



Agenda **Regular Meeting of the Santa Fe
River Commission
December 12, 2024 at 6:00 PM
City of Santa Fe Transit Center,
Room #117
2931 Rufina St., Santa Fe**

Procedures for Santa Fe River Commission Meeting

Join on Zoom: <https://santafenm-gov.zoom.us/j/84309864154>

The agenda and packet for the meeting will be posted at
<https://santafenm.portal.civicclerk.com/>

1. Call to Order
2. Roll Call
3. Approval of Agenda
4. Approval of Minutes
 - a. Approve the Amended August 8, 2024 Meeting Minutes (Zoe Isaacson, Santa Fe River Commission Liaison, zrisaacson@santafe.gov) - ,
 - b. Approval of the October 10, 2024, Meeting Minutes (Zoe Isaacson, Santa Fe River Commission Liaison, zrisaacson@santafenm.gov) - ,
5. Communications from Other Agencies/Committees
 - a. Update from Santa Fe Watershed Association (Amara May, Director of Stewardship and Outreach, Santa Fe Watershed Association, amara@santafewatershed.org) - ,
6. Informational Items
 - a. Thoughts on Restoration of the River Above Cerro Gordo Road (Neil Williams, PE, Watershed West, nwilliams@watershedwest.com) - ,
7. Discussion and Action Items
 - a. Formation of Sub-Committees (Heidi Klingel, Commission Chair, heidiklingel@hotmail.com) - ,

- b. Approval of the 2025 Santa Fe River Commission Meeting Calendar
- 8. Matters from Staff
- 9. Matters from the Public
- 10. Matters from the Commission
 - a. Recognition of Community Members' Efforts Towards River Restoration (Bill Carey, River Commissioner, billcarey.tellus@gmail.com) - ,
- 11. Next Meeting: February 13, 2025
- 12. Adjourn

Persons with disabilities in need of additional accommodations, contact the City Clerk's office at 505-955-6521, five (5) working days prior to meeting date.



MINUTES

SANTA FE RIVER
COMMISSION
AUGUST 08, 2024
6:00 PM
VIRTUAL MEETING

1. **CALL TO ORDER**

Meeting was called to order at 6:06 PM

2. **ROLL CALL**

Members Present:

Voting Member Jacob Lyon
Member Bill Carey
Member Eric Montoya
Member Lauren Price
Member Jim Riesterer
Member William Hutchinson

Members Excused:

Chair Heidi Klingel
Santa Fe County Commissioner Anna Hansen
Voting Member Patrick Smyth

Others Attending:

Zoe Isaacson, River and Watershed Project Administrator

3. **ROLL CALL**

Chairwoman Klingel, Commissioner Smyth, and County Commissioner Hansen were not in attendance, but excused.

4. **APPROVAL OF AGENDA**

MOTION: Member Riesterer moved, seconded by Member Hutchinson, to Approve the Agenda as presented.

VOTE: The motion was approved on the following Roll Call vote:

For: Voting Member Lyon, Member Carey, Member Montoya, Member Price, Member Riesterer, Member Hutchinson

Against: None



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Abstain: None

5. APPROVAL OF MINUTES

- a. Approval of the June 13th Santa Fe River Commission Meeting Minutes (Heidi Klingel, Chair, heidiklingel@hotmail.com)

MOTION: Member Hutchinson moved, seconded by Member Riesterer, to Approve the June 13th Meeting Minutes as presented.

VOTE: The motion was approved on the following Roll Call vote:

For: Voting Member Lyon, Member Carey, Member Montoya, Member Price, Member Riesterer, Member Hutchinson

Against: None

Abstain: None

6. COMMUNICATIONS FROM OTHER AGENCIES/COMMITTEES

- a. Santa Fe Watershed Shed Association Update (Amara May, Stewardship and Outreach Director, amara@santafewatershed.org)

Mori Hensley, Executive Director of the Santa Fe Watershed Association attended the meeting in Amara's absence. Ms Hensley introduced herself to the group and explaining that the SFWA works closely with various City staff in both Parks and Open Space and Water Divisions and is looking forward to working with the River Commission in a similar capacity to the Water Conservation Committee.

Ms Hensley mentioned that the River and Watershed Section and SFWA are finalizing their Adopt the River and Arroyo Programs contract and is hopeful it will be fully executed in the near term. Ms Hensley reported that SFWA is preparing for the Fall Watershed Festival happening in late September and is partnering with the City on hosting these events. Ms Isaacson mentioned that these events coincide with the River Talks



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schedule and there will be offerings for both events. Ms Hensley described the events as movies, lectures, workshops and a legacy tour of San Ysidro Park, Santa Fe County's first open space.

