City of Santa Fe

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Agenda

Santa Fe River Commission Agenda
Thursday, June 14, 2018 (Round House Room), 6 pm to 8 pm
City Offices at the Market Station Building at the Railyard
500 Market Street, Suite 200, Santa Fe, NM
505-955-6840

1. **ROLL CALL**
2. **APPROVAL OF AGENDA**
3. **APPROVAL OF MINUTES FROM MAY 10, 2018**
4. **COMMUNICATION FROM OTHER AGENCIES /COMMITTEES**
   a. **SF Watershed Report (Andy Otto)**

5. **INFORMATION/DISCUSSION/ACTION:**
   a. **Information Item: Optional Water Management Practices in Support of the Santa Fe River Greenway Project (Andrew Erdmann)**
   b. **Informational Item: Nutrient Standards and the SF River (Alex Puglisi)**
   c. **Informational Item: Santa Fe River Fund Quarterly Report (Melissa McDonald)**
   d. **Discussion Item: River Commission Mission Review (Zoe Isaacson)**

6. **MATTERS FROM COMMISSIONERS**

7. **MATTERS FROM STAFF**
   Next month- Water Resources & Conservation, Update on the Santa Fe River Study-Monitoring & Management of River Flows (Alan Hook)

8. **CITIZENS' COMMUNICATION FROM THE FLOOR**

9. **SUB-COMMITTEE BREAKOUT SESSION**

10. **ADJOURN**

Next Scheduled River Commission Meeting is July 12, 2018
Captions & Packet Material are due by 10 am on July 3, 2018
Persons with disabilities in need of accommodations,
Contact the City Clerk's office at
(505) 955-6521 five (5) working days prior to the meeting date.

Santa Fe River Commission
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June 14, 2018

Santa Fe River Commission
MINUTES
Thursday, June 14, 2018
6:10 pm to 8:00 pm

1. CALL TO ORDER

The Chair, Zoe Isaacson, in the Roundhouse Meeting Room, Market Station Building at the Railyard, 500 Market Street, Santa Fe, NM, called the Santa Fe River Commission meeting to order at 6:10 pm.

ROLL CALL

PRESENT:
Zoe Issacson, Chair
John Buchser
Jerry Jacobi
Luke Pierpont
Dale Doremus
Anna Hansen, Alternate

NOT PRESENT/EXCUSED:
F.M. Patorni, Alternate
Emile Sawyer, Excused
Phil Bové

OTHERS PREENT:
Melissa McDonald, River and Watershed - Staff Liaison
Raquel Baca-Thompson, Admin. Dir. and Program Dir.,
Santa Fe Watershed Association
Alex Puglisi, Staff
Fran Lucero, Stenographer

2. APPROVAL OF AGENDA

Mr. Jacobi moved to approve the agenda as presented, second by Ms. Hansen, motion carried by unanimous voice vote.

3. APPROVAL OF MINUTES FROM MAY 10, 2018

Page 1: F.M. ~~Patomi~~ correct spelling is Patorni, misspelled throughout the minutes
Page 2: 2nd paragraph #5 – St. ~~Frances~~ Francis misspelled
4th paragraph #6, there not ~~their~~
Critical Flow: ~~015~~ is 0.15cfs
Page 3: Item B: first paragraph ~~burm~~ should be berm

Ms. Hansen moved to approve the minutes as amended, second by Mr. Pierpont, motion carried by unanimous voice vote.

Mr. Jacobi asked staff to speak with IT to find out why minutes are not available on the city website. Some can retrieve and others can't.

4. **COMMUNICATION FROM OTHER AGENCIES /COMMITTEES**

   a. **SF Watershed Report - Raquel**

   Clean and Green: Cleaning will be through Alto Park, green part is new this year and they are working with the city to do upstream St. Francis, Defouri Bridge and would like about 10 volunteers at that location. Saturday, from 10:00 am to 12 noon.

5. **INFORMATION/DISCUSSION/ACTION:**

   a. **Information Item: Optional Water Management Practices in Support of the Santa Fe River Greenway Project (Melissa McDonald for Andrew Erdmann)**

   Ms. McDonald reported that they were contacted by Scott Kaseman from Santa Fe County who asked staff to withdraw this item from last night City Council meeting and that it be placed on the agenda 3rd week in July. Santa Fe County has been observing what is going on and they feel like there is enough moisture where they can maintain it and they are more worried about the July heat. The City Council is very concerned about the fire season, they are wanting to watch the weather closely and working closely with the county to make sure we are not wasting water.

   Mr. Jacobi asked, up to this time what has been done?

   Ms. Hansen responded that they have been watering with non-potable water, which is what the contractor is scheduled to do and trying to keep as much alive, nothing is getting deep water.

   Ms. McDonald said that restoration watering likes to have one or two deep soaks, the county coordinated with the city to have it be in alignment with the spring releases but we had a very dry winter and we were not able to give that pulse. It came up with this group to discuss if there was anything we could do. Mr. Erdman mentioned that the Osage Well and also affluent and the other two options got bumped out because we don't have living river flows to give at the moment nor do we have time to get a permit for the affluent. Osage Well rose to the option and there has been a lot of caution to make sure we are not wasting water. City Council is supportive, action will be taken in July.

   b. **Informational Item: Nutrient Standards and the SF River (Alex Puglisi)**

   Power point presentation distributed and followed by the River Commission members. Mr. Puglisi stressed that he would be talking about nutrients as this is a hot topic for Santa Fe in terms of dealing with the NMPDS permit and NMPDS storm permit eventually. Nutrients (nitrogen and phosphorous) requirements are very strict. Many of you may know that the lower Santa Fe River from the outfall on down to Cochiti Reservoir is impaired to Cañon de Cochiti for nutrients. What that means is that we are exceeding standards for nitrogen and phosphorus. It has hit Santa Fe now because the State of New Mexico started with weighable strains; they call them, first in terms of nutrients implementation. The poorest communities of the state are getting hit the hardest. Albuquerque who reaches the stem of the Rio Grande will not have to face what we are facing for the next 10 years. Raton, Chama, Mora have had to deal with this as well as Ruidoso which

is probably the poster child for the Sate of New Mexico. They have gone through quite a bit trying nutrients, limits on their discharges to Rio Hondo. They have spent close to $38 million to $41 million dollars in upgrading their facility and they are still not meeting nutrient requirements. That is because the nutrient requirements are really strict and they are not achievable by the best available technology right now. The only technology that can probably meet the nutrient standard would be reverse osmosis and for us to put reverse osmosis on our effluent would cost us close to $100,000 million dollars. These are estimates that were given to us during an optimization study that we are going through right now.

