



Agenda

Santa Fe River Commission Agenda
Thursday, September 12, 2019 (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
AMENDED

- 1. ROLL CALL**
- 2. APPROVAL OF AGENDA**
- 3. APPROVAL OF MINUTES FROM August 8, 2019**
- 4. INFORMATION/DISCUSSION/ACTION:**
 - a. Introduction of Mayor Alan Webber to new committee members and recognition of departing members' service (Zoe Isaacson, zoe.isaacson@gmail.com)
 - b. Discussion Item: Upper Watershed Management: A discussion of potential benefits/challenges of a public-private partnership to create a stakeholder engagement process and a feasibility study for the management of the river reach from Nichols to Cerro Gordo. (Jesse Roach, Water Division Director, jdroach@santafenm.gov or 955-4309)
 - c. Action Item: WOTUS- Clean Water Act Update (Alex Puglisi, aapuglisi@santafenm.gov, 955-4232)
- 5. MATTERS FROM STAFF**
 - a. Action Item: RiverTalks Educational Series for Fall 2019 (mamcdonald@santafenm.gov, 955-6840)
- 6. COMMUNICATION FROM OTHER AGENCIES /COMMITTEES**
 - a. Informational: SF Watershed Report (Andy Otto, andy@santafewatershed.org, 820-1696)
- 7. CITIZENS' COMMUNICATION FROM THE FLOOR**
- 8. MATTERS FROM COMMISSIONERS**
- 9. ADJOURN**

Next Meeting:

- Stormwater Strategic Management Plan Update (mamcdonald@santafenm.gov, 955-6840)
- Review of River Commission Goals Plan (Zoe Isaacson, zoe.isaacson@gmail.com)

Next Scheduled River Commission Meeting is October 10, 2019
Captions & Packet Material are due by 10 am on October 1, 2019
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.

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Summary Index
Santa Fe River Commission
September 12, 2019 – 6:00 PM

| ITEM | ACTION | PAGE(S) |
|--|----------------|----------------|
| CALL TO ORDER | 6:00 PM | 1 |
| ROLL CALL | Quorum Present | 1 |
| APPROVAL OF AGENDA | Approved | 1 |
| APPROVAL OF MINUTES – August 8, 2019 | Approved | 2 |
| INFORMATION/DISCUSSION/ACTION: | | |
| a. Introduction of Mayor Alan Webber to new committee members and recognition of departing members' service. | Presentation | 2 |
| b. Upper Watershed Management | Discussion | 2-13 |
| c. WOTUS- Clean Water Act Update | Informational | 13-15 |
| MATTERS FROM STAFF | | |
| a. River Talks Educational Series for Fall 2019 | Informational | 15 |
| COMMUNICATION FROM OTHER AGENCIES/COMMITTEES | | |
| a. SF Watershed Report | Informational | 15 |
| CITIZEN'S COMMUNICATION FROM THE FLOOR | None | 16 |
| MATTERS FROM COMMISSIONERS | Discussion | 16 |
| ADJOURN | 7:56 P.M. | 16 |

MINUTES OF THE SANTA FE RIVER COMMISSION
THURSDAY SEPTEMBER 12, 2019

CALL TO ORDER

Zoe Isaacson, Chair of the SF River Commission, called the meeting to order at 6:00 p.m. in the Conference Room of the Railyard Market Street Offices.

1. ROLL CALL

Roll Call indicated the presence of a quorum as follows:

Present:

Zoe Isaacson, Chair
Andrew Black
Phillip Bove
Susan Coulter
Anna Hansen
Heidi Klingel
Rachel Kullman
Vanessa Springer

Excused/Absent:

Emile Sawyer (Alternate)

Staff and Others Present:

Alan Webber, Mayor
Regina Wheeler, Public Works Director
Melissa McDonald, River & Watershed Section
Carol Romero-Wirth, City Councilor
Allen Hook, Water Division
Andy Otto, Executive Director, Santa Fe Watershed Association
Melissa Byers, Stenographer

***NOTE:** The original meeting packet is on file with City Staff. Any materials submitted at the meeting are marked as exhibits.

2. APPROVAL OF AGENDA

MOTION: Commissioner Coulter moved to approve the agenda as presented. Commissioner Hansen seconded the motion. The motion passed by unanimous voice vote.

3. APPROVAL OF MINUTES FROM AUGUST 8, 2019

MOTION: Commissioner Hansen moved to approve the minutes of August 8, 2019, as presented. Commissioner Klingel seconded the motion. The motion passed by unanimous voice vote.

4. INFORMATION/DISCUSSION/ACTION:

- a. **Introduction of Mayor Alan Webber to new committee members and recognition of departing members' service. (Zoe Isaacson, zoe.isaacson@gmail.com)**

Mayor Webber presented Muchisimas Gracias Certificates to departing Santa Fe River Commission members Jerry Jacobi, Luke Pierpont, John Bushcher and Dale Doremus. He thanked them for their contributions to the City, to the River Commission, to the Watershed and to the river. The City is fortunate to have people who work as hard and volunteer as much and give as much to our community.

- b. **Discussion Item: Upper Watershed Management: A discussion of potential benefits/challenges of a public-private partnership to create a stakeholder engagement process and a feasibility study for the management of the river reach from Nichols to Cerro Gordo. (Jesse Roach, Water Division Director, jdroach@santafenm.gov, 955-4309)**

Jesse Roach introduced himself as the Water Division Director. He's been in that position for two months. He grew up in Santa Fe and after high school, he went to college in the Bay area. That opened his eyes to natural resource management issues. He got his master's in environmental and civil engineering. He did some river guiding which brought him to the place that water is his passion. He loves it for recreational purposes and as a natural resource. He went to the University of Arizona and got a PhD in hydrology and water resources. During that study, he worked on a model of the Rio Grande system from the headwaters down to Southern New Mexico. He was able to leverage that into a job at Sandia National Labs. He got involved in climate study that was done by reclamation. Then he got involved a little bit with the City of Santa Fe in the Santa Fe Basin Study. He then moved from Sandia to Tetra Tech. He moved back to Santa Fe. He didn't get the Water Division Director position the first time he applied; they were looking for someone with more utility experience of which he didn't have. The second time he applied, he got hired. In the last two months he realized that he chose the right career and he has the right job now.

He read the Water Division's Mission statement which is to "efficiently manage and deliver an adequate, reliable, safe and sustainable water supply to meet community and customer needs." He read the Mission Statement again but this time with his parentheticals,

that are not official, they are his: "efficiently manage and deliver an adequate, reliable, safe and sustainable water supply and ancillary aesthetic, environmental, recreational and cultural benefits to meet community and customer needs in accordance with City of Santa Fe policy." His feeling is, as a Water Division, if adequate, reliable, safe and sustainable water can be delivered more efficiently, with some wiggle room, there will be some flexibility/resiliency to respond both to the unknown and also deliver ancillary and value based benefits to the largest Santa Fe community. This is per the wishes of that community as expressed by the City Council.

He said the City is trying to figure out how to fully consume their San Juan Chama water. That's the purpose of the reuse pipeline, which has gotten some attention and can be somewhat controversial. The Water Division has studied this and is comfortable with their technical conclusion that this is the most cost-effective way to fully consume the City's San Juan Chama water. If the City can do that, he believes the City will end up in the same position that Albuquerque did so we can say we're done with buying dry. We have maximized the efficiency of existing imported water resources to such a degree that we don't need any more water rights from that. And we also have more flexibility to respond to community values, which might suggest we want to put more water in the Santa Fe River, or we want to develop the Santa Fe River for recreational or environmental purposes.

He said that would be the segue to what he'll be talking about, which is ideas related to the stretch of river from Nichols down to Cerro Gordo. Before that discussion, he wanted to state what his specific goals are for the Water Division. The first goal has to do with the water reuse pipeline, because it buys the City so much flexibility. The second goal is related to the dam outlet conduits. The conduits on both dams, Nichols and McClure were downgraded from satisfactory to poor, based mostly on those conduits. He said that's a primary focus of the capital improvement projects for the next several years. He expects, not this winter but next winter to redo Nichols conduit and then another winter off for planning and staging. Four winters from now, McClure will be redone.

Commissioner Hansen asked what he meant by the conduits.

Mr. Roach said the way that those dams were built, they were these five-foot diameter pipes that the water moves through the dams. There is some leakage, there's some seap areas, there's some joint cracking; there's some things about those that the State Engineer is not very excited about. It is his understanding that the solution at this point is to pull a two foot maybe plastic pipe through these and then grout that in. There will then be a better conveyance of water from the reservoir through the dam.

Commissioner Hansen asked if the reservoirs will have to be emptied to do that work.

Mr. Roach said he believes the reservoirs will have to be emptied to do that work.