Ms Hensley encourages Commissioners to reach out if they have questions and looks forward to strengthening their partnership with the River Commission.

Ms Isaacson suggested that the River Commission reach out to Mori and her team to find a project that helps leverage each other's and reminded Commissioners that the Santa Fe Watershed Association is a community resource that shares the same mission and goals as the Commission. Partnering where it makes sense can cultivate advocacy and stewardship community wide.

Ms Hensley then mentioned the SFWA's educational programs and specifically called for volunteers for the My Watershed field trips to the upper watershed to help chaperon the 5th grade students and provide support. It's a great way to get into the upper watershed. Commissioners had a question regarding what the students learn on the field trip and Ms Hensley explained the kids learn about where our water comes from, where the watershed is, water quality, and about the management of our water resource.

6. INFORMATIONAL ITEMS

- a. Two Mile Pond Complex: A Brief History (Alan Hook, Santa Fe Municipal Watershed Program Manager, aghook@santafenm.gov)

Alan Hook, Water Resource Coordinator for the City, gave an overview of the Santa Fe River and Two Mile Pond Complex. The presentation focused on the reservoirs, points of diversion, monitoring stations, infrastructure (current and historic), and the City's role in these changes over time. This presentation was in preparation for the River Commission field trip to the Two Mile Pond Complex on August 15th.

Mr Hook began with an overview of the watershed boundary, the locations of McClure and Nichols Reservoirs, and the location of gauging stations in the upper portion of municipal watershed. Mr Hook described the outlet works to Nichols and how deliveries to the Acequias and the Living River traditionally worked. However, there is currently construction



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happening at Nichols to simplify the delivery process. The current construction complicates deliveries to the Acequias and Living River. However, the Water Division and contractors have developed a workaround using coffer dam and pumps to pipe the water around the outlet works to the river channel. Before the coffer dam can be put to use, the bottom of Nichols must first be drained; flushing of the sediment laden water has begun.

My Hook then went on to describe the mandated delivery requirement for each of the four acequias: Acequia del Llano, Acequia Cerro Gordo, Acequia la Muralla, and the Acequia Madre. Mr Hook covered each acequia, their points of diversion, court ordered allotment (including carriage water requirements), delivery schedule, and how the City coordinates with each, especially while work on Nichols is in progress.

Commissioners asked what is considered the River and what exactly is the bypass channel; Mr Hook explained that the bypass channel (built to divert flows during the construction of Two Mile Dam) is now considered the Santa Fe River per the 1977 hydrographic survey.

Commissioner Carey asked when the Acequia Cerro Gordo get its water? Mr Hook: Sundays and Wednesdays. However, in dry years, when there is limited bypass volume, the acequias and river commission will do shortage sharing. Ms Isaacson pointed out that is why in some years, it may seem like the water goes dry every Monday for example, and that is because the acequia will be getting deliveries during this time and then the Living River releases will occur on the days the acequias aren't irrigating.

The next topic covered was Old Stone Dam, Aztec Springs and Two Mile Reservoir: Mr Hook briefly discussed Old Stone Dam, the remaining sediment plug that helps convey seepage water to the Two Mile Pond complex and how due to the location at the bottom of the valley, seepage flows from both the Santa Fe River, Aztec Springs, and Nichols likely flow through Two Mile Pond, regardless of intentional diversions to the pond. Mr Hook spoke to Two Mile Pond specifically and the TNC restoration channel diversion. Restating that this was removed by the Office of the State Engineer due to a lack of water rights for both the diversion from the Santa Fe River and the subsequent storage behind the remnant dam



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at Two Mile. Mr Hook then went on to describe existing infrastructure, both active and decommissioned, that exists in the area and some limitations they may pose if the channel should be restored. Ms Isaacson described the pipes that run from the irrigation dam upstream through Old Stone Dam, and daylight at Two Mile Pond. These pipes continue to carry water to the pond complex and run almost perennially.

The presentation then went on to describe the outflow of Two Mile Pond, where it converges with the Santa Fe River return flow locations downstream. Mr Hook also made note of the Acequia Madre headgate at the bend on East Alameda and how being the last in line impacts the delivery to their headgate, ie. the carriage water required to get the allotted flow to the point of diversion.

Commissioner Carey asked Mr Hook to go over the Acequia Muralla, how much water rights does the acequia have? Mr Hook: 11 acres for the entire season; they usually take less than 1 cfs once a week. Mr Carey: How many parciantes does the acequia have? Mr Hook: I'm not sure, it mostly serves folks living off Camino Pequeno.

Commissioner Price asked about the users of e; do the parciantes have individual gates that bring water onto their property, or do they pump it? Commissioner Montoya responded that parciantes have all the above, they have gates and or pumps and often folks without water rights will pump water from the Acequia Madre