards and so on in front of us, but when we get to that point I'd like to have public health expertise on the panel. So I would like to suggest – I worked a lot with Joan Rose but she'd be out of state and expensive, presumably.

CHAIR IVES: Commissioner.

COMMISSIONER HANSEN: Thank you, James, for the presentation. So what are you going to do about routine sampling? I mean I know we're doing the next TREAT study. So how routine is the sampling going to be?

MR. BEARZI: That's a good question. The first question is should there be additional routine sampling and what would it be? That's something that the expert panel is going to be looking at. Quite frankly, the last four to five weeks have been about the run-up to just get the data in shape where we can assess it, and we really haven't – these are really just questions at this point. So we would come back with recommendations about what that might look like. We don't know at this point.

COMMISSIONER HANSEN: Okay. You said that the data was from the lab? Or you had data from the lab?

MR. BEARZI: We had a spreadsheet that was provided by BDD staff, and that was presumably – that was populated by looking at lab reports.

COMMISSIONER HANSEN: LANL?

MR. BEARZI: No, no, no. I'm sorry. Analytical laboratory reports.

COMMISSIONER HANSEN: Okay.

MR. BEARZI: When I referred to – when I say Los Alamos National Laboratory, I'll say LANL.

COMMISSIONER HANSEN: Okay.

MR. BEARZI: So when I say “lab” I mean the analytical laboratory. So far there's no LANL in this.

COMMISSIONER HANSEN: Okay. That's what I wanted to make sure.

MR. BEARZI: Sorry about that. My team keeps beating on me about that and I forgot it. I apologize.

COMMISSIONER HANSEN: And I will too. Then, along with experts on this panel, Dr. Makhijani who I'm sure you know –

MR. BEARZI: Arjun. I sure do. Haven't talked to him in a while.

COMMISSIONER HANSEN: Was instrumental in getting the standards for this stretch of the river from Cochiti to Otowi Bridge, so he is really an expert in radionuclide contamination. And so if we're going to have experts who really know this stretch of the river, he's somebody who I think should be consulted. I'm just putting that out there. He is familiar with this. He has worked on this stretch of the river. There was a quote from him – “The State of New Mexico Water Quality Commission has tightened monitoring requirements for plutonium, tritium, and other radioactive contaminants in the segment of the Rio Grande that's deemed at greater risk from potential LANL discharges.” He was responsible for raising those standards.

So to me, that's somebody who is really qualified and knowledgeable about our river and the standards that we need. And –

MR. HARWOOD: Commissioner, if I could address that single point, because I think it's a very, very important one. I worked with Arjun in 2009 on the Triennial Review. He was – he brought a lot of information to the table on Rio Grande water quality. I feel like he would be a great addition to the study session on Rio Grande water quality. And just to contrast it, this is a study looking at the plant. I don't know if Dr. Makhijani is an expert in treatment processes. He may be; I don't know. But my interface with him has been on sort of natural water quality issues in the environment. This technical panel has really been struggling with the TREAT data, which was the treatment optimization stuff. So I think he may have a role in a related but sort of separate analysis to this TREAT data that James is presenting. I don't know if that's helpful.

COMMISSIONER HANSEN: Thank you, Kyle. So that was one of the issues – I just feel that maybe outside expertise is important. And then even though this is a inside the plant treatment issue, having more places where we have monitoring, where the MOU is really weak in LA Canyon and other places is really important to me and I feel like we're not getting the results that we need to turn off the water when we need to turn off the water coming into the plant to minimize even these so-called lower standards.

COMMISSIONER HAMILTON: So called what?

COMMISSIONER HANSEN: Lower standards. What he's saying that these standards are quite low?

COMMISSIONER HAMILTON: Those aren't standards. Those are sample results.

COMMISSIONER HANSEN: Okay. Sample results. I'm sorry. Low sample results. So I would just like to see that in the MOU. I think that that is really important that we continue to press with LANL. And I'm referring to LANL. That we

have more monitoring stations so that we – when we’re coming to this TREAT area that we have the kind of sampling that is lower.

CHAIR IVES: And Commissioner, I think it was – I forget how many – a few months ago that we approved the MOU which was in part based upon funds allocated through Los Alamos and we did discuss additional sampling protocols but at least under the funding available this is my understanding what could be done. So I think that’s a real separate discussion.

COMMISSIONER HANSEN: It is a separate discussion but it bears weight on this because it appears that we need more sampling.

COMMISSIONER HAMILTON: Of what?

COMMISSIONER HANSEN: For what they’re doing with the TREAT.

CHAIR IVES: Well, I think the question is the quality of the sampling and it sounds like that’s going to be addressed in the TREAT 5 study and presumably there’s an additional TREAT 6 study under the MOU that is called for, so I think we would be putting in place, presumably, the quality assurance and quality controls necessary to ensure at least that the samples are taken in such a way that when they are delivered to the laboratories they can do their work and give us accurate information that resolves some of the doubt, if you will, that are reflected here, even those these results are well below any of the MCLs.