Mr. Hook said right now it's gravity fed, so depending on the head, i.e., how high the elevation of the water is, determines how those valves flow out. Then the bypass is done for safety deliveries and the set of pre retarded post. Now with this construction it'll be fully charged so there won't be a air space in that pipeline. There will be a series of meters at the bottom to then be able to regulate flows to the plant, flows to the Santa Fe River target flows and flows for safety.

Commissioner Hansen asked if all leakage that is going into the original river will be eliminated.

Mr. Hook said there will still be some leakage. Before the intake infrastructure was done they were getting about 0.3 CFS of leakage and that's just out of the earth, the dam itself and below grade. Then it got down to 0.1 CFS improvement.

Mr. Roach said there were a couple of other Water Division related goals that he has. One goal being that he wants to upgrade the Water Division Website. Another goal is related to pumping. He said the City has storage tanks that would allow us to pump this water at night instead of during the day. That's something he thinks is best practice for utility. He said we have sort of slipped away from it because for operators it's sort of easy to keep things real full. He's pushing a little bit back against the operators. It's a challenge, but we'll see on our bill what percentage of our pumping has been on peak and off peak for the last five years. Starting this month, he's going to start looking to see if they can beat last year or the year before. Already they've responded and now most of the pumping is happening at night. That saves us a little money that maybe can put somewhere else. He said there is a mission, goals and objectives document that he would like to update. He said that's it for his intro and overview of what he hopes to do at the Water Division.

With that, Mr. Roach said he wanted to switch gears to this idea about Nichols to Cerro Gordo.

Commissioner Hansen stated that before he does that, she wanted to address the wastewater plant in her district and this reuse idea. She said she understands the concern, but she has a lot of constituents downstream who are not very excited about this. La Cienega has been promised water and Agua Fria Village has been promised water and they're not getting it. Those constituents have real concerns about farming and agriculture and a lot of them get water from the river to do their agriculture in those traditional communities. They're very nervous about this pipeline idea. She recognizes, from being a member of the Buckman Direct Diversion Board, how valuable it is to get a full asset that is invested in San Juan Chama. She also recognizes that the constituents who are farmers and have depended on the water downstream from the treatment plant are very uneasy because they feel like their livelihood depends on that water in the river. It has a long history of a traditional community not being represented and their voice is not heard.

Mr. Roach said he understands Commissioner Hansen's concern and he'd be happy to talk with her about it, but he didn't want to hijack this meeting to do that.

Commissioner Hansen said she just wanted to put that statement out.

Mr. Roach thanked her for that comment.

Mr. Roach said he was a member of the Santa Fe Watershed Association Board for many years until he heard tangentially about some big issues that occur at the City. It seems like the Water Division has been criticized for not being involved enough in public dialogue on the reuse pipeline. He feels like those two things together, give us an opportunity to slow down and see if there is some sort of dialogue the City could engage in related to the Nichols to Cerro Gordo reach. This is a good time to do that because the City is redoing the way water is delivered from Nichols to the water plants. The pipeline is up in the air, in the river channel, because it all has to go by gravity. The opportunity now is having this be a pressurized line that will be underground. It will come out of the reservoir. He pointed to where on the map the pipe will be. Essentially, it's going to be under the road all the way down until it goes into the water treatment plant. There is an opportunity for river channel restoration there.

He said the landowners are going to be Audubon, the City of Santa Fe and the Nature Conservancy. In the upper stretch, we're removing this pipe and there are pilings that are in the channel. If the City saves some money by pumping at night, there can be some stream channel restoration here, pointing to the map.

He has an idea that he, Mr. Hook and Ms. McDonald serve as a steering committee. They will pull in the landowners into a conversation about what the challenges are, what the opportunities and what the City is up against. In addition to those landowners, then engage the water rights holders, the Acequias, the State Engineer, the folks that have an interest in how water is moving from here to here, pointing to the map.

Chair Isaacson asked if Mr. Roach mentioned when he was planning on implementing this.

Mr. Roach said they're just starting, so you, if you want to affect something. The City has reached out to The Nature Conservancy, they have said they're interested. Alan and Melissa are both interested. He said they are at the beginning here. In fact, he hasn't even spoken to the mayor personally about it.

Chair Isaacson stated that he was talking about putting the water in a pipe under the road. She asked what the river restoration is and what is feeding that restoration.

Mr. Roach responded that there is already water in a pipe, but that pipe is above ground. Now, that pipe is going to be invisible. He said, we will deliver for the target flow to the river channel. The water can be placed in the pipe to deliver to the treatment plant. There's also water delivered to Acequia del Llano, directly here, pointing to map. The other two Acequias that are pertinent to this discussion are the Cerro Gordo and Acequia Madre. One of the opportunities, and he's not promising anything, but one of the technically feasible options would be to pull this safety of deliveries that we're going to make to both of these Acequias into another pipe that bypasses all this stuff on one side or the other. Then the target flow will be delivered here, pointing to the map. The whole question of where's the river channel and what does Santa Fe as a community want the water for the living river to be.

Andy Otto of the Water Shed Association said the City has done a lot of studies in that area over the last 20 years, particularly over the last three or four years. It would be great to have a presentation of what those studies that have discerned. That will help everybody get on the same page as far as what's out there.

Mr. Roach said he was glad that Mr. Otto mentioned that. He knows there is a ton of great technical work that's been done recently. It'd be a perfect place to start. Some of the interesting facts here are that the Santa Fe River, as defined by the State Engineer, flows through the bypass channel and it sort of flows around south of this whole two-mile reservoir where there used to be water stored. Then it goes under Cerro Gordo near that trail head. Then it drops over this almost like waterfall cascade back down to the low point where everyone agrees from here down, we're talking about the Santa Fe River. This channel here is not legally defined by the state as the Santa Fe River. Now we've got this issue where The Nature Conservancy has a diversion to what we are calling on this map, the restoration channel, which is the lowest point. According to the State Engineer this is an illegal diversion and there is no water right here. He thinks that all parties involved, including the State Engineer, need to discuss what are possible options and solutions that would incorporate a full restoration, environmental, recreational opportunities in this whole stretch. The location of the river channel is a question. The Nature Conservancy folks would say the river channel's here, this is the historic river channel. The Water Division says the State Engineer says it's here.

Mr. Roach said if the traffic people get involved, we probably want a bridge. I don't know if the neighbors want a bridge. He said, we're willing to come into the dialogue and put the effort and the time into it and possibly some money into some of the different potential technical solutions that might serve the interests of the broad range of stakeholders in this stretch.

Commissioner Klingel asked if there would only be water in that section of channel when we have the living river flow.

Mr. Roach said with this current configuration, if the State Engineer's cease and desist order is complied with, there would only be water. He said water released here (pointing to the

map) for the living river would still end up in this bypass channel except for what leaks naturally and anything that's diverted.

Mr. Hook said the leakage comes through Old Stone Dam and then down into the Beaver pond and then two-mile. But to answer Commissioner Klingel's question, it depends. Jesse's one suggested solution might be per Cerro Gordo. If we did a pipe for them and Cerro Gordo is amicable to it and the OSE because it would have to be a three-party agreement. And/or, are we changing the point of diversion that could be piped there? There is also the consideration of Acequia Madre. Are we still delivering water through the river channel, wherever that exists in the future, to Acequia Madre, to reach them? Or, maybe we're doing another pipe that creates efficiencies to deliver all the way down to Pequeno. As for Santa Fe River target flows, nothing changes. It'll still come out below Nichols. But the question becomes, what do we see as the floodplain? What do we see in the future as the channel?

Commissioner Isaacson said she was alluding to that. She said she realizes that there's still a pipe there, but you had also mentioned about diverting or making deliveries through a pipe as well. Every time we add another pipe to the system, we're taking water away from the green belt and the natural habitat that we've provided for so many years through leakage or through the inherent sloppiness of the system. Every time we kind of make it more engineered or we make it a little tighter, we're also greatly impacting all the habitat that we provided for all these years. She asked, how do we balance that? How do we balance and reconcile putting things in pipes, making more efficient deliveries? The weather is getting much hotter, much drier and maybe we need to have a paradigm shift of what we can expect in that area. She thinks that everybody in the room really values that area up there and what it provides from environmental and aesthetic points.

Commissioner Hansen asked when the bypass channel was built, doesn't that mean that the river, is the actual river and they built the bypass channel because the river could not accommodate the amount of water that was coming down from the building of Nichols and McClure? The OSE has said this is the river. If they're making that assumption on well this is the channel that carries the most water. Or, are they making that assumption on the historic value of that restoration channel? That creates a conflict right there. Why can't we just have both, that seems to be a solution for everyone, including the habitat?