This power point presented by the NMED (New Mexico Environment Department), (Exhibit A). Mr. Puglisi as NMED if they could use this presentation from last month and they apologized for not being able to be present. Shelly Lemon, Chief Surface Water Quality Bureau from NMED is spearheading this project. (Committee members followed the power point handout).

Ms. Hansen asked about nutrients. Mr. Puglisi stated, nutrients = nitrogen and phosphorous. Included in the presentation, the project team is considered the NM Environment Department. What happened is that the NM Municipal League said, NMED, we have a problem, small municipalities in the state are getting hit with these nutrient limits and they can't meet them, what can we do. All this discussion started 3 or 4 years ago, NMED was under review for the Water Quality Standards and so what we asked was that we get an EPA waiver provision, NMED doesn't want to call it a waiver provision. It is a temporary standard and a temporary standard will allow municipalities to continue to discharge while not meeting the actual standard, which has not been determined in a lot of places. This way they won't have to shut down their wastewater treatment plans or spend $100 million dollars to go to reverse osmosis. Until such point in time when either economic conditions change or economic and best technology conditions change to remove nitrogen and phosphorous. We will get to some of the limits later on. Basically nitrogen and phosphorous cause the depletion of oxygen and changes in pH in the stream because they encourage the growth of algae and algo blooms. When you get eutrophication of a stream you have these algo blooms and you deplete oxygen and you kill aquatic life. You also change the pH of the stream, sometimes to the point where it is no longer suitable for cold-water aquatic life. Mr. Jacobi knows a lot about this, he did a lot of work on nutrients. I remember the day when they were reducing the amount of phosphorous in detergents because it was such a concern nationally. EPA wanted people to reduce the concentration of phosphorous in laundry detergent and then all of a sudden that went away as if everything was OK. Everything is not OK. In NMED's presentation on the second page it is the 3rd leading cause of impairment in river and stream miles in the US and the 2nd leading cause of impairment in lakes, reservoirs and pond acres. In NM nutrients are the 2nd leading cause of impairment in streams and rivers and all 50 states have identified over 11,000 nutrient related impairments. It is a huge problem here in New Mexico and NM municipalities understand that it is just that we don't have a way to get to the limits that are necessary right now to solve the problem.

Mr. Puglisi proceeded to read from the power point referencing:

Page 3 – The Problem – in this slide they are talking about elevation and slope and the nature of the geologic substance. In the past they did nutrients based on geographic eco system reference values and they switched from that to this new protocol that looks at the slopes, the volcanic nature of the soil, is it flat, moderate or steep. They said they saw such a relationship that they decided that this was a more accurate way of upward reference values for nutrients so you can see on a flat it is 0.65, moderate (that is us) is 0.37 and steep it is 0.30, volcanic geology 0.084, flat moderate 0.061 and steep is 0.03. It is very difficult to get that low especially on nitrogen. Everybody thought phosphorous would be the problem, it is nitrogen. You can remove phosphorous with chemical precipitation, it is costly, but you can do it. It is the nitrogen that is very difficult to remove. We are using a biological process and we can only drive the uptake of nitrogen and the off gassing of nitrogen gas to a certain level using our aerobic systems. Most of the treatment plants in New Mexico are now oxidation dishes or extended air, you deliver oxygen to a race track with waste water, the bugs consume the oxygen and the nutrients and the food and they basically grow, multiply and then they settle to the bottom along with other solids and are removed as sludge. You remove nitrogen and phosphorous in that process. The funny thing about nitrogen and phosphorous is that when you do something that is good for nitrogen removal it is not good for phosphorous removal. They like different conditions to encourage bacteria to remove phosphorous you have to discard bacteria that likes nitrogen. When you try to focus on one you mess up on the other. It is a very difficult balance to achieve. NMED has come to the realization that places like Chama, Raton and Santa Fe, which has a high medium income, are not going to be able to pay for the improvements that are necessary. We need our MPDS permit and we were faced with this during the last reissuance of our MPDS permit and what they did is base our current value on the anti-degradation clause, anti-degradation meaning we could make the stream no worse than it currently is. They basically used an average of best values in terms of nutrient discharges, nitrogen and phosphorous over the last 5 years. We had it available and a lot of the other communities said that did not have the data. We did nutrients, we did nitrogen and phosphorous, we monitored them and we had 5 years of data. What they did is they took the 95th percentile of data to see what we could achieve on a regular basis and they set our limits at that. That was no further degradation of the stream condition. Right now our nutrient values compared to those we just went over, we are meeting them. Our nutrient values are total nitrogen 6.9 mg., current wastewater permit requires we meet 6.9 and nitrogen phosphorous is 3.1. We will talk about what values we are facing later on and it is in order of magnitude lower. We have also have a compliance schedule in our permit. We said, NMED we know we can meet these values, we have consistently met them and we will continue to meet them but we need some assurance that we aren't going to be enforced upon because we are going to do an optimization study to see how much lower we can get. During that optimization study we could trip those limits and we don't want to be punished for that. They gave us a 3-year compliance schedule to get in to full compliance. At the end of those 3-years which is next year we will have to meet those limits on a regular basis. In the next issuance we will face these new values.