MR. BEARZI: Mr. Chair, I think that was well put and Commissioner Hansen, the TREAT studies also could point to other things that the Board needs to consider down the road as well, such as things that you talked about.

COMMISSIONER HANSEN: Okay.

CHAIR IVES: So I’m happy to have a separate discussion about if we want to take on an independent sampling protocol and what the nature and cost of that would be, but at least with regards to what we’ve entered into with Los Alamos, that’s pretty fixed at this point in time, I believe. Councilor.

COUNCILOR HARRIS: Thank you, Chair. Mr. Bearzi, thank you for the presentation. I’m sorry it had to be cut short. But as I listened, it seemed to me that the process – and I’m talking about even before you were involved was working appropriately. I heard you say that staff added that – not 4A but added another sampling station. There were some other questions raised about the dissolves or some total, and so they brought in additional expertise in your firm. I heard you say six weeks ago. And so it seems to me that people are doing their jobs. It has raised questions. You’re kind of moving forward and refining what the expert panels will refine, what you want to accomplish in TREAT 5, and I think that the team, the expert panel should be encouraged to move forward as soon as you can. What would be your expectation – I realize there’s a lot of questions to answer. Analytical labs, any number of things, but when would you expect to bring something back as a result of TREAT 5? Because overall, this is a very long timeline.

MR. BEARZI: Mr. Chair, we would expect TREAT 5 to happen in the fall.

COUNCILOR HARRIS: Okay.

MR. BEARZI: September or October, the actual sampling.

COUNCILOR HARRIS: Right.

MR. BEARZI: That gives us a few months to create all these documents and to make sure the quality assurance is in place. Meanwhile, we've got to deal with the GAC as well. We'd like to have some certainty about whether or not the Rio Grande is going to cooperate with diversions being able to happen because we want the plant to be operating the way – and do all those other things. So then TREAT 5, I would expect after sampling, it could be four to six months before a report is put together that says here's what we found in TREAT 5 going forward.

COUNCILOR HARRIS: Okay. All right. Well, like I say, it seems like a long timeline and what you just described certainly stretches it out from this point, not quite a year but nine months all together, I would say. So I don't really have anything else to add. I don't have the expertise that either Commissioner Hamilton or Member Fort has and I'd be curious – and I did hear Member Fort loud and clear about the public health component and I think that would have value, but it seems like that would need to come, perhaps after TREAT 5 and if there's still uncertainty, maybe we go to 6. I don't know. But at any rate, is that what you were suggesting, Member Fort?

MEMBER FORT: I think that as we get to the questions that were raised here, what do we do next? We've had a lot of allusions in this talk to meets the MCL, but then we also know there are contaminants for which there are no MCLs and so I think I would want any panel that makes recommendations – well, it would be very useful to the Board to have recommendations in terms of with what constituents that have been found at a technical level, should we have interest? Should we possibly recommend further treatment? And to make recommendations about further treatment, which is per se, expensive, I'd want to have health expertise commenting on that.

And then I do think we are not the cutting edge state with respect to this, among other areas so we could look at the experience of other states that have invested quite a bit in doing risk assessments and so on for specific contaminants. So I think I'm mostly going to be interested in the ones that aren't on – for which we don't have MCLs, and just a friend of mine said, we've got lots of pharmaceuticals in our drinking water and no one's doing anything about it. No, no, that's not right, but we need to get – I appreciate Mr. Vokes saying we'll put what we know up on the website now and we need to just be very transparent, but as we get to the risk assessment part we should have health people involved in that.

MR. BEARZI: Mr. Chair, if I could just interject quickly, when you talk about risk assessment, very different data quality objectives too. That's a different study.

CHAIR IVES: So, folks, we have much more on the agenda. We have roughly 13 minutes in this chamber. We have an executive session, so much more to accomplish in a very limited amount of time. My proposal would be that we take Matters from the Public and then at 6:00 I'm told we can adjourn to the City Councilors conference room which folks are certainly invited to attend, at least for purposes of capturing comments, proceed in that fashion. And I think much of the balance of the agenda would move fairly quickly. So unless you have something significant to add here, it's clearly an ongoing process and very much appreciate the report and the update and the knowledge shared. Anything further from staff on this one? So is it the consensus of the Board that we can modify our agenda and take comments from the public? So after the Discussion and Action Items are items from the public.

MATTERS FROM THE PUBLIC

CHAIR IVES: If there's anybody who wishes to address the Board on any issue I would invite you to come forward and line up on the ramp there. And I'd love to be able to count the number of folks to figure the timing because again, our time in this chamber is somewhat limited. And if there's nobody that has a matter from the public, that's great. Why don't we press on through and see if we can't complete much if not all of our agenda before 6:00 and then we can adjourn to executive session and then we will have to come out of executive session as there is a potential action item after that. But we can do that in the City Councilors conference room, which we will invite everybody back into if you desire to hear that action.