Mr. Hook said we're not the regulators of the river. We don't control waters of New Mexico, it's the State Engineer. Regarding the Santa Fe River target flows there are aspirations and goals under the administrative procedures. The Water Division or even Public Works, once it goes below Nichols, we have what's called a bypass flow. We have given up the right to divert it. We have aspirational goals, like community events, fishing derby, San Isidro Blessing; but we don't regulate it or determine, based on the hydrographic survey where that river channel is. It's the State Engineer's job. Jesse appropriately said when it comes to the water rights and that conversation, after the landowners' notice, he has to be part of that conversation as well as the

Acequias, because we're obligated, per court order to make deliveries. Acequias, traditionally have been an open ditch and they provide habitat and everything else. But if you're an Acequia, you might say, "I don't want to have that conveyance loss. I would like all my water rights to be delivered to the point of diversion."

Commissioner Isaacson said she sees the other side of that. In some ways, with piping, we don't have to push as much water through. We have a savings on that end in some regard. She wonders if that is a factor into making these decisions.

Mr. Hook added it works now with leakage from the river channel down to two-mile pond. He would love to have another year worth of this data. Last meeting, he presented that below two-mile, there's already a minimum 0.3 CFS coming out of there. That is the minimum flow even with a thousand-acre feet for the living river. So, it's already coming out of two-mile plus what's already gone into the Santa Fe River channel for both the Acequia deliveries and our goals while we're doing peak flows that are going under Cerro Gordo bridge all the way down to the waste water treatment plant. In some ways, at least as a Water Division and Public Works working with Melissa, we've met both channels, the bifurcation of close through both sides. So, we've already got a win, win. Again, there's sort of a conflict of viewpoint of where this river channel may be.

Mr. Roach said his answer would be that he would like to understand what it is that the Water Division should determine. He said we have this chunk of water that we've set aside for the living river. The value judgment as to where that water should be, he doesn't want that. He wants to say, I'm going to deliver to the Acequias because that's court ordered, and we have the infrastructure to do that and we're going to deliver the Santa Fe River target flows. We're going to put those in the channel right here. He doesn't want to be part of the fight of what happens to it down here. If the community decides they want this water flowing through a restored river channel, including a pond or, or whatever it is down here, and they want that evaporation there, great. He doesn't want that to be his fight.

Commissioner Coulter said if we do go the route of putting in pipes to more efficiently deliver the water to the Acequias that we have to deliver to, then we would have better data on exactly what's being delivered where and that might even create efficiencies that would allow us then to do diversions as you say, into two-mile pond, if that's what people want. It seems that continuing to allow leakages, that we may have the numbers on, but it's still like a sloppy system that doesn't seem like the best way forward, she thinks. It seems to her that having the data and having more controlling efficient delivery, then allows you to know what you have left over that you can possibly send on the restoration channel or whatever.

Mr. Roach said he was glad we had this conversation because he hadn't even thought about the fact that those Acequia flows currently would benefit this stretch of river. If we deliver those Acequia flows through the pipe and this stretch of river, if that's the downside to this

stretch of river. These are the kinds of ideas that I hope come out of conversations with stakeholders involved.

Ms. McDonald said the other interesting thing that Jesse pointed out is that it's not up to the City, it's the stakeholders. It could be a different looking thing if that is the desire. This is really removing us from that conversation and saying, what is it that you think this is going to look like and how would that work?

Councilor Romero-Wirth, City Councilor, District 2 said we've talked about the stakeholders on the upper end of the river, but not the stakeholders, as Commissioner Hansen mentioned, further down the stream and across the city. If you're putting water into the restoration channel, what is that doing to how far water will get down the river. She said we must be cognizant of that. You can't just think about this little section and that's it. Whatever you're doing up here is going to affect how far the river is going to extend across the city. There are people on the other side of the city who are interested in the river. She just wants staff and the Commission to keep this in their thoughts as this issue is weighed and balanced.

Mr. Roach said when you start talking about some sort of a pond system that does extend all the way down to folks who rather than instead of wanting additive apparition here, want the river to be wetter farther downstream, that's a physical trade off. The studies that Alan has talked about, sort of quantify that evaporation.

Jerry Jacobi asked about how much water evaporation was he talking about.

Mr. Hook said he would have to look at the numbers.

Mr. Jacobi said it's not very much. The Acequia deliveries are a little over 100-acre feet. The target flow is 1,000, so that means 900 acre-feet to deal with, more than the actual river. Seven years ago, when the target flow ordinance was passed, simultaneously, that natural channel was reconstructed to the top of Stone Dam. For the first two or three years, the City let water go through that natural channel and then it started being shut off and shut off. Why did it suddenly get sandbagged and closed this year like there was a court order to stop it? What does the cease and desist order say? Who was that sent to, to stop that water going down the natural channel?

Mr. Hook said that wasn't a cease and desist. We put a wood barrier to the culvert, so the water could make a 90 degree and go and do a restoration channel at Two-Mile. The reason being, we had this great plentiful year, there was a lot of flow below Old Stone Dam. There was a lot of flow going into Two-Mile. He talked to Bob Finley and Terry Sullivan, TNCs state director, and they said their trails were getting saturated, there's just too much water there and it's causing a problem. Mr. Hook told TNC there was a lot of flow because we were trying to move enough water through Nichols so that we weren't overtopping Nichols.

He said, at the end of March, Two-Mile was overflowing and the culvert below Cerro Gordo Road was starting to fill up. It was starting to become a Public Works issue. TNC agreed to have the City sandbag it up because we knew probably by the beginning of April, we were going to spill Nichols, we had that much flow coming above McClure. We're moving the water out of McClure into Nichols. So TNC agreed, they didn't want Two-Mile to overflow and then become a public threat and asked the City to please block it off until you guys have management of both the reservoirs. We did that all the way through June because McClure spilled until June 20th.

He said these were emergency management measures because that river channel bypass handles more flow. There was no intention of cutting off Two-Mile Pond, because Two-Mile was already full.

Commissioner Klingel said it seems like if we're talking about restoration of that channel decommissioning Two-Mile Dam should be on the table. That would alleviate some of the concerns about evaporation loss and not wetting the channel all the way to the West side of town.

Mr. Roach said he thinks as we structure these conversations, starting with the scientific facts as we know them is a great place to start. It would be good to structure these conversations with alternatives. One of the alternatives would be a restoration of the river channel without a pond. Let's look at all the options and let's see what do people want?

Commissioner Isaacson asked if we know where in the Santa Fe River channel it becomes a losing stream rather than a gaining, where the water kind of goes underground.

Mr. Hook said this past year, you're not losing water probably until St. Francis. In an average year with the thousand-acre feet of bypass flow, you're maybe losing half a CFS all the way down to St Francis after that really starts tanking. Then as you get to Siler it drops off and then San Isidro, there's a fault there, like five to eight-foot drop on that fault. So it progressively gets further worse just because of the dynamics, the geology there.

Mr. Roach said he was glad that Commissioner Isaacson asked that question because it brings up another aspect and that is that the living river target ordinance which is a great thing for our City well field. As we start looking at 10 to 20 years and we start rehabbing some of these wells, he would like to look at potentially moving some of the wells downstream further so that we can capture some of the storm flow, the living river flow.

Commissioner Isaacson she thinks this is important to be part of the conversation. It all is framed around scarcity and moving into the future.

Commissioner Hansen asked who owns Two-Mile Pond.

Mr. Roach displayed the map that shows ownership and the Santa Fe National Forest comes down and captures a lot of it, there's also a chunk that is The Nature Conservancy's and there's a chunk that is the City of Santa Fe's.

Commissioner Hansen said what's happened with Two-Mile Pond, it has become a wildlife habitat. It has created a tremendous amount of wildlife in that area because they have a resource. We have to think about the wildlife along with, you know, the needs of human beings. People appreciate this nature area where they can go and it's something that we want to maintain and in the best way for everyone. She said she didn't get an answer to her questions about who built the bypass channel.

Mr. Hook said Santa Fe Water & Power built it, before PNM owned it.

Chair Isaacson said another thing that we can maybe start to think about is and to echo what Heidi was saying, if Two-Mile Dam were to be decommissioned and we lose a pond, it doesn't necessarily mean that we're losing habitat. We can re-frame what is habitat and what's a corridor for animals and what is providing this Oasis. It doesn't have to be in the form of a pond.

Commissioner Hansen said if the old river or the restorative river has water running in it, then maybe there isn't the same necessity for the pond. But if you do not have the pond you don't have the river, then you've taken away a tremendous amount of source for wildlife that they have come to depend on.