The Chair asked for explanation of the nitrogen thresholds. It is counter intuitive to me that a flat system would have a higher threshold; is that because steep

systems tend to be more pristine or untouched, they tend to be more oxygenated to begin with, it seems like their threshold should be higher.

Jerry Jacobi: They are more oxygenated and could be more detrimental with even a slight increase.

Mr. Puglisi: It is like a limited factor, once you go over the threshold, you start turning the stream condition; you degrade the stream condition. Looking at these numbers at first I would have thought flat slow moving is going to be the most hit. They are saying that when they did their studies around the state that these correlated to the stressors almost exactly in terms of how they had to limit nitrogen and phosphorous and that is why they adopted these as part of their water quality management plan. These have never been adopted as a standard, this is how they basically use these reference values to develop TMDL's. It is standard for nutrients right now in the current standards it is a narrative standard and you come to a numeric standard through this reference value in equating it in to the discharge. We don't know what this value in the stream will mean for our effluent but we know it is going to be really low considering we have no dilution, it probably is going to be end of pipe. Basically we and other municipalities petitioned for this temporary standard. Believe it or not it was passed, it was incorporated in the new Water Quality Standards at 20.6.4 into the regulations and the standards. EPA approved the temporary variance or temporary standard, time limited designated use and criteria, the temporary standards are only for specific pollutants and they reflect the highest attainable condition during the term of the temporary standard. It is a regulatory mechanism that allows progress towards attaining a designated use and criteria that is not currently attainable. The temporary standard is a change to the Water Quality Control Commission Standards.

What we will have to do and this is why we are doing it in conjunction with both EPA and NMED, we will have to go before the Commission and petition for a temporary standard. The Commission may not approve it, we hope that with EPA and NMED as one of the parties going to petition the WQCC, and hopefully us, we haven't decided if we are in favor of the temporary standard either that it will pass. Hopefully we will adopt the temporary standard in to the WQS, EPA will have to review and approve that change (or disapproves) the change to the WQS. What makes someone eligible for a temporary standard? 1) The standard can't be achieved through treatment based effluent limit. You can't just go in and apply for this temporary standard you have to show that it is unachievable through treatment based effluent limits. Water quality based effluent limits have to derive from water quality standards, cannot be achieved now or through en enforceable sequence of events. In other words, the compliance schedule I talked about in the permit, if we get a compliance schedule and we still can't meet the standard at the end of 5 years or 3 years, then we could show that there is a need for a temporary standard. If EPA believes that we could meet that at the end of a 3-year compliance, most likely we aren't going to be able to get that approved. You have to justify that the temporary standard is based on 40CFR131.1OG Factor #6. In other words you have to show that not only is it non-attainable but that attainment would cost substantial and wide spread economic and social impact. Basically you have to show that the citizens of the community would not be able to afford the upgrades necessary to achieve the standards.

Ms. Hansen asked; what are you talking about.

Mr. Puglisi stated that EPA has set up criteria that he is not equipped to prepare/explain right now. They have a set of criteria that shows substantial and widespread impact. During this study EPA will actually clarify what that will mean with respect to Raton, Chama or us in this instance, they will define what widespread impact is based on a median income.

Ms. Hansen asked what is the impact what we are doing as citizens or does it impact our economic.

Mr. Puglisi said it could impact both. Water bills discourage economic growth but at the same but at the same time water bills are increased to the point that citizens cannot afford especially those on the lower end of the economic scale.

Mr. Pierpont said a point of clarification, this applies to the city and in particular to the wastewater treatment plant and the treatment standard before releasing to the down stream.

Mr. Puglisi said yes, because it is going to be us who bears the cost. It could get passed on to the county in those agreements that we have with county customers. We do serve county customers at the wastewater treatment plant. It could have an impact on them also.

Ms. Hansen stated that they are talking about things that cause the problem, they are coming from septic tanks.

Mr. Puglisi stated they are coming from human waste. That is where any organic matter is going to have nitrogen and phosphorous.

It was noted that the septic is not making it to the water treatment plant.
Ms. Hansen re-confirmed that it is only what is going to the wastewater treatment plan and it was confirmed.

Mr. Puglisi said that is correct, it is only what is going through the waste water treatment plant and being discharged through our permit however the way this affects us in other ways is that there is storm water entering the Santa Fe River down below so if the stream isn't prepared for nutrients as a result of our wastewater discharge from the treatment plant, Melissa is going to have to figure out how we control nutrients in storm water also so we don't further impair the stream along the wastewater treatment plant. That was mentioned in the new permit that you have to prepare a plan to address those constituents in storm water that have either a TMDL issued for them already, there has been a TMDL done or have not had the TMDL issued but have been identified as impaired and need a TMDL and so you are going to identify the BMPs to put into place so that the storm water doesn't further degrade the _____. The cleaner we can make it the wastewater treatment plant the less strain we have to put on the storm water program.

Ms. Hansen: So there are nitrates and phosphorous, where is the phosphorous coming from?

Mr. Puglisi, from detergents, it is in your food, it is in anything you eat or get rid of. Basically these are common elements, widespread, no one ever thought that it is the constituent that kills us in terms of wastewater treatment we thought it was going to be a volatile organic compound that we couldn't remove and it is really nitrogen and phosphorous that is causing impairment across the US and it is one of the basic elements out there.