12. Request for Approval of a Budget Amendment Resolution (BAR) to FY 17/18 Operating Budget to reflect the Fiscal Agent Fee, as per the Project Manager and Fiscal Services Agreement (PMFSA)

COUNCILOR HARRIS: Yes, this is a – very briefly, a discussion we had at FSAC and it's really the statement having to do with the fiscal agency, the new agreement and it's written New Agreement for Support Services has not been finalized. What I said, and I think people know that this has been going on, not finalized, for about two years now, and it's been handled appropriately, I believe, by Ms. Romero, in how it's been budgeted. The one percent has been budgeted and then the three percent is identified in contingency should the fiscal agency agreement be put in place. But I did speak with Mr. Martinez, that's Marcos Martinez from our City Attorney's Office yesterday and he said there's some things that have been discussed, kind of on the table, I think primarily with you, Ms. Long, on behalf of the Board.

So I just want to make sure that – seemingly it's not terribly difficult. I want to make sure that it gets the necessary attention so we can get this resolved. And that's all I'm saying.

MS. LONG: Mr. Chair and Councilor Harris, I understand this has been dragging on for some time and I think we're finally down to – we worked pretty hard on the agreement and I think we understood we were going to get a marked-up agreement from the City, but that's fine. We have just a few comments, as you said that I think I've already addressed two of them and then one will take the working group to come up with a formula for payment of the fee. We understand Mr. Martinez' concern about that and I think that can be done.

COUNCILOR HARRIS: So who's – my other question: Who's in the working group in this? Again, just cut to it. Who's in the working group and when would you expect them to meet?

MS. LONG: Ms. Romero would have that information. I was not in the working group.

MS. ROMERO: So the working group consisted of City, County and BDD staff and since it's been two years since the working group has been together I'm sure some of those have changed, but we'll go back to the original. They were assigned by title, like Public Utilities Director from both the City and the County. I believe the Finance Directors from both the City and the County were part of that original

committee. So we'll go back and reach out to those titles that are being held by those individuals and bring everybody back in so we can discuss the proposed changes by the City.

COUNCILOR HARRIS: So, Ms. Long, do you need any direction from the Board in order to do that?

MS. LONG: No, Councilor Harris.

COUNCILOR HARRIS: Okay.

MS. LONG: And I'm think that maybe what we can do, because of the issue that needs to be addressed, we may not even need the entire working group. It may just be the Finance side, which could expedite things.

MS. ROMERO: Yes.

COUNCILOR HARRIS: Okay. From what Ms. Romero said, one of them is just almost an accounting question, how it's going to be handled. So if we can do that and not worry about creating a new working group, because that's what you're talking about I think that'd be good. That's all I have to say, Chair. Thank you. I'll move to approve, because this requires a BAR.

COMMISSIONER HANSEN: Second [Commissioner Roybal was not in the room at this time]

CHAIR IVES: We have a motion and second. Any further discussion?

The motion passed by unanimous [5-0] voice vote.

CHAIR IVES: Very good, the matter carries. 13 and 14 were approved on Consent.

DISCUSSION AND ACTION

15. Request for Approval to Award Request for Bid #18/14B to Chavez Security, Inc. for the Buckman Direct Diversion Facilities for the total amount of \$179,000 exclusive of NMGR

MS. ROMERO: Mr. Chair, members of the Board, on March 1, 2018 –

CHAIR IVES: I'm going to ask you to be very abbreviated. It's in the packet so folks have had a chance to review this.

MS. ROMERO: Okay. I will be quick. The Buckman Direct Diversion, along with the City of Santa Fe Water Division issued the RFB, which is a request for a bid, for security services. We received three bids for a total number of hours that were needed and the lowest bid was submitted by Chavez Security, which included local preference. I did provide a chart in the memo. That dollar amount does include the hours that were requested by the City of Santa Fe Water Division, so BDD facilities that award would be \$179,000 plus New Mexico GRT. And that was based on an estimate of 6,519 regular hours.

So security is a critical service as you know. They provide suspicious activities, security breaches and provide security protection for staff. So if there's any questions about the award or the contract?

CHAIR IVES: Any questions from the Board?

COMMISSIONER HANSEN: I move to approve.
COMMISSIONER ROYBAL: Second.
CHAIR IVES: We have a motion and a second. Any further discussion?
COMMISSIONER HANSEN: I don't know if I can make that motion.
COMMISSIONER ROYBAL: I was just going to ask that question.
COMMISSIONER HANSEN: Because you weren't here and then you came back. So I don't think I can make that motion.
COMMISSIONER ROYBAL: I'll make the motion to approve.
COMMISSIONER HAMILTON: Second.
CHAIR IVES: We have a motion and a second. Any further discussion?

The motion passed by unanimous [5-0] voice vote.