Commissioner Black said one of the things this Commission should be clear on is what is the kind of annual wildlife habitat that's going on in these areas. Then what is the kind of seasonal movement of wildlife into these areas. Obviously, you've got watering holes, you've got animals that are moving from winter range to summer range and kind of all along this whole area. That's where he would want to get a little more clarity from Game and Fish and from the Santa Fe National Forest of what they know is kind of the key movement of animals in this area. What do they know of the key species that are going to be residing in this area, year-round? The other piece that would kind of dovetail on that is if you're dealing with some kind of diversion towards Acequias, the potentiality is, I would assume, if you create a pipeline for an acequia, you could determine whether you want water to go through that pipeline or not. There may be a more beneficial time to not let it go through that pipeline during the year. You have it filling wells where animals are moving into that area. Then there's a time where you kind of cut that off depending on movement of animals. It could be a little bit more helpful knowing more about what animals are moving in and out of the area. What times of the years would something like that be beneficial and when you'd want to activate a pipeline like that or not?

Mr. Roach said that was a good point because when we talk about a pipe, we're really talking about Cerro Gordo. Cerro Gordo is on the right and the diversion is on the left. When we

talk about Acequia Madre, that water's going down the channel, so we can release it in the end of the channel at certain times of the year and we just have to release enough so that it gets to their head gate.

He said the Water Division staff are not habitat experts. That is part of the reason he would like to have a conversation and let the stakeholders and the broader stakeholders decide what should we do.

Mayor Webber said he wanted to reiterate Councilor Romero-Wirth's words. There's something a little bit misleading about the map on the wall, which is it stops. While we map all the wildlife movements we want in this particular neck of the woods, as a Mayor, City Council members and the County Commission members, our map doesn't stop. As you are describing the interested parties, there are interested parties who are not on that map and there are wildlife movements that are not on that map. There are people who as Carol said, are just as interested in their neck of the woods that can be living as the people who have conserved up till now and they don't have priority. They also don't get left out of the discussion simply because the matter stops when the map stops. Don't confuse the map of territory. This is not the territory.

Commissioner Kullman said she's been curious about the target flows. She wanted to know if the target flows have served the community and the river to the best of their ability. She asked if those target flows are set in stone or do we need to revisit them over time.

Commissioner Hansen said she was involved and around at that time. This was a long, long, long discussion. Anybody in this room who was around at that time, it was not something that happened overnight with a thousand-acre feet. It took a tremendous amount of effort and many years until it got passed through the City Council in 2012. The fact that they got a thousand-acre feet was like they were celebrating. Having that discussion and changing that amount is no easy task.

Ms. McDonald said there are other aspects of the administrative procedures that we may want to revisit. It isn't going to be a quick thing. This was set up to mimic natural cycles. With the way that our climate is changing, is there any flexibility on that? We might want to look at some of that. This body would have to go through a process; work with councilors and the mayor. I think there are other parts of that administrative procedures that are problematic.

Mr. Roach said that's a good point about the timing of these releases. We could have a very interesting discussion throughout the entire city of what these flows are for. If these flows are for recreation, the hydrograph that we're using is not, if these flows are for aquatic, you know, plants. If these flows are for riparian vegetation, they're also not optimal. The decision to say, okay, we've got a thousand-acre feet, let's just mimic a natural hydrograph. There's nothing natural about the river through Santa Fe. It's an opportunity for a very interesting discussion.

Commissioner Kullman said she wasn't proposing that we change the volumes or anything, but can we manage it in a more meaningful way that meets more goals.

Commissioner Coulter asked if there have been any studies or research looking at the part of the river that goes right through downtown?

Ms. McDonald said the Army Corps did a vegetative study and they did some comparisons.

Mr. Otto said wetlands for a watershed and a river system are not just for quantity of water but for the quality of water. The bioremediation that happens in that wetlands is far and away better than any remediation that we could do, especially when that water is potentially going into our aquifers. Our aquifers have all kinds of potential sources of challenges and solutions. The wetlands are nice good water sources.

Chair Isaacson countered that what exactly is it remediating? If you're talking about bioremediation, wouldn't it better serve our water supply a little further downstream where it's remediating more stormwater?

Mr. Otto said he agreed.

Chair Isaacson thanked Mr. Otto for bringing this to the Commission's attention.

c. Action Item: WOTUS- Clean Water Act Update (Alex Puglisi, aapuglisisantafenm.gov , 955-4232)

Mr. Puglisi distributed two handouts: 1) A News Release from the US EPA entitled "EPA, U.S. Army Repeal 2015 Rule Defining "Waters of the United States" Ending Regulatory Patchwork", attached as Exhibit "1"; and 2) An article titled "Clean Water Act May Change to Limit State Oversight", attached as Exhibit "2".

Mr. Puglisi said the EPA and the Army Corps of Engineers approved the rescission of the 2015 Obama rule. Basically, everybody's back in pre 2015, which is not terrible for New Mexico because we were in pre 2015 mode anyway. The shocking thing about it is that at the same time, the EPA proposed, a couple of weeks ago, to limit state certification of MPDS permits and 404 permits. For those of you who are familiar with the Clean Water Rights Act, Section 401, relates to water quality certification and that's delegated to the states in those areas when EPA issues the permit. However, EPA can also issue do water quality certification of a permit in those cases where the state will be issuing the permit. So now we have two things happening within a couple of weeks of each other. He has a feeling that there's going to be a new definition of WOTUS, sometime soon. He's going to see if we can comment as a city on the state floor about the water

quality certification provision on the changes that are being proposed. If we hear anything about EPA's final decision on WOTUS, we'll keep you informed.

Mr. Puglisi also wanted to update the Commission on Baca Street also known as the Santa Fe Well Number One. There was petroleum contamination at that site from PNM when they operated the Santa Fe generating station. He distributed a chronology that the City of Santa Fe put together which is attached as Exhibit "3." PNM is now using it in their workplan for nitrate contamination. The good news is for the City of Santa Fe always supported PNM to clean up the petroleum contamination at the site. The way the nitrate contamination came to be is that they tried bioremediation of the petroleum and it really helped. The cleanup is now addressed by two different sets of regulations, one being the underground storage tank regulations and the other one to be being groundwater regulations.

He's going to send an electronic copy of the abatement plan to Melissa so she can forward it to the Commission. Stage One of the plan is the investigation. They are going to require additional monitoring on several new wells that haven't been monitored in the recent past. From that they're trying to delineate the nitrate plume to see how extensive the contamination is, how deep, how far it goes laterally. At that point, they'll decide whether Stage Two, the abatement stage is being made. They'll decide whether they need to plan for actual clean-up of the site. Then PNM will select an abatement method and the state will have to approve it.

Mr. Puglisi said there was another site that was discussed and that was the South College Plaza Site. He distributed another handout related to that site which is attached as Exhibit "4." South College Plaza is a cleanup that's occurring at the corner of Cerrillos Road and St. Michael's. A real estate company entered into an agreement with the State of New Mexico to do a voluntary clean up of perchloroethylene that was found at the site. In order to get closure on the site, they submitted a voluntary investigation and clean-up plan. They found that the vapor plume extended towards our property, the old College of Santa Fe, and then towards the Southeast and to the Northeast from the site in that little space that goes in between Smiths and Planet Fitness. There was a source and it was the hottest portion of the contaminated site. They submitted a remediation plan and immediately started trying to withdraw vapor; that's been successful. The City asked them to put three wells in along our borders so that we could be assured that the College of Santa Fe property would not be affected. They all came in non-detects, so we're happy about that.

He said at the same time, they did some additional monitoring on some of the vapor wells they had out there. Vapor intrusion levels are now below the vapor intrusion screening level for residential use. There's no intrusion happening from below the concrete slab anymore, which is a good sign. Our concern at the city is at the same time, there were some groundwater monitoring wells found to be contaminated out there. One of the things we requested from NMED is that they require the applicant to go back and drill some additional wells to ensure that

our well is not affected and to tell us whether it's a good idea to drill wells in that area. If we see that the flume has extended in that direction, obviously we'll think again.

Commissioner Isaacson asked what the source of the contamination is.

Mr. Puglisi said dry cleaning.

5. MATTERS FROM STAFF

a. Action Item: River Talks Educational Series for Fall 2019 (mamcdonald@santafenm.gov, 955-6840)

Ms. McDonald said she had a couple of quick things. First, she wanted to take a moment to welcome her boss, the Public Works Director, Regina Wheeler.

Ms. McDonald said we finally got the river repair out to bid yesterday. She doesn't know how much money we're going to have to do the installation of all of it, but we're very excited to get this going. If you want to see the plans, you can go to our RFP website. She'll also email the link so you can download it from there and really get more into the details of it.

Ms. McDonald also wanted to let the Commission know that she'll be sending out the announcement that we're going to be doing the river talk at the Canyon Road Treatment Plant, on October 5th. Everybody's on board for that and that's going to be a lot of fun.

She said the other thing she wanted to let the Commission know is that our storm water management plan has been progressing nicely. We've been doing various neighborhood meetings and small group meetings, community meetings, and we're being well received. People really see the need for us to tackle the storm water flows and the flooding and erosion and really take it head on. We're getting really good feedback.