Mr. Puglisi said that the steps to obtain the standard would include the economic evaluation to see if the cost would cost substantial widespread economic and social impact. When you look at a community like Raton, their population is going down right now and they are losing households, they are losing customers and they know this is going to cause social and economic impact. The next step is to determine with EPA because EPA is doing a lot of analysis for NMED. The Washington headquarters have contracted with TetroTech to do the study so they are looking at different treatment options and how much could be removed by those treatment options, options that maybe we don't have at the waste water treatment plant right now. We are pretty much already there but there are things like certain biological membranes, MBRs that we could employ that might remove more nitrogen and phosphorous. They will have to look at our plant and cost that improvement out for us and see which improvements are attainable based on our billing rate and which are not and see what the economic impact that it would cost and even feasibility. Can we even put those processes down at the wastewater treatment plant that is limited by our footprint?

Ms. Hansen asked how is Buckman impacted?

Mr. Puglisi, it is not because they don't discharge.

Ms. Hansen said they don't discharge but they are taking water from the discharge.

Mr. Puglisi said that they do a very good job in removing phosphorous and nitrogen from our drinking water. It is put in the process when you drink it and it goes to the wastewater treatment plant. Both treatment plants, BDD and Canyon Road do remove nitrogen and phosphorous. Nitrogen and phosphorous are in the reservoirs.

Ms. Doremus asked if there is any sense of how much is contributed by _____. Mr. Puglisi said that they do not know, that would be down below the alpha and we have brought that up but right now we are defined as the only point source to that stream segment. You are aware of the standards and you know that when they do a TMDL they focus on the point of discharges in terms of what they can basically reduce and not the non-point. Ms. Doremus said, except through the 319 program, right? Mr. Puglisi said, right. Ms. Doremus said that the 319 program which deals with the non-point source. You can get grants to focus on some of those other potential issues. Mr. Puglisi said if Santa Fe could reduce the discharge at these non-point sources we would have a little more leigh way in the stream. We could work with people to upgrade their septic

systems or work with other non-point sources like cattle horses. Ruidoso talked about going up stream at the watershed and maybe fencing off streams, that wasn't popular. That would be so cattle and horses couldn't make it to the stream. They are looking at erosion control in the upper watershed and reducing that flow at the watershed. Before you do that as you don't know how much of a reduction you are going to get you almost always have to focus on your treatment technology because that is the sure thing that you can get some reduction about. That is what we would end up doing, not that we wouldn't address those non-point sources. I hate to say that storm water is not a non-point source it is a point source. If we could retch it down on what we are getting in our storm water it could improve our stream conditions to a point where we would not have to go so low at the waste water treatment plant.

Mr. Buchser asked if any communities have looked at trying to decrease on the source side such as doing compost in toilets, community basins. Mr. Puglisi said no. Mr. Buchser asked if that is a larger source? Mr. Puglisi said it is a huge source but not the only source, restaurants, Laundromats release nitrogen and phosphorous, people washing their clothes. I think the reason cities are not going to jump to doing something like that is because they are providing a service to their customers and I don't think any city at this time wants to say you have to go to composting toilets. That is not a very popular concept right now.

Mr. Puglisi said they are committed to an educational element to encourage people to use low phosphorus detergents, maybe working with larger entities like Laundromats and if we could encourage them to go to something different. There is already a green program to work with these hotels and we would like to get some of this out to them. The problem is people have this concept that low phosphorous detergents are not as good as high phosphorous detergents, I'm not sure why that would be.

The Chair noted that possibly the grey water credits will help and Mr. Puglisi agreed.

Mr. Puglisi reiterated that we are faced with a new permit in 3-years to try to develop all of these outreach efforts to try to get people to stop discharging nitrogen and phosphorous. Even with those efforts these limits you can see are low. Mr. Puglisi picked up again from the power point. You can see that presently our phosphorous is currently 3.1 so we are looing at $1/50^{th}$ of what our current permit is. Very few communities have had the success in getting below .01.

Mr. Puglisi stated that staff has looked at treatment technologies out there and how much it would cost to reach the different types of treatment. The first step that we had to do for a temporary standard was look at treatment based effluent limits, there are no technology-based requirements for nutrients and POTWs, Publicly Owned Treatment Works. The conclusion for step 1 was technology based effluent limits not sufficient to meet water quality standards. We could not just meet a technology-based limit and be off the hook. The next step is to evaluate the options for obtaining the water quality standards. We had some disagreement on how to look at this. NMED wanted to use RO as a comparison point in every study. If we are all agreeing that RO is not the best available

technology than why are we doing that. NMED wants to have a comparison to look at all these treatment technologies against the cost, they want to be able to do a comparison. In ever case they are looking at Reverse Osmosis (RO) and we would have to estimate the cost of technology. Off the cuff we are looking at $100 million dollars for Santa Fe to use RO. They have different applications and literature that they can look at, what kind of technology, what type of treatment it can achieve and what the cost of that treatment is as applied to so many million gallons of water so to treat 1 million gallons of water using RO would cost so much. That is what they are using to come up with these decision trees. They would look at the annualized cost, you're going to have to fund this so you would have an interest rate of 5%. The second step is justifying the temporary standard based on the fact that technology is not available and it will cause substantial and widespread impact. For Santa Fe RO will cause substantial and widespread impact. Mr. Puglisi referred to the 1995 Interim Economic Guidance for determining economic impact. Substantial economic and socio impact after estimating annualized treatment costs, you have to assess the magnitude of the cost burden in respect to the medium income and all other available financial indicators for financial capability. The preliminary screener is cost per household. The have put pollution control cost associated with reverse osmosis. The secondary test is the financial socio economic impact. What is our debt right now? What is our employment rate compared to the national average. What is the medium income compared to others in the state. That is the tax revenue, what is the property tax collection rate in that model, they look at all of this. Santa Fe actually does well in many of these areas.