16. Consideration and Possible Approval of Amendment 7 to the Project Management and Fiscal Services Agreement (PMFSA) for the Board and the City of Santa Fe to Increase the Monetary Authority for the Project Manager Approval of Contracts from \$50,000 plus GRT to \$60,000 plus GRT

CHAIR IVES: This of course complies or puts it in compliance with what is now standard state operating procedure which in the last year raised those limits. So there's nobody presenting. I'm not sure if anybody has any questions.
COUNCILOR HARRIS: I'll move to approve.
COMMISSIONER HAMILTON: Second.
CHAIR IVES: We have a motion and a second. Any further discussion?

The motion passed by unanimous [5-0] voice vote.

MATTERS FROM THE BOARD

CHAIR IVES: We have two minutes. Yes, Commissioner Hamilton.
COMMISSIONER HAMILTON: I would just like to suggest that at our next meeting we have limited personnel matters added to the executive session. I can give you details later.
CHAIR IVES: Okay, if appropriate for us to consider, you bet.
COMMISSIONER HAMILTON: It's appropriate.
CHAIR IVES: Other matters from the Board?

EXECUTIVE SESSION

**In accordance with the New Mexico Open Meetings Act NMSA 1978 Section 10-15-1(H)(7), discussion regarding threatened or pending litigation in which the BDDB is, or may become a participant, including without limitation:
Discussion regarding Diversion Structure issues**

CHAIR IVES: And we will retire to the Councilors conference room and folks will have to remain outside while we conduct the executive session but once we

come out of executive session we will invite you, obviously, back in as we take any necessary action after that is concluded.

COMMISSIONER ROYBAL: Mr. Chair, I'd like to make a motion to go into executive session, if we could get a summary from Ms. Long.

MS. LONG: Yes, members of the Board, the motion would be to go into executive session in accordance with the New Mexico Open Meetings Act, for the purpose as provided on the agenda.

COMMISSIONER HAMILTON: Second.

CHAIR IVES: We have a motion and a second. Any further discussion?

The motion to go into executive session passed by unanimous [5-0] voice vote with the following BDD Board members voting in the affirmative:

Councilor Ives	Yes
Councilor Harris	Yes
Commissioner Hamilton	Yes
Commissioner Roybal	Yes
Member Fort	Yes

[The Board met in Executive Session from 6 p.m. to 6:20 p.m.]

COMMISSIONER ROYBAL: So we need a motion to come out of executive session?

CHAIR IVES: We do.

COMMISSIONER ROYBAL: Mr. Chair, I'd like to move that we come out of executive session where the items that were discussed were the only ones that were presented by the County attorney.

COMMISSIONER HAMILTON: Second.

CHAIR IVES: The Board's attorney.

COMMISSIONER ROYBAL: Yes, the BDD attorney. Do you want me to read this into the record?

CHAIR IVES: Yes, please.

COMMISSIONER ROYBAL: I will state for the record, for our minutes, that the only matters discussed during the executive session during the last Board meeting on May 3, 2018 was the matter as stated in the motion to go into executive session and no other action was taken.

CHAIR IVES: That covers our last executive session, and now for this executive session, why don't I state for the record and our minutes that the only matters discussed during the executive session today were the matters as stated in the motion to go into executive session and no action was taken in executive session but we will come out of executive session to consider action.

So we have a motion to come out of executive session. Is there a second?

COMMISSIONER HAMILTON: I seconded. Any further discussion?

The motion passed by unanimous [5-0] voice vote.

17. **Consideration and Possible Approval of Amendment #1 to the Legal Services Agreement with Snell and Wilmer, PA and the Buckman Direct Diversion Board to increase the Compensation Under the Agreement by \$1,500,000.00 for a total contract amount of \$1,7000,000.00**

CHAIR IVES: I don't know if anyone wants to present or just beg the question.

COUNCILOR HARRIS: Chair, I'll move to approve item 17, consideration of approval of Amendment #1.

COMMISSIONER ROYBAL: I'll second.

CHAIR IVES: We have a motion and a second. Any further discussion?

The motion passed by unanimous [5-0] voice vote.

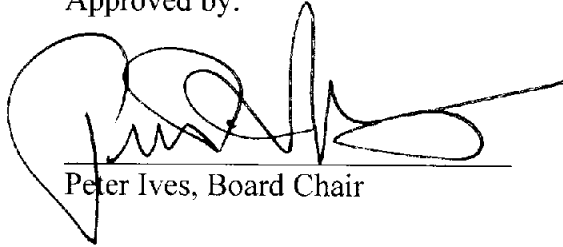
CHAIR IVES: The matter is approved. That completes our agenda for this evening.

NEXT REGULAR MEETING: Thursday, July 5th at 4:15. A discussion ensued regarding whether a quorum will be available for July 5th. Staff offered to research availability during that holiday week.

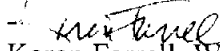
ADJOURNMENT

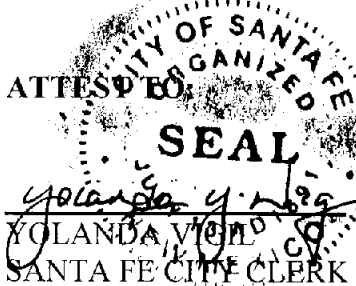
Having completed the agenda, Councilor Ives declared this meeting adjourned at approximately 6:25 p.m.