6. COMMUNICATION FROM OTHER AGENCIES /COMMITTEES

a. Informational: SF Watershed Report (Andy Otto, andy@santafewatershed.org, 8201696)

Mr. Otto handed out the bi-monthly report, attached as Exhibit "5". They are on-going on the adopt-a-river and adopt arroyo programs. They've also been working with the County on the green way project. They have a crew going out tomorrow. In July and August there were 20 total reaches. He said they have a new staff person, Morika Hensley. She will be the River and Watershed Coordinator.

Mr. Hook said, as a matter from staff, there will be a prescribed burn above Nichols, north into the headwaters of Aztec Springs. Stay tune could happen Monday or Tuesday, he'll send the news release to Melissa if it's a go.

7. CITIZENS' COMMUNICATION FROM THE FLOOR

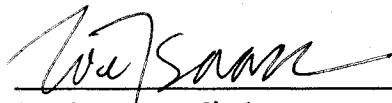
None.

8. MATTERS FROM COMMISSIONERS

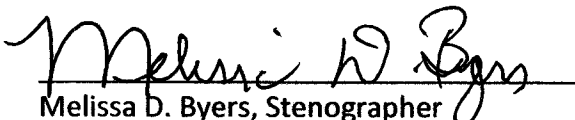
Commissioner Klingel and Commissioner Hansen announced that they will not be at the October River Commission meeting.

9. ADJOURN

Commissioner Coulter moved to adjourn the meeting. The motion was seconded by Commissioner Klingel. The Santa Fe River Commission meeting was adjourned at 7:56 p.m.



Zoe Isaacson, Chair



Melissa D. Byers, Stenographer
Byers Organizational Support Services

9/12/19

EXHIBIT 1

From: EPA R6 News Media <no_reply@epa.gov>
Sent: Thursday, September 12, 2019 12:52 PM
To: PUGLISI, ALEX A.
Subject: EPA, U.S. Army Repeal 2015 Rule Defining "Waters of the United States"



U.S. ENVIRONMENTAL PROTECTION AGENCY

NEWS RELEASE

WWW.EPA.GOV/NEWSROOM

EPA, U.S. Army Repeal 2015 Rule Defining "Waters of the United States" Ending Regulatory Patchwork

Media contacts: Jennah Durant or Joe Hubbard at r6press@epa.gov or 214 665-2200

DALLAS – (Sept. 12, 2019) At an event at the Dallas Builders Association, U.S. Environmental Protection Agency (EPA) Region 6 Administrator Ken McQueen announced EPA and the Department of the Army are repealing a 2015 rule that impermissibly expanded the definition of "waters of the United States" (WOTUS) under the Clean Water Act. The agencies are also recodifying the longstanding and familiar regulatory text that existed prior to the 2015 rule—ending a regulatory patchwork that required implementing two competing Clean Water Act regulations, which has created regulatory uncertainty across the United States.

"Today, EPA and the Department of the Army finalized a rule to repeal the previous administration's overreach in the federal regulation of U.S. waters and recodify the longstanding and familiar regulatory text that previously existed," **said EPA Administrator Andrew Wheeler**. "Today's Step 1 action fulfills a key promise of President Trump and sets the stage for Step 2 – a new WOTUS definition that will provide greater regulatory certainty for farmers, landowners, home builders, and developers nationwide."

"Today, Administrator Wheeler and I signed a final rule that repeals the 2015 Rule and restores the previous regulatory regime exactly how it existed prior to finalization of the 2015 Rule," **said R.D. James, Assistant Secretary of the Army for Civil Works**. "Before this final rule, a patchwork of regulations existed across the country as a result of various judicial decisions enjoining the 2015 Rule. This final rule reestablishes national consistency across the country by returning all jurisdictions to the longstanding regulatory framework that existed prior to the 2015 Rule, which is more familiar to the agencies, States, Tribes, local governments, regulated entities, and the public while the agencies engage in a second rulemaking to revise the definition of 'waters of the United States.'"

"Hardworking Americans will be able to build a better future for themselves and their communities as a result of today's action," **said Regional Administrator Ken McQueen**. "I look forward to working with our state partners and our stakeholders as we move forward."

directs the EPA and the Department of the Army to review the 2015 Rule for consistency with the policy outlined in Section 1 of the Order and to issue a proposed rule rescinding or revising the 2015 Rule as appropriate and consistent with law.

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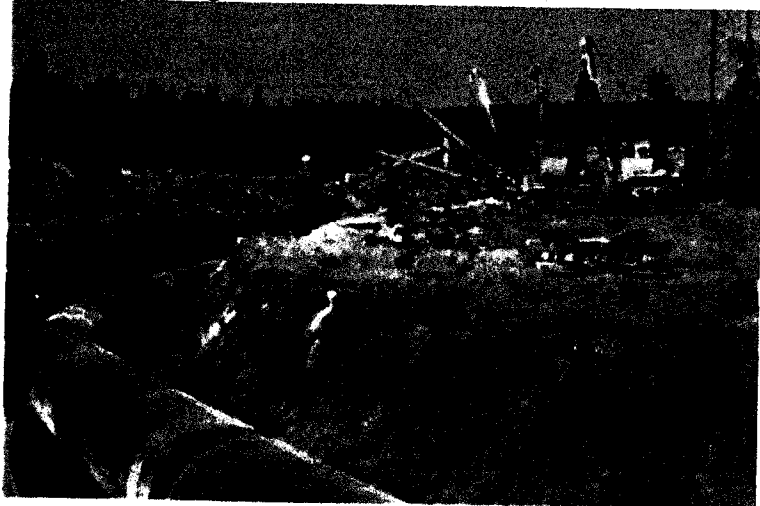
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Subject: Clean Water Act May Change To Limit State Oversight - Water Online

Santa Fe River Commission
9/12/19
EXHIBIT 2

Clean Water Act May Change To Limit State Oversight

By Peter Chawaga Water Online



Since 1972, the Clean Water Act has served as the cornerstone federal regulation governing water pollution in the United States. And now, the U.S. EPA has proposed that significant changes be made to it in order to ease processes for construction projects.

“The Environmental Protection Agency is proposing a change in Clean Water Act regulations aimed at streamlining the approval process for permits that are often a sticking point for pipelines and other major infrastructure projects,” *The Wall Street Journal* reported. “The proposed regulatory change is aimed at bolstering federal authority in granting these permits and at preventing states from overstepping their authority, EPA Administrator Andrew Wheeler said in an interview.”

The EPA pushed the proposal forward earlier this month, initiating a 60-day public comment period. Specifically, the changes would put a stricter one-year deadline on state’s permitting authority and would require states to reference water-quality issues only when they reject permits.

Wheeler has argued that, as it stands now, states leverage the Clean Water Act to hold up pipeline projects that should be moving forward. In this way, the changes seem connected to a larger emphasis on cutting red tape and environmental protections that stand in the way of the energy industry throughout the Trump administration.

“President Trump has promised to streamline government reviews and speed up energy projects,” per the *Journal*. “Interstate pipeline projects, in particular, have faced delays, with new lines to take natural gas to coastal consumers stalled for years under court and regulatory challenges.”

On the other hand, environmental groups have raised concerns that changes to the Clean Water Act could recklessly endanger the natural resources it was meant to protect.

~~Per~~ *Inside Climate News*, Matthew Gravatt, deputy legislative director for the Sierra Club said the changes "would limit states' authority to protect their waterways from effects such as erosion and sedimentation by restricting their permit decisions to only considering the potential for discharges into the water from a point source," according to *Inside Climate News*.

If and when the proposed changes are adopted into the rule, states will have to be more clear and concise about why they object to permits under the Clean Water Act.

To read more about the rules that affect water and wastewater utilities, visit Water Online's Regulations And Legislation Solutions Center.

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From the Rio to the tap, providing water today for Santa Fe's tomorrow!