The thing that we had a problem with and Raton has a problem with is that when you use this model you aren't necessarily looking at the people at the lower end of the socio economic, you are looking at the medium income and there are a lot of people in Santa Fe that make less than medium income. We have asked them to definitely include that type of analysis, it is not going to be the rich people that this affects dramatically it is going to affect the poorer people, the people who have a lower income. They said that they will figure out a way to do that. We thought it was unfair, we got a good bond rating, we have worked hard to do that, we have bonded out very well, we have a high property tax collection rate.

In the end they will look at different options that might be available to remove nitrogen and phosphorus and how low it can get. They will look at option A, B, C and D. Mr. Puglisi said these are all examples say; DE nitrification which is option b, you can reach a 3 mg per liter total nitrogen .5 mg total liter phosphorous and the economic analysis says, you can do that, your community can afford it because it only costs $20 million dollars and Santa Fe you can afford $20 million, that is going to be the option they select for us to support in front of the Water Quality Control Commission. If we disagree with it they will say that is what they are going to do when you go before the commission and say you need Option A. There has to be some collaboration and coordination in the agreement for us to take this option forward. Nobody has to take this option forward; no one has to agree on this. In the end if we don't like the temporary standard we do not have to go before the commission nor does NMED. This doesn't bind anybody. Right now when you look at the alternative facing the incorporation of .37 effluent into our permit for total nitrogen, that is not a good option for us. Most like there is going to be some agreement for us. Right now

NMED's temporary standard is the way they will have to control nutrients for the most part around the state where you have municipal discharges because there is no other way to get to a highest achievable condition and that is what the next step will do. They look at the highest achievable condition and the impact has on the community in terms of economic and the option chosen will basically be based on that. Mr. Puglisi referred to page 15 on the examples of options for incremental improvements. 120% is the mid-range impact and 40% is considered a low impact. Our bills are already high in Santa Fe so another 40% is going to be substantial.

Next Steps: (Power point Page 16)

They will look at the highest achievable condition based on both treatment technology cost and economic impact and the one that is chosen will be considered the highest achievable in terms of both the available technology and economic impact. That is what we will be chosen to proposed to the Water Quality Control Commission along with all the supporting documentation.

Mr. Puglisi stated that this overview is technical and opened up for questions; they have not agreed to this model yet and that they haven't said they are truly participating, they are in the discussion phase. The city has turned over their data to them so they can look at it and we will see where we go from here.

Q&A

Contact at NMED: Shelly Lemon, Chief, NEMD, Surface Water Quality Bureau

Mr. Puglisi stated that they are going in to the 3rd year of the current permit. They will need to reapply in 2 years.

c. Informational Item: Santa Fe River Fund Quarterly Report (Melissa McDonald)

Mayor is moving quickly to create quarterly reports for all of the funds and moving to monthly reports. Current balance is $181,297.73. The $7,000 that was discovered in the last spreadsheet by Mr. Buchser has been corrected in this report.

The city is moving away from paper bills and hopefully will have everything on line soon. It is a third party system; there will not be a check out box for the River Fund. They now have a picture and description, which will provide the option. It is good to have it on-line, it certainly eliminates the human error, which was why we had all these problems with regular donations. We have had very consistent inputs since we switched that method. Ms. McDonald said she could also ask the Finance Department to present more information to the commission members.

Chair: Basically the expenses were for the San Isidro Permaculture Rain Garden? (Exhibit B) Ms. McDonald stated that in this quarter it reflects a partial payment as we have a little outstanding. We didn't have any other expenses.

Mr. Pierpont: We had talked about ways to promote the fund. Having it all on line changes it. Will the city be promoting the on line payment option.

Ms. McDonald said yes, they are very open to promoting it. It is a soft launch right now. The city will work out the bugs and once they are comfortable they will work with us to allow announcements to be included electronically.

Ms. McDonald announced that they are also getting ready to revamp the collateral material for the storm water and would like to have an effort to include the Santa Fe River fund in that.

We will continue to bring these reports forward and if there are any questions Ms. McDonald is happy to answer.

d. Discussion Item: River Commission Mission Review (Zoe Isaacson)

Mayor has confirmed that he will attend the August meeting. The Chair would like to discuss the Mission and Purpose of the River Commission. At the August meeting we want to have a strong voice to express our mission. It was suggested that the July meeting be dedicated to discuss the Mission and Purpose, anything that might need tweaking or reaffirm what the River Commission does.

Ms. McDonald: Suggested presenting a brief overview of the history, focus on active projects and development, goals list and ask for direction from the Mayor as to what he would like to see River Commission do. We have founding members and the impact that has been made is important and notable.

6. MATTERS FROM COMMISSIONERS

Ms. Hansen noted that she would not be in attendance at the July meeting.

Ms. Hansen invited everyone to the ribbon cutting at Frenchy's Field on June 20th. Santa Fe County has been working on the next segment of Siler and San Isidro.

Direction to staff to create a Muchas Gracias Certificate for Scott Kaseman for his work on the above projects.

7. MATTERS FROM STAFF

Water Division and Ms. McDonald have an intern and they would like to have her do some work for this commission. She is working on the scoop the poop campaign and some budget items. Erin G., from Santa Fe and goes to the University of Georgia. She interned at Santa Fe County last year.

River Corridor Master Plan sub-committee should meet before the July meeting.

Report from Alan Hook will take place next month's agenda.

Santa Fe River Traditional Community meets every month, they have an intern, Ryan Mann, he got a river resources grant and he is going to be looking at some of the nutrient concerns in the lower river. Ms. McDonald will invite him in the future. Ms. Hansen noted that he will be doing excellent work and would like to have him come to present.

Intern will also be looking at the electronic library. Ms. McDonald asked the commission members if they have reports or documents that they would like included, she would like to receive those documents or ideas to figure if it could get on the website.

Storm Water Master Plan will be ready in August for review.

Transition team will be giving their report, June 15th, 8 am to 1:15 pm, they looked at different divisions in the city, and they will be reporting their findings. Agenda is available on the city website and Ms. McDonald will send it to the Commission members this evening.