Approved by:


Peter Ives, Board Chair

Respectfully submitted:


Karen Farrell, Wordswork

ATTESTED TO:

YOLANDA VIGIL
SANTA FE CITY CLERK

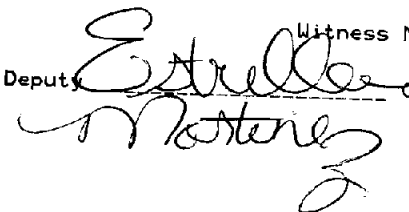


COUNTY OF SANTA FE)
STATE OF NEW MEXICO) ss

BUCKMAN DIRECT DIV MIN
PAGES: 27

I Hereby Certify That This Instrument Was Filed for
Record On The 14TH Day Of August, 2018 at 05:30:57 PM
And Was Duly Recorded as Instrument # 1865140
Of The Records Of Santa Fe County

Witness My Hand And Seal Of Office
Geraldine Salazar
Deputy County Clerk, Santa Fe, NM





Buckman Direct Diversion

**AGENDA**

The City of Santa Fe
And
Santa Fe County

CITY CLERK'S OFFICE

DATE 5/30/18 TIME 3:41

PREPARED BY [Signature] [Signature]

Buckman Direct Diversion Board Meeting**THURSDAY, June 7, 2018****4:15 PM****CITY HALL****CITY COUNCIL CHAMBERS****200 LINCOLN**

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF CONSENT AGENDA
5. APPROVAL OF MINUTES FROM THE MAY 3, 2018 BUCKMAN DIRECT DIVERSION BOARD MEETING
6. REPORT ON JUNE 5, 2018 FISCAL SERVICES AUDIT COMMITTEE (FSAC)

INFORMATIONAL ITEMS

7. Monthly Update on BDD operations. (Michael Dozier)
8. Report from the Facilities Manager. (Charles Vokes) **VERBAL**
9. Report on status of the Rio Grande del Norte/Sabinoso Wilderness State Land Exchange and information related to the Buckman Direct Diversion right-of-way. (Melanie Barnes, BLM Deputy State Director) **VERBAL**
10. Report on 3rd Quarter Financial Position for Fiscal Year 17/18. (Mackie Romero)

11. Report on Granular Activated Carbon and Finished Water Quality Study (Charles Vokes, Rick Carpenter) **VERBAL**

CONSENT AGENDA

12. Request for approval of a Budget Amendment Resolution (BAR) to FY17/18 Operating budget to reflect the fiscal agent fee, as per the Project Manager and Fiscal Services Agreement (PMFSA). (Mackie Romero)
 - a.) Reduce budgeted Fiscal Agent Fee by \$236,649.
13. Request for approval of a Budget Adjustment Request to the FY17/18 Operating Budget. (Mackie Romero)
 - a.) Request to decrease Electricity by \$192,000 and transfer \$95,000 to Chemicals and \$97,000 to Other Operating Costs.
14. Request for the approval of Amendment #5 to the Legal Services Agreement in the amount of \$187,000 exclusive of NMGRIT for FY 2018/2019; (Long, Komer & Associates, PA). (Mackie Romero)

DISCUSSION AND ACTION

15. Request for approval to award RFB No. '18/14/B to Chavez Security, Inc. for the Buckman Direct Diversion Facilities for the total amount of \$179,000 exclusive of NMGRIT. (Mackie Romero)
16. Consideration and possible approval of Amendment No. 7 to the Project Management and Fiscal Services Agreement ("PMFSA") between the Buckman Direct Diversion Board and the City of Santa Fe to increase the monetary authority for Project Manager approval of contracts from \$50,000.00 plus gross receipts tax to \$60,000.00 plus gross receipts tax. (Nancy R. Long)

MATTERS FROM THE PUBLIC

MATTERS FROM THE BOARD

EXECUTIVE SESSION

In accordance with the New Mexico Open Meetings Act NMSA 1978, §10-15-1(H)(7), discussion regarding threatened or pending litigation in which the BDDDB is, or may become, a participant, including without limitation: Discussion regarding Diversion Structure issues. (Nancy R. Long)

End of Executive Session



Buckman Direct Diversion



DISCUSSION AND ACTION ITEMS cont.