9/12/19

EXHIBIT 3

TABLE 1
Site Investigation Chronology
Former Santa Fe Generating Station (Santa Fe We
Santa Fe, Santa Fe County, New Mexico

| Date | Summary |
|------------------|--|
| 1950 - 1980 | Public Service Company of New Mexico (PNM, now PNM Resources) electric power generating station operational (NMED GWQB, 2000) |
| 1951 | Santa Fe Well (Baca St Well) was installed and turned on. The well does not contain an annular seal, which was typical for this time (NMED GWQB, 2000). |
| 1952 | Approximately 84,000 gallons of fuel oil leaked into the soil from a leaking underground pipe that was connected to one for the above-ground storage tanks (ASTs) at the power plant. It was reported that all of the fuel was missing from the one of the fuel oil tanks (PNM, 1995). The leak occurred in a portion of the pipeline connecting the fuel oil tank to the 18,000-gallon underground storage tank (UST) referred to as the "Day Tank" (Figure 3) (PNM, 1995). The leak was repaired but there was no investigation to determine the extent of the environmental damage (NMED GWQB, 2000). |
| 1950s - 1970s | A 1,000-gallon tank was installed at the location noted as UST-A on Figure 3. Later this tank was replaced in the same location by a 2,000-gallon tank. Both tanks are believed to have held gasoline. The location noted as UST-B may have held as many as three tanks (Figure 3). From the 1960s to 1970s, one or two 1,000- or 2,000-gallons USTs existed at this location; a 10,000-gallon UST was installed in 1979. The original tanks may have contained diesel at some time (not confirmed) but reportedly contained regular gasoline (Metric, 1995a). |
| 1953 - 1985 | A service center was operated within the southern portion of the property between 1953 and 1985 (Figure 2b). Five USTs containing gasoline were located at two different locations within the service center. The volumes of these USTs could not be identified and no soil contamination was identified down to 30 feet below the tank pits during UST removal in 1989 (NMED GWQB, 2000). |
| January 15, 1987 | The 2,000-gallon UST was removed from location UST-A. No evidence for a release was found at the time the tank was removed. The 10,000-gallon UST was removed from location UST-B. No evidence of release was found during UST removal activities (Metric, 1995a). |
| October 1988 | Benzene and ethylene dibromide (EDB) contamination discovered in the Santa Fe Well (NMED, 1994). |
| December 1988 | The Santa Fe Well was shut down due to the presence of gasoline constituents in the water. The Sangre de Cristo Water Company (SDCW) installed a granulated activated carbon (GAC) wellhead treatment system and the well was returned to service in 1989 (Metric, 1995). |
| 1989 | Four monitoring wells (USTB-1 through USTB-4) were installed as part of the investigation into petroleum contamination found in the Santa Fe Well (Metric, 1995). |
| October 1989 | Santa Fe Well returned to service with wellhead treatment consisting of GAC. |
| 1989 - 1990 | A subsurface soil investigation was conducted. Chlorinated solvents, predominantly tetrachloroethene (PCE), were found near the former service center building. PNM voluntarily removed and incinerated 220 cubic yards of contaminated soil (Figure 3). Laboratory analysis of soil samples from the limits of the excavation revealed that contaminant levels were below the United States Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure (TCLP) levels (Settlement Agreement, 1992). |
| January 31, 1991 | A total of 38 potential off-site contamination sources were identified. Three possible sources have been designated as top priority and were addressed in the off-site investigation (NMEID, 1991). |
| 1992 | Monitoring wells OS-1 through OS-11 were installed. |

TABLE 1
Site Investigation Chronology
Former Santa Fe Generating Station (Santa Fe Well-S)
Santa Fe, Santa Fe County, New Mexico

| Date | Summary |
|------------------------|--|
| November 19, 2012 | The Santa Fe Well was shut down when a 50-60 gpm drop in the flow rate began to cause the well to cycle on and off in 30-minute intervals. PNM determined that the reduced flowrate in extraction well PNM-5 was causing excessive amounts of backpressure in the system. Once PNM-5 was shut down, the Santa Fe Well and associated wellhead treatment system were put back into service and operated normally (PNM, 2012). |
| August 2013 | The Santa Fe Well (including PNM-5) went out of service due to the failure of the systems variable frequency drive (VFD). The VFD controls the operation of the booster pumps which pump treated water into the City's distribution system (PNM, 2015). |
| March through May 2018 | Seven new monitoring wells were installed (USTB-18 through USTB-24) to further characterize the nature and extent of petroleum hydrocarbon contamination on- and off-site. Monitoring well OS-18 was located and recompleted. |
| August 2018 to present | Seventeen (17) new monitoring were installed (USTB-25 through USTB-36 and USTB-39 through USTB-43) to further characterize the nature, extent, and magnitude of the petroleum hydrocarbon contamination both on and off-site. Monitoring well OS-4A and OS-4B were located, uncovered, and recompleted and USTB-17 was plugged and abandoned (P&A). Installation of monitoring well USTB-38 is pending. |
| Present | The Santa Fe Well is still not operating. |

TABLE 2
Monitoring Well Details
Former Santa Fe Generating Station (Santa Fe Well-S)
Santa Fe, Santa Fe County, New Mexico

| Well | Date Installed | TOC Elevation (ft amsl) | Ground Surface Elevation (ft amsl) | Screen Length (ft) | Depth to top of screen (ft bgs) | Depth to bottom of screen (ft bgs) | Well Depth (ft bgs) | Borehole Depth (ft bgs) | Well Diameter (Inches) | Pump Type | Depth to Water (ft bwc) (July/August 2018) | Comments |
|----------------------------------|----------------|-------------------------|------------------------------------|--------------------|---------------------------------|------------------------------------|---------------------|-------------------------|------------------------|-----------|--|--|
| USTB-28 | 10/5/2018 | -- | -- | 10 | 317.1 | 327.1 | 327.4 | 329 | 4 | -- | -- | Not surveyed |
| USTB-29 | 12/14/2018 | -- | -- | 40 | 246.5 | 286.5 | 286.85 | 287 | 4 | -- | -- | Not surveyed |
| USTB-30 | 12/5/2018 | -- | -- | 10 | 316.65 | 326.65 | 327 | 330 | 4 | -- | -- | Not surveyed |
| USTB-31 | 11/27/2018 | -- | -- | 10 | 356.5 | 366.5 | 366.85 | 369 | 4 | -- | -- | Not surveyed |
| USTB-32 | 9/23/2018 | -- | -- | 10 | 344 | 354 | 354.35 | 361 | 4 | -- | -- | Not surveyed |
| USTB-33 | 1/28/2019 | -- | -- | 30 | 245 | 275 | 275.35 | 282 | 4 | -- | -- | Not surveyed |
| USTB-34 | 1/23/2019 | -- | -- | 10 | 280.65 | 290.65 | 291 | 300 | 4 | -- | -- | Not surveyed |
| USTB-35 | 1/12/2019 | -- | -- | 2.5 | 286.65 | 289.15 | 289.5 | 330 | 4 | -- | -- | Not surveyed |
| USTB-36 | 12/20/2018 | -- | -- | 35 | 249.5 | 284.5 | 285 | 302 | 4 | -- | -- | Not surveyed |
| USTB-39 | 9/7/2018 | -- | -- | 10 | 246.1 | 256.1 | 256.5 | 257 | 4 | -- | -- | Not surveyed |
| USTB-40 | 8/28/2018 | -- | -- | 30 | 270 | 300 | 300.35 | 319 | 4 | -- | -- | Not surveyed |
| USTB-41 | 2/20/2019 | -- | -- | 10 | 319.65 | 329.65 | 330 | 332 | 4 | -- | -- | Not surveyed |
| USTB-42 | 2/16/2019 | -- | -- | 10 | 370.15 | 380.15 | 380.5 | 420 | 4 | -- | -- | Not surveyed |
| USTB-43 | 3/13/2019 | -- | -- | 9.1 | 307 | 316.1 | 316.45 | 318 | 4 | -- | -- | Angle Well (24° off vertical) |
| CAT-1 | 7/7/1993 | 6890.57 | 6891.08 | 50 | 250 | 300 | 302 | 302 | 4 | -- | 269.41 | Near Hickox Well |
| CSF-1 | 10/16/97 | 6895.22 | 6895.01 | 25 | 259 | 284 | 284 | 298 | 4 | -- | 284.70 | On property owned by the NM School for the Deaf. Located approximately 100 ft east of the south end of Alicia Street |
| CSF-2U | 10/10/97 | 6844.99 | 6845.13 | 20 | 534.4 | 554.4 | 554.4 | 680 | 2 | -- | 226.46 | In Larragoite Park on the east side of Avenida Cristobal Colon Road. (COSF#2A and #2B) [2A] |
| CSF-2L | 10/10/97 | 6844.88 | 6845.13 | 10 | 648.4 | 658.4 | 668 | 680 | 2 | -- | 238.78 | In Larragoite Park on the east side of Avenida Cristobal Colon Road. (COSF#2A and #2B) [2B] |
| Water Supply Well | | | | | | | | | | | | |
| Santa Fe Well (Baca Street Well) | 8/6/1951 | 6870.90 | -- | 523 | 200 | 723 | 725 | 1523 | -- | -- | -- | Survey data not updated |
| Dry | | | | | | | | | | | | |
| USTB-6 | 2/27/1992 | 6877.87 | 6875.58 | 9 | 66 | 75 | 75 | 78 | 2 | -- | Dry | |
| USTB-10 | -- | 6882.80 | 6880.34 | 10 | 125 | 135 | 138 | 138 | 4 | -- | Dry | Dry at 138.7 ft bgs |