8. **CITIZENS' COMMUNICATION FROM THE FLOOR**
   None

9. **SUB-COMMITTEE BREAKOUT SESSION**
   Third Corridor update sub-committees. Ms. Hansen's letter has been reviewed and will be passed on to Ms. McDonald. Letter will be sent out by Ms. Hansen

10. **ADJOURN**
    There being no further business to come before the River Commission the meeting was adjourned at 8:00 pm

SIGNATURE PAGE:

Zoe Issacson, Chair John R Bucher, vice-chair

Fran Lucero, Stenographer

NMED

New Mexico Environment Department

NUTRIENT TEMPORARY STANDARD DEMONSTRATION

City of Santa Fe

May 11, 2018

Exhibit A

Project Team

- New Mexico Environment Department
- USEPA Standards and Health Protection Division Washington, DC
- USEPA Region 6 Dallas, Texas
- Tetra Tech, Inc.
- EcoNorthwest

Nutrient Pollution

- For assessed waters nationwide, nutrients are:
  - 3rd leading cause of impairment in river and stream miles
  - 2nd leading cause of impairment in lakes, reservoirs, and pond acres
- In NM, nutrients are the 2nd leading cause of impairment in streams and rivers
- States have identified over 11,000 nutrient-related impairments

The Problem...

	Flat	Moderate	Steep	Volcanic	Flat-Moderate	Steep
	0.65	0.37	0.30	0.084	0.061	0.03

- Nutrient concentrations necessary to protect water quality have/would result in effluent limits that are not economically or technologically achievable for many permittees (typically little to no dilution capacity in NM streams)
- Need to create a clear path to compliance that is achievable and affordable in the near-term and encourages incremental improvements to water quality in the medium and longer-term
- Is there a tool that would allow adaptive management when applying nutrient thresholds statewide?

A Solution… Temporary Standards

- Temporary standard (NM) = WQS variance (federal)
  - 20.6.4.10.F NMAC
  - 40 CFR 131.14
- A time-limited designated use and criterion:
  - for a specific pollutant(s) or water quality parameter(s)
  - that reflects the highest attainable condition during the term of the temporary standard.
- A regulatory mechanism that **allows progress toward attaining a designated use and criterion** that is not currently attainable
- A temporary standard is a change to the WQS.

Temporary Standard is a Change to WQS

- Discharger petitions the state for a temporary standard
  - Documentation to show eligibility and justify temporary standard
  - Justification based on one of seven factors outlined in federal regulations as required by 40 CFR 131.14(2)(i)
- State adopts the temporary standard into WQS
- EPA reviews and approves (or disapproves) the change to the WQS
- Only in effect for time justified as needed to make the incremental progress specified in the temporary standard

Steps for a Temporary Standard Demonstration

1. **Determine eligibility**

   WQS cannot be achieved through TBELs

   WQBELs derived from WQS cannot be achieved now or through an enforceable sequence of events (e.g., optimization, upgrades)

2. **Justify the TS based on 40 CFR 131.10(g) "Factor 6"**

   Evaluate whether that cost would cause ***substantial and widespread*** economic and social impacts

3. **Determine highest attainable condition (HAC)**

   Can current performance be improved?

   What is the best affordable performance (HAC)?

   Determine TS duration

"Factor 6" Demonstration Project

Applicable In-Stream Threshold Values

- Discharge is to an effluent-dominated stream
- Average catchment slopes are > 15%
- Not in "volcanic" geology site

TN Flat	TN Moderate	TN Steep	TP High-Volcanic	TP Flat-Moderate	TP Steep
0.65	**0.37**	0.30	0.084	**0.061**	0.03

Step 1: Evaluate TBELs

TQ

- No technology-based requirements for nutrients applicable to POTWs
- ***Step 1 Conclusion:*** Technology-based effluent limitations not sufficient to meet water quality standards
- ***Next Step:*** Evaluate options for attaining WQS

Step 2: Evaluate Options for Attaining WQS

Determine whether RO is feasible now or through enforceable sequence of events

- Estimate ***cost of the technology***
  - Use CapdetWorks and literature values to calculate capital and O&M costs
  - Annualized costs (Interest rate = 5%: Term = 20 years)
- Justify temporary standard based on showing that impact on the community will be ***substantial*** and ***widespread*** ["factor 6" in 40 CFR 131.10(g)]
  - Analysis uses USEPA's 1995 interim economic guidance and spreadsheet tool

Step 2: Evaluate Options for Attaining WQS

- **<u>Substantial</u> Economic and Social Impact Analysis:** after estimating annualized treatment costs to achieve WQS, **assess magnitude of cost burden** with respect to the community's income and other relevant indicators of financial capability

  Municipal Preliminary Screener – costs per household

  - Pollution control costs with RO

  Secondary Test – financial and socioeconomic conditions

  - Total community debt; unemployment rate compared to national average; bond rating; community median household income relative to state median income; property tax revenue; property tax collection rate

Step 2: Evaluate Options for Attaining WQS

- **<u>Widespread</u> Impacts Analysis:** assess the likelihood that substantial economic and social impacts on the community will be widespread
- **Consider**:
  - Household Income
  - Unemployment rate
  - Poverty rate
  - Vulnerable Industries
  - Property value

Step 3: Evaluate Options for Incremental Improvements—HAC

EXAMPLE:

Option A	Optimize Cycle Times + Chemical Precipitation	7.0 mg/L TN 0.5 mg/L TP
Option B	Denitrification Filters + Chemical Precipitation	3.0 mg/L TN 0.5 mg/L TP
Option C	Optimize Cycle Times + Chemical Precipitation and Filtration	7.0 mg/L TN 0.1 mg/L TP
Option D	Denitrification Filters + Chemical Precipitation and Filtration	3.0 mg/L TN 0.1 mg/L TP