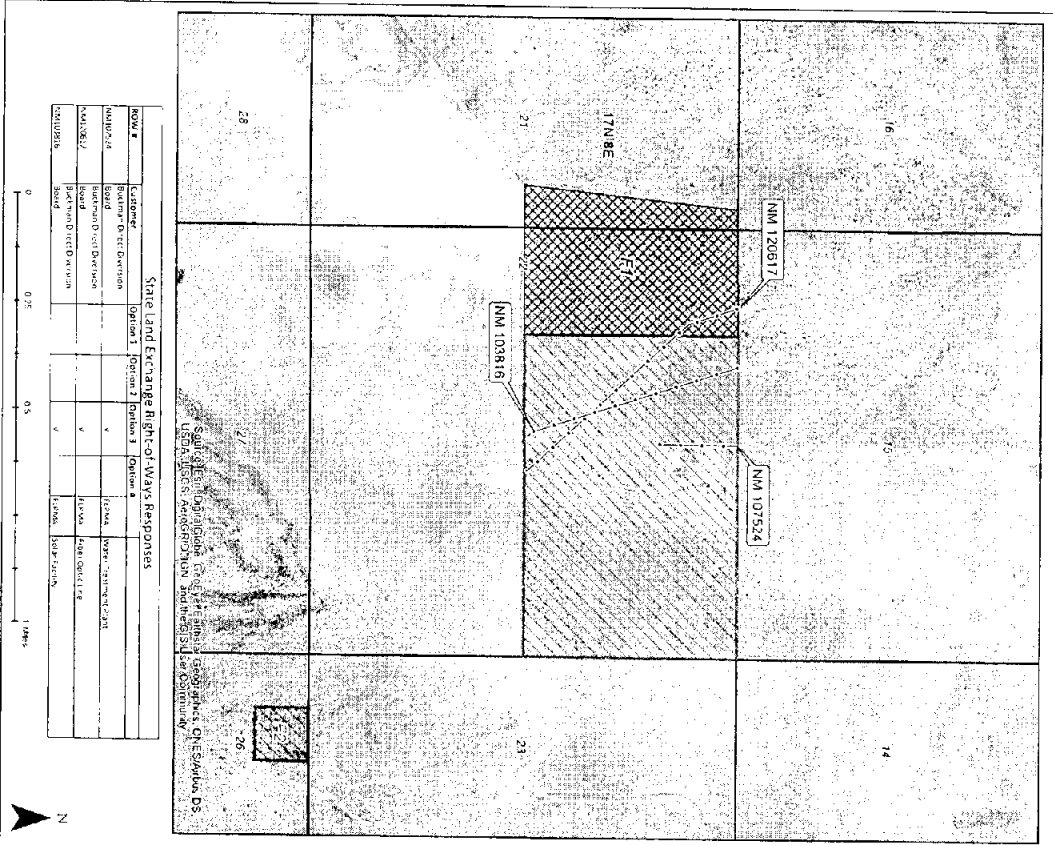
17. Consideration and possible approval of Amendment No. 1 to the Legal Services Agreement between Snell & Wilmer, P.A. and the Buckman Direct Diversion Board to increase the compensation under the Agreement by \$1,500,000.00 for a total contract amount of \$1,700,000.00. (Nancy R. Long)

NEXT REGULAR MEETING: Thursday, July 5, 2018 @ 4:15pm, City Council Chambers, 200 Lincoln

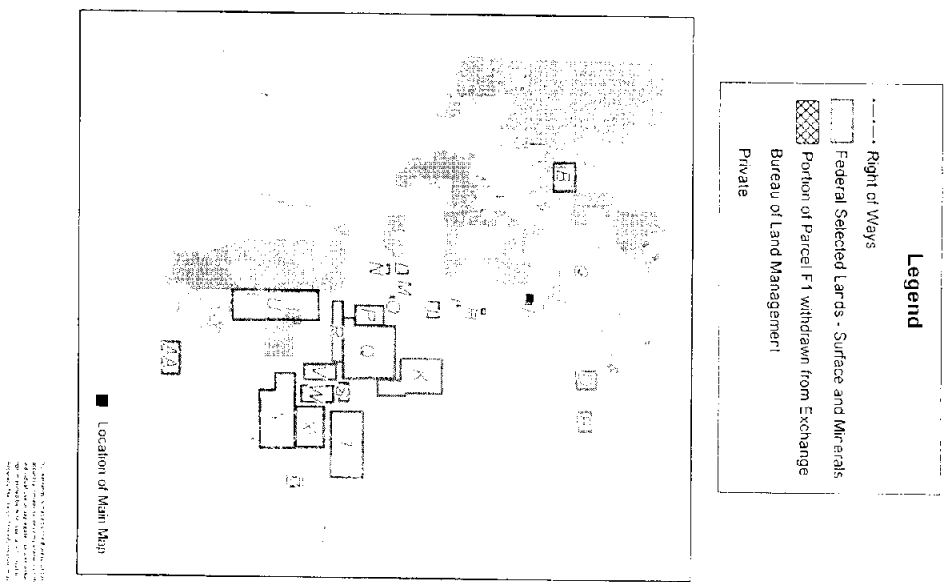
ADJOURN

PERSONS WITH DISABILITIES IN NEED OF ACCOMODATIONS, CONTACT THE CITY CLERK'S OFFICE AT 505-955-6520, FIVE (5) WORKING DAYS PRIOR TO THE MEETING DATE