TABLE 2
Monitoring Well Details
 Former Santa Fe Generating Station (Santa Fe Well-S)
 Santa Fe, Santa Fe County, New Mexico

| Well | Date Installed | TOC Elevation (ft amsl) | Ground Surface Elevation (ft amsl) | Screen Length (ft) | Depth to top of screen (ft bgs) | Depth to bottom of screen (ft bgs) | Well Depth (ft bgs) | Borehole Depth (ft bgs) | Well Diameter (inches) | Pump Type | Depth to Water (ft btoc) (July/August 2018) | Comments |
|------|----------------|-------------------------|------------------------------------|--------------------|---------------------------------|------------------------------------|---------------------|-------------------------|------------------------|-----------|---|--|
| OS-5 | Oct-92 | -- | -- | 40 | 245 | 285 | 285 | 290 | 2 | -- | Dry | Dry at 286 ft bgs, Survey data not updated |

Notes:

- amsl = above mean sea level
- bgs = below ground surface
- BTOC = below top of casing
- CSF = City of Santa Fe
- ft = foot/feet
- LNAPL = light non-aqueous phase liquid
- NM = not measured
- NMDOT = New Mexico Department of Transportation
- OWI = oil/water interface
- TOC = top of casing
- USTB = Underground Storage Tank Bureau (former name of PSTB - Petroleum Storage Tank Bureau)
- = not known or not applicable
- All wells unless otherwise noted surveyed by SW Mountain Surveyors in April and May 2018

TABLE 5
Proposed Monitoring Well List
Former Santa Fe Generating Station (Santa Fe Well – S)
Santa Fe, Santa Fe County, New Mexico

| Well | Condition #1: Nitrate Exceedance (post-2004) | Condition #2: CVOC Exceedance (post-2004) | Condition #3: Less than 2 sample events (post-2004) | Nitrate Data Gap Well | Collect Sample |
|-----------------------------|---|--|--|--------------------------|-------------------|
| OS-4A** (Dry) | | | X | | X (CVOC) |
| OS-4B | | | X | | X (CVOC) |
| OS-6 | | | | X | X (nitrate) |
| OS-7 | | | | | |
| OS-8 | | | | | |
| OS-9 | X | | | | X (nitrate) |
| OS-10 | | | X | | X (CVOC) |
| OS-12 | X | | | | X (nitrate) |
| OS-13* | | X | | | X (CVOC) |
| OS-14 | | | | | |
| OS-15* | X | | X | | X (CVOC, nitrate) |
| OS-16 | | | | | |
| OS-17 | | | X | X | X (CVOC, nitrate) |
| OS-18 | | | | | |
| OS-19 | | | | | |
| PNM-1* | | X | | | X (CVOC) |
| PNM-2 | | X | | | X (CVOC) |
| PNM-3 | | X | | | X (CVOC) |
| PNM-4 | | X | | | X (CVOC) |
| PNM-5 | | | | | |
| USTB-1 | X | | | | X (nitrate) |
| USTB-2 | | | | X | X (nitrate) |
| USTB-3 | | | | X | X (nitrate) |
| USTB-4* | X | | | | X (nitrate) |
| USTB-5 | | | | | |
| USTB-7* | X | | | | X (nitrate) |
| USTB-8 | | | | X | X (nitrate) |
| USTB-9* | X | | | | X (nitrate) |
| USTB-11 | | | | | |
| USTB-12 | | | | | |
| USTB-13 | X | X | | | X (CVOC, nitrate) |
| USTB-14 | | | | | |
| USTB-15 | | | | | |
| USTB-16** (Inaccessible) | | X | | | X (CVOC) |
| USTB-18 | | | | | |
| USTB-19 | | X | | | X (CVOC) |
| USTB-20 | | | | | |
| USTB-21 | | | | | |
| USTB-22 | | X | | | X (CVOC) |

TABLE 5
Proposed Monitoring Well List
Former Santa Fe Generating Station (Santa Fe Well – S)
Santa Fe, Santa Fe County, New Mexico

| Well | Condition #1: Nitrate Exceedance (post-2004) | Condition #2: CVOC Exceedance (post-2004) | Condition #3: Less than 2 sample events (post-2004) | Nitrate Data Gap Well | Collect Sample |
|---------|---|--|--|--------------------------|-------------------|
| USTB-23 | | | | | |
| USTB-24 | | X | | X | X (CVOC, nitrate) |
| USTB-25 | | | X | X | X (CVOC, nitrate) |
| USTB-26 | | | X | X | X (CVOC, nitrate) |
| USTB-27 | | | X | X | X (CVOC, nitrate) |
| USTB-28 | | | X | X | X (CVOC, nitrate) |
| USTB-29 | | | X | X | X (CVOC, nitrate) |
| USTB-30 | | | X | X | X (CVOC, nitrate) |
| USTB-31 | | | X | | X (CVOC) |
| USTB-32 | | | X | | X (CVOC) |
| USTB-33 | | | X | | X (CVOC) |
| USTB-34 | | | X | | X (CVOC) |
| USTB-35 | | | X | | X (CVOC) |
| USTB-36 | | | X | | X (CVOC) |
| USTB-39 | | | X | | X (CVOC) |
| USTB-40 | | | X | | X (CVOC) |
| USTB-41 | | | X | | X (CVOC) |
| USTB-42 | | | X | | X (CVOC) |
| USTB-43 | | | X | | X (CVOC) |

Notes:

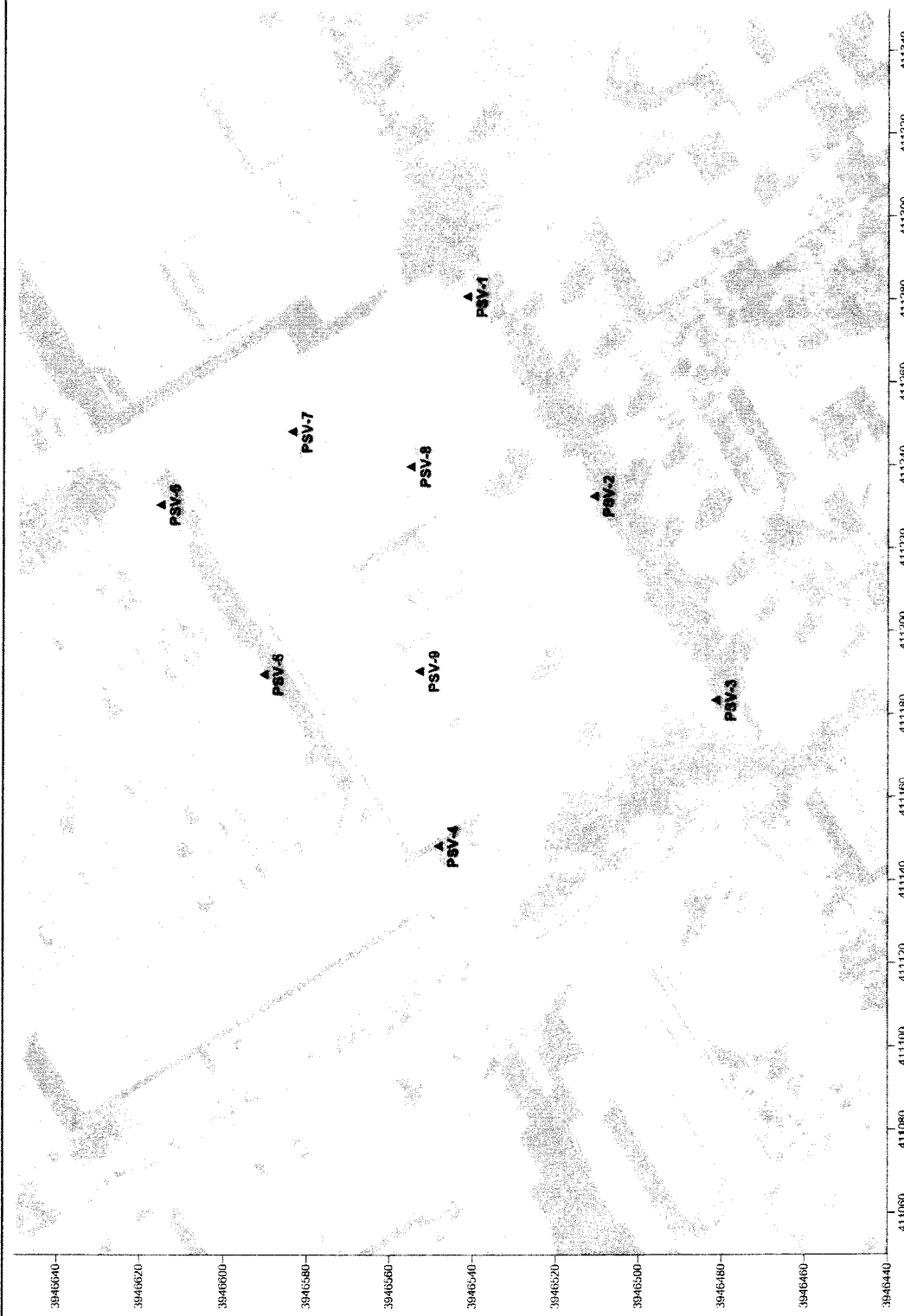
* = former bionutrient injection well

** = sample will not be collected because well is either dry or inaccessible

CVOC = chlorinated volatile organic compound

Monitoring well to be sampled

Santa Fe River Commission 9/12/19 EXHIBIT 4



LEGEND

▲ PASSIVE SOIL-GAS SAMPLE LOCATION
PSV-5

System: UTM
Zone: 13 South
Datum: WGS 1984
Coordinate Units: Meters



| |
|---|
| Figure 1 Passive Soil-Gas Survey Sample Locations |
| College Plaza South Santa Fe, NM |