Step 3: Evaluate Options for Incremental Improvements—HAC

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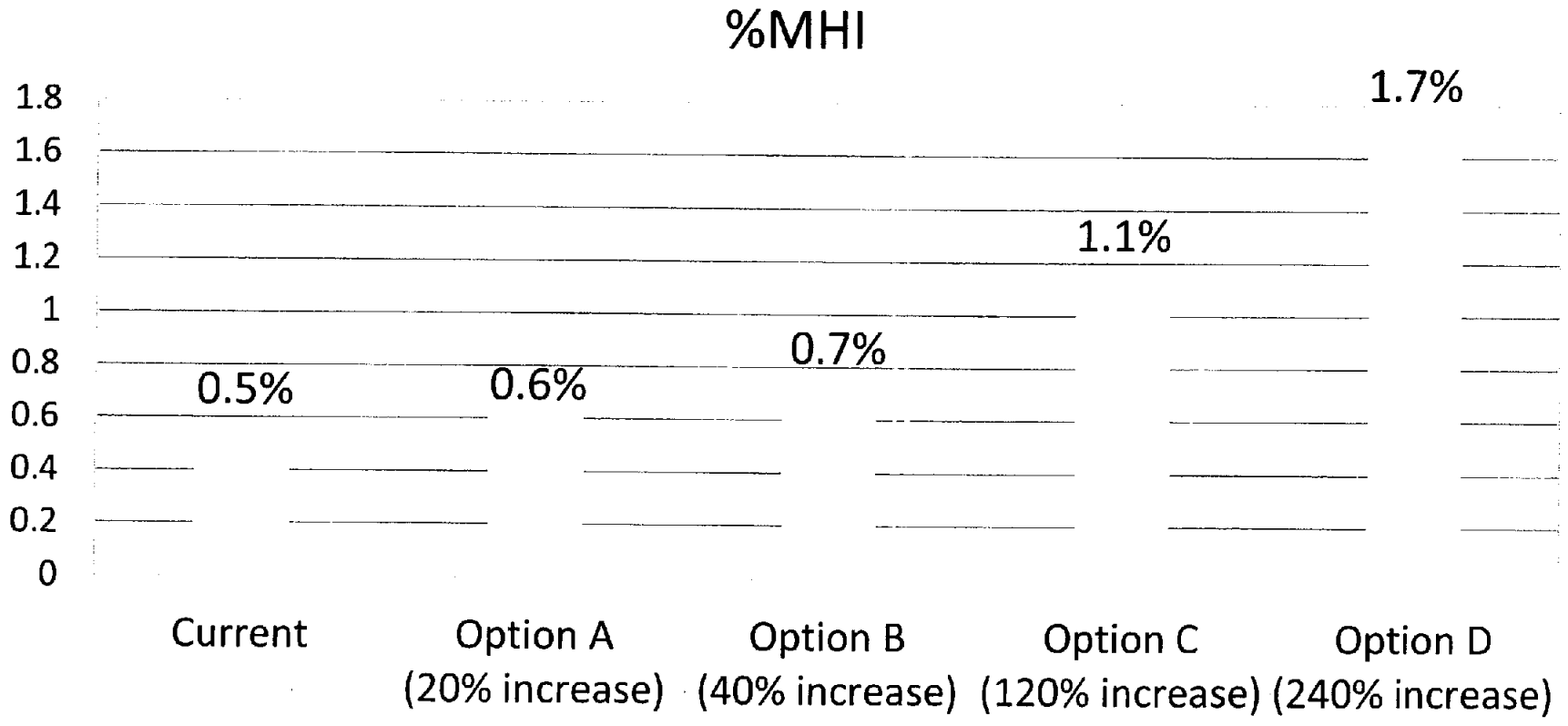
EXAMPLE:



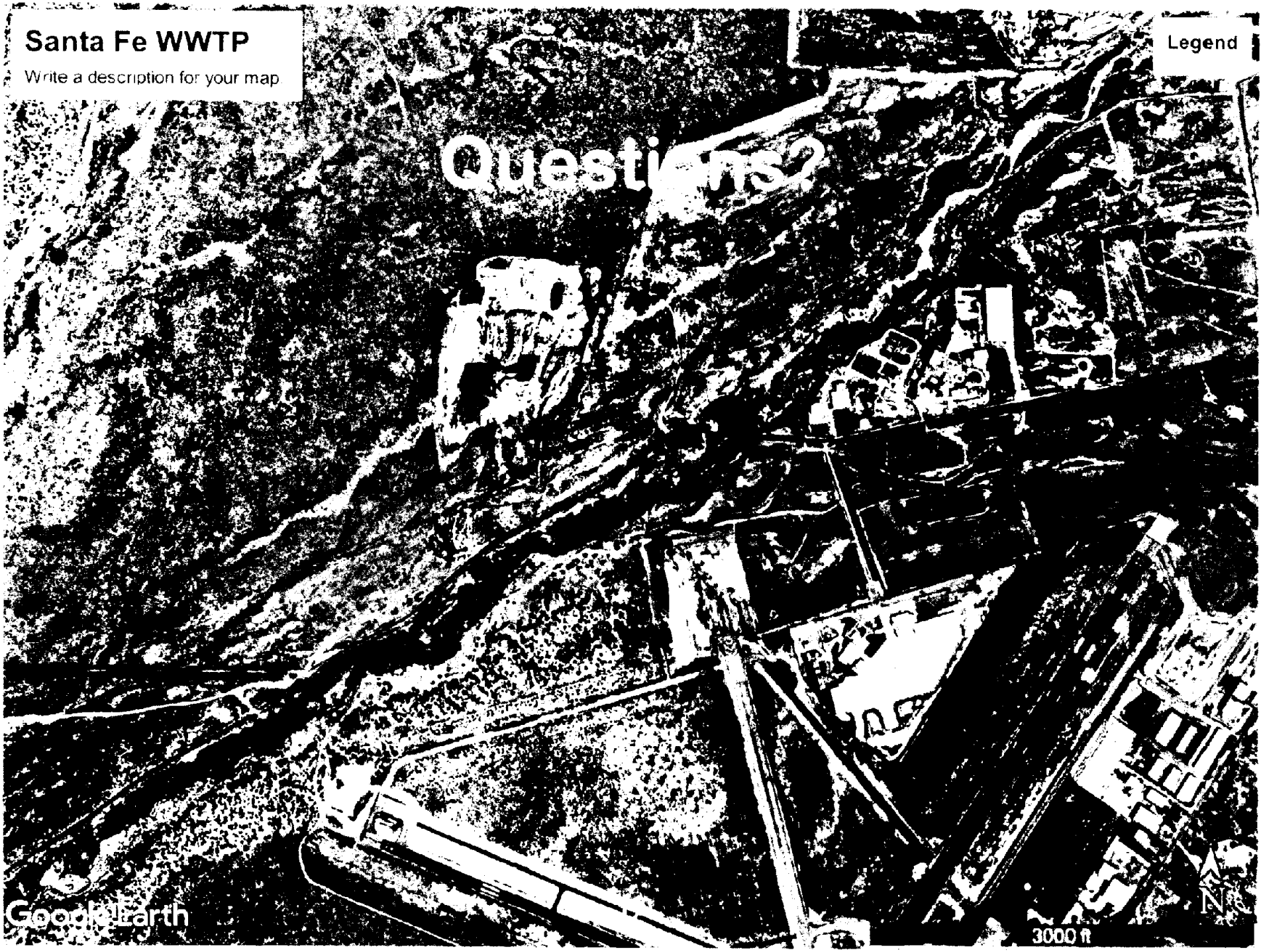
"low" impact

"mid-range" impact

approaching "substantial"

Next Steps – After This Project

- Review options for attaining WQS that were not part of this analysis to complete the justification for a temporary standard
- Submit a formal petition for temporary standard that identifies highest attainable condition (HAC) and details a work plan with timetable of proposed actions for achieving compliance with WQS
- NM Water Quality Control Commission reviews and adopts temporary standard if appropriate; NMED submits temporary standard and documentation to USEPA
- USEPA reviews temporary standard and documentation; approves or disapproves; temporary standard becomes effective under CWA if approved


Santa Fe WWTP
Write a description for your map
Legend
Questions?
Google Earth
3000 ft
N

Company	Business Unit	Object Account	Subsidiary	Account Description	Cumulative Quarter 1 FY17/18	Cumulative Quarter 2 FY17/18	Cumulative Quarter 3 FY17/18
05317	5317	100700	07000	Cash due from Hub	208,801.52	213,513.52	181,297.73
05317	5317	110100		Interest Receivable	0.00	0.00	0.00
05317	5317	200100		Vouchers Payable	0.00	0.00	0.00
05317	5317	301010		Fund Balance-Unreserved	0.00	0.00	0.00
05317	5317	304200		Unreserved	-199,395.52	-199,395.52	-199,395.52
Total Business Unit 5317					**9,406.00**	**14,118.00**	**-18,097.79**
05317	51317	470100		Contributions/Donations	-1,203.00	-3,559.00	**-6,014.00**
05317	51317	470800		Gain on Sale - Investments	0.00	0.00	0.00
05317	51317	480020		Interest on Investments	0.00	0.00	0.00
05317	51317	480022		Interest (Amort of Prem & Disc	0.00	0.00	0.00
05317	51317	600150		Interfund Transfers In	-8,203.00	-10,559.00	[redacted]
05317	51317	600200		Other Sources	0.00	0.00	0.00
05317	51317	600300		Unrealized Gains/Losses	0.00	0.00	0.00
Total Business Unit 51317					**-9,406.00**	**-14,118.00**	**-19,028.00**
05317	52389	510340		Other Consulting	0.00	0.00	[redacted]
05317	52389	510400		Grants and Services	0.00	0.00	0.00
05317	52389	520400		Rep & Maint Machin & Equip	0.00	0.00	0.00
05317	52389	700150		Interfund Transfers Out	0.00	0.00	0.00
Total Business Unit 52389					**0.00**	**0.00**	**37,125.79**
Total 05317					**0.00**	**0.00**	**0.00**
Grand Total					**0.00**	**0.00**	**0.00**

Total Cash balance at 3/31/18 **181,297.73**

Total Contributions at 3/31/18 **(6,014.00)**
Total Interfund transfer at 3/31/18 [redacted]
Total Expenses at 3/31/18 [redacted]
Net (Income)/Loss at 3/31/18 18,097.79 **

Revenue Explanations per Quarter

Quarter 1
Total Contributions 1,203.00
Total Interfund 8,203.00 *
Total Revenue Qtr1 9,406.00

Quarter 2
Total Contributions 2,356.00
Total Interfund 2,356.00
Total Revenue Qtr2 4,712.00

Quarter 3
Total Contributions 2,455.00
Total Interfund 2,455.00
Total Revenue Qtr3 4,910.00

Expense Explanations per Quarter

Quarter 1
Other Consulting 0.00
Total Expense Qtr1 0.00

Quarter 2
Other Consulting 0.00
Total Expense Qtr2 0.00

Quarter 3
Other Consulting 37,125.79 ***
Total Expense Qtr3 37,125.79

* This includes the make-up $7,000 match for FY 14/15
** For FY 17/18 The SF River Fund has a net loss of $18,097.79
*** San Isidro Permaculture Rain Garden - Avenida Cristobal Colon/Larragoite Park

Exhibit B