ROWS within Parcel F1 Proposed RGDNNM/Sabinoso Wilderness SLO Land Exchange



State Land Exchange Right-of-Ways Responses				
Row #	Customer	Option 1	Option 2	Option 3
NM107516	State of New Mexico			
NM107517	State of New Mexico			
NM107518	State of New Mexico			
NM107519	State of New Mexico			
NM107520	State of New Mexico			
NM107521	State of New Mexico			
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NM107600	State of New Mexico			





U.S. Department of the Interior
Bureau of Land Management



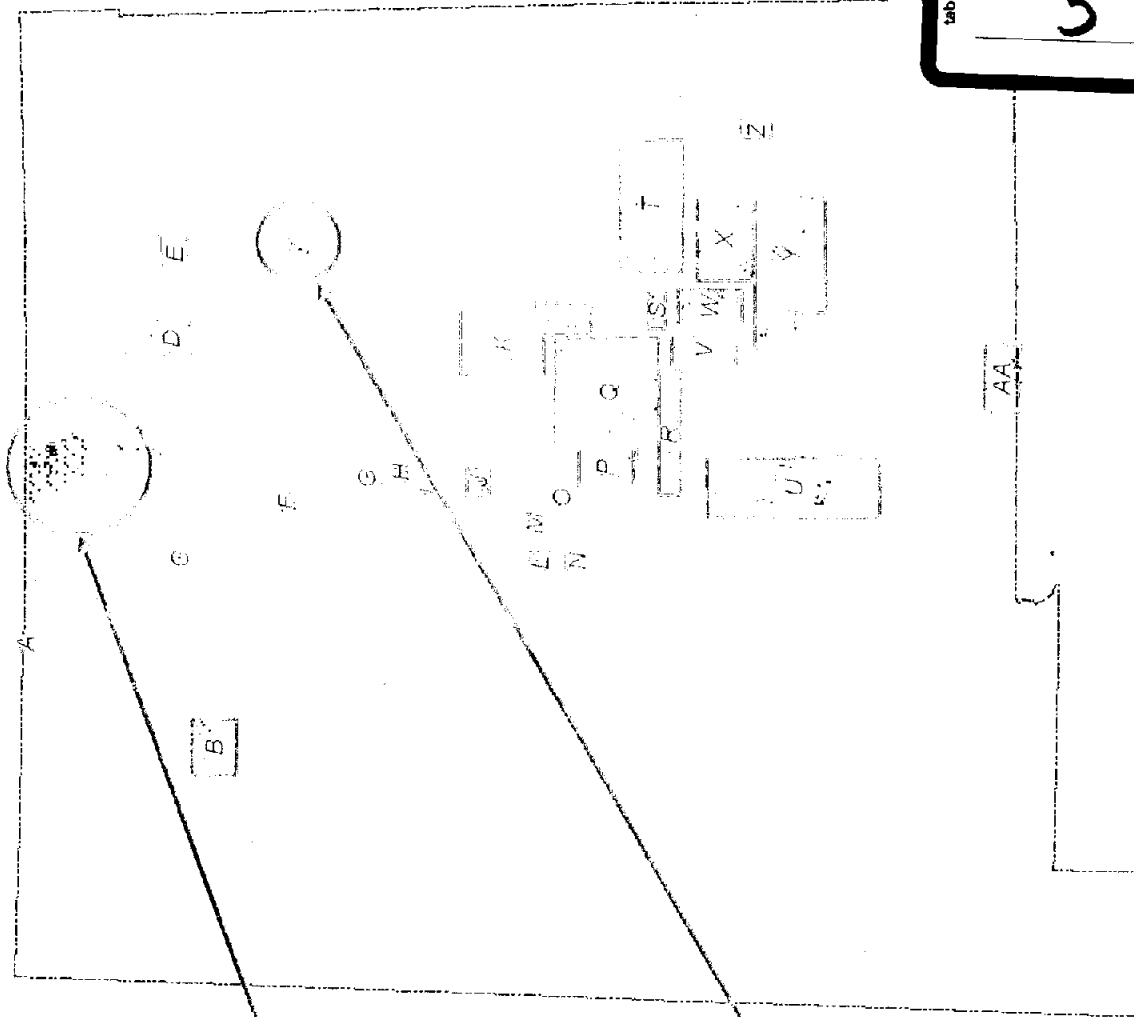
New Mexico State Land Office

Lands Proposed For Exchange

BLM lands

• Parcels A - AA

State Lands



TREAT STUDY AND GAC DISPOSITION

Briefing for the Buckman Direct
Diversion Board

June 7, 2018

James P. Garza

Senior Environmental Scientist
Florida Geoscience, Inc.
Santa Fe, New Mexico

What Are The Main Issues?

TREAT = The Removal Efficiency & Assessment of
Treatments

GAC = Granulated Activated Carbon

For both TREAT and Granulated Activated Carbon
(GAC) the primary issues include:

- Quality Assurance/Quality Control (QA/QC)

- Sampling and Analysis

- What do the data tell us now? What are the
implications? Potential sources?

- What do we do next?

Expert Panel

Expert Panel

James P. Bearzi, Glorieta Geoscience, Inc. (Lead)

Bill Schneider, City of Santa Fe

Alex Puglisi, City of Santa Fe

Daniela Bowman, BDD

Jerry Schoeppner, Santa Fe County

Kerry Howe, UNM

Work overseen by Rick Carpenter and Charles Vokes



What Do the TREAT Results Tell Us?

Safe water has been and continues to be delivered to customers

Important questions raised about chemicals detected by the analytical laboratories

Are the results “real?”

What are potential sources?

What, if any, additional sampling should be done to confirm previous results?

What, if any, additional sampling should be done on a routine basis going forward?



TREAT Study Data Uncertainties

QC complete; some errors found and corrected

QA depends on objectives of study

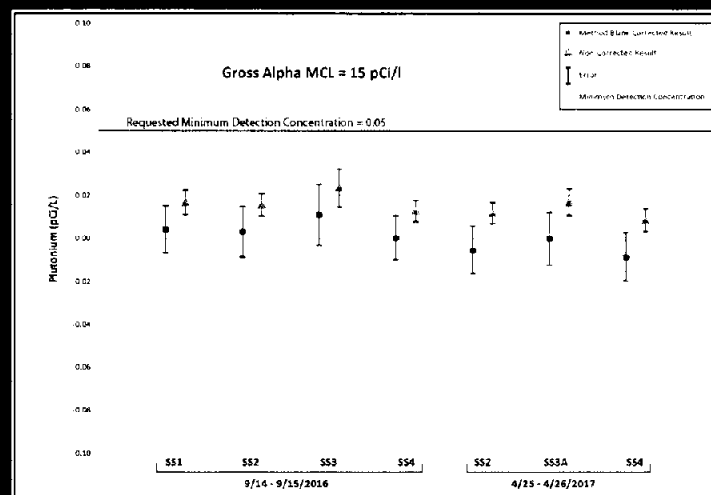
TREAT study showed BDD finished water is below MCLs, but had measurable (but not necessarily quantifiable) concentrations of some chemicals

Sampling issues and procedures

Sample analysis (including changing analytical laboratories between TREAT studies 1-2 and 3-4)



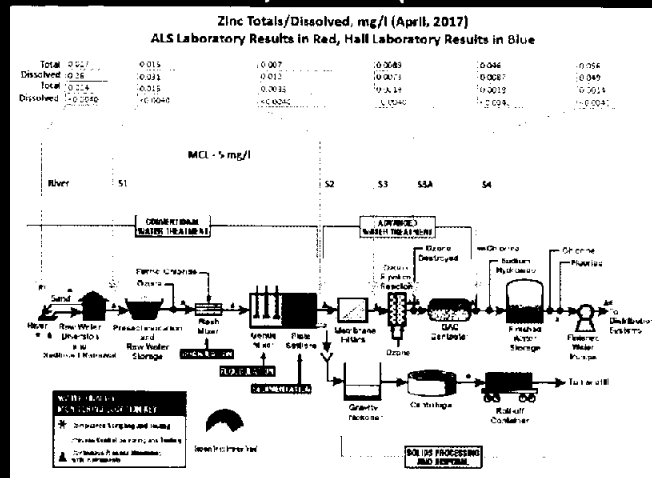
TREAT Study Data (Plutonium Illustration)



Appropriately balance data quality and detection limits.
Resample with rigorous QA procedures in place.



TREAT Study Data (Zinc Illustration)



Dissolved > Totals (in some cases)

Concentrations may increase with travel through the treatment works (in some cases)

Laboratory selection crucial

Some Potential Sources

Radionuclides

- Raw Water (Rio Grande; LANL)
- Background in soils
- Laboratory or sampling error

Metals (trends)

- Normal Plant operation (including return flows)
- Total flow rate through process units
- pH changes
- Treatment products

Laboratory or sampling error

Pharmaceuticals and other organics

- Upstream point and nonpoint sources
- Laboratory or sampling error

Primary GAC Issues

Evaluate GAC data – same issues as TREAT
Are chemicals found in TREAT present in new GAC?
Are they being concentrated or desorbed in GAC?
Does the age of GAC affect removal efficiencies for organics and metals?
Is additional or revised sampling required?
What are potential contaminant sources?
What are appropriate disposal pathways?
What are the potential regulatory issues?



What Do We Do Next?

TREAT 5 Preparation (Fall 2018)
Need for robust study design and implementation
CM – Conceptual Model
DQOs – Data Quality Objectives
QAPP – Quality Assurance Project Plan
SAP – Sampling and Analysis Plan
QA/QC – Quality Assurance/Quality Control
Utilize existing data the Plant has (pH, turbidity, time)
and assess possible correlations with TREAT results
Resolve GAC issues



Take Home Messages

Safe water continues to be delivered to customers

Need for TREAT 5 with robust study design

- Study is reproducible with clear data quality objectives

- Confirms or refutes preliminary results (TREATs 1-4)

Analytical laboratory selection is crucial

Assess disposition of GAC

Expert Panel provides technical support to BDD management and staff