BEACON ENVIRONMENTAL SERVICES, INC.
2203A Commerce Road, Suite 1, Forest Hill, MD 21050 USA
www.Beacon-USA.com 1-800-838-8789
Beacon Project No. 4617, June 2019



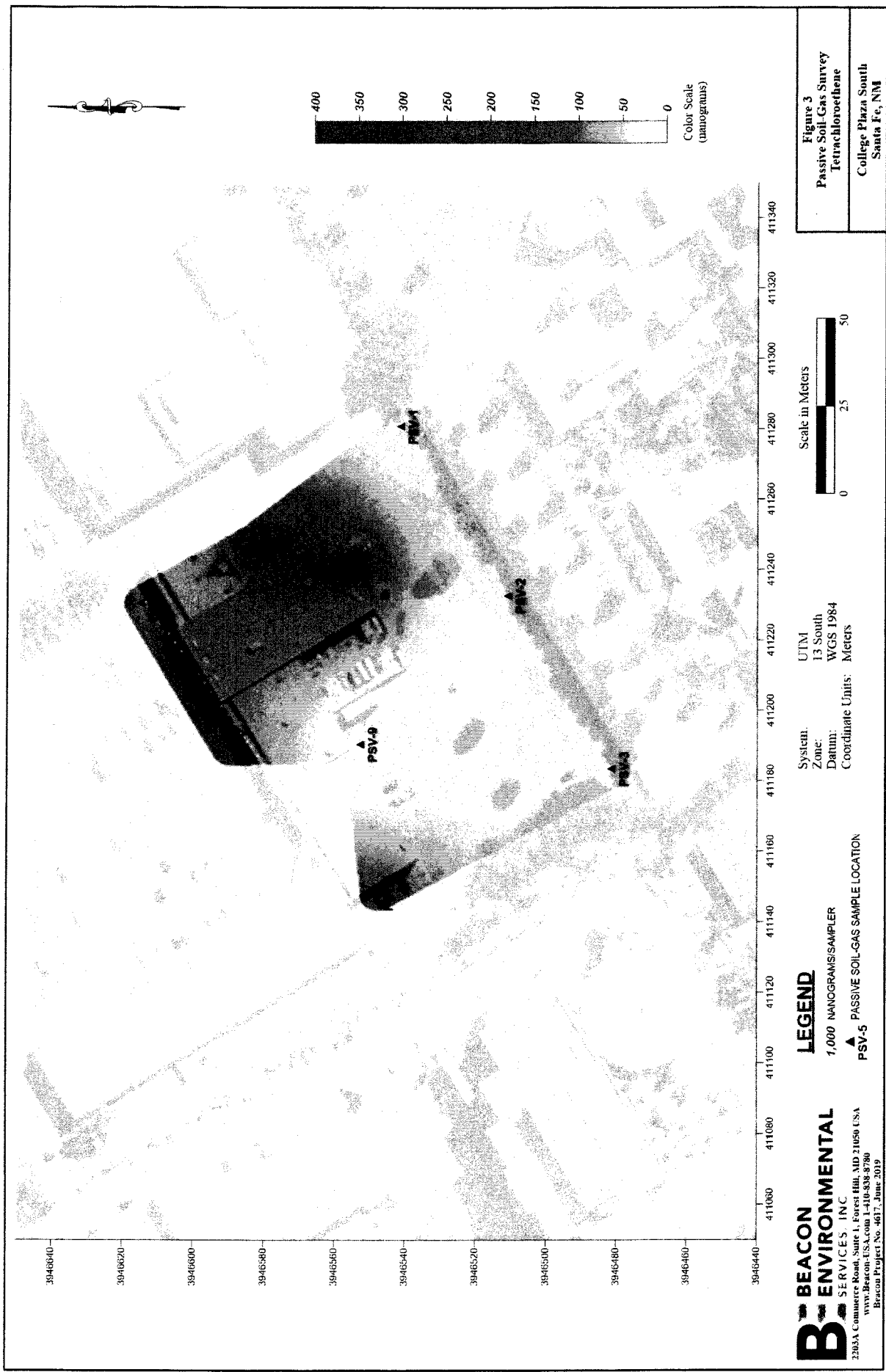
Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C
(results in nanograms)

| Client Sample ID: | LB190606s | Trip-1 | PSV-1 | PSV-2 | PSV-3 | PSV-4 |
|-------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|
| Project Number: | | 4617 | 4617 | 4617 | 4617 | 4617 |
| Lab File ID: | S19060603 | S19060605 | S19060606 | S19060607 | S19060608 | S19060609 |
| Received Date: | | 6/5/2019 | 6/5/2019 | 6/5/2019 | 6/5/2019 | 6/5/2019 |
| Analysis Date: | 6/6/2019 | 6/6/2019 | 6/6/2019 | 6/6/2019 | 6/6/2019 | 6/6/2019 |
| Analysis Time: | 10:59 | 11:42 | 12:04 | 12:25 | 12:46 | 13:08 |
| Matrix: | | | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Units: | | ng | ng | ng | ng | ng |
| COMPOUNDS | CAS | | | | | |
| Vinyl Chloride | <u>75-01-4</u> | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <u>75-35-4</u> | <10 | <10 | <10 | <10 | <10 |
| trans-1,2-Dichloroethene | <u>156-60-5</u> | <10 | <10 | <10 | <10 | <10 |
| cis-1,2-Dichloroethene | <u>156-59-2</u> | <10 | <10 | <10 | <10 | <10 |
| Trichloroethene | <u>79-01-6</u> | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | <u>127-18-4</u> | <10 | <10 | <10 | <10 | 117 |

Results in nanograms (ng). B = Detected in method blank.





Santa Fe River Commission
9/12/19
EXHIBIT 5

Adopt Update

JULY + AUGUST

In the past year, Santa Feans have been able to experience a living river for months at a time. Normally, conditions along the river are much drier but this year the Santa Fe River has been running frequently. The river flowed continuously for approximately 120 days until about the end of June. During the months of July and August monsoon rains have allowed sporadic flows into the river. This good fortune has made it possible for our volunteers to care for Santa Fe County's newly planted cottonwoods. These trees were planted along the new River Greenway project that is between Frenchy's Park and Siler Road. So far, 83 volunteers made seven visits to the river to water, re-stake, re-plant and re-basin the trees. More visits are planned to continue into the fall of 2019. Come join us!



RIVER NEWS

A special thanks to our steward team from the Santa Fe Indian School who made a special trip to the river to help care for the young cottonwoods planted along the river by the County of Santa Fe.

Santa Fe Hills Neighborhood Association

SPONSOR NEWS

We'd like to welcome our newest Adopt - an - Arroyo sponsor to our program. Thank you, Santa Fe Hills NA, for helping protect the Arroyo Piedra.



ARROYO NEWS

Coming soon, the Arroyo Hondo, in Santa Fe County, will have a steward team. They will be in training with our Director of Watershed Restoration, Aaron Kauffman, who will teach the art of arroyo assessment.

SEPT/OCT

UPCOMING EVENTS

9.21.19 | Toss No Mas

7:00 am - 12:00 pm

Registration is on the day of the event from 7-9 am at 1142 Siler Road.

More Info: Carol Branch
(505) 955-2215

9.27.19 | Rain Gardens at Herb
Martinez Park

1:30 pm - 2:00 pm

Keep Santa Fe Beautiful and The Santa Fe Watershed are proud to invite you to a ribbon cutting for our rain gardens!

10.19.19 | Hunt for the Red Rocktober!

Join us to remove summer's trash from Santa Fe's river and arroyos!

Registration is on the day of the event.

10 am - 12 pm
under the shade trees at Alto Park.

RIVER REACHES : 15* VOLUNTEERS : 78* BAGS : 115* HOURS : 119* ARROYO REACHES : 5*

SF River + Arroyo cleanup totals = 2 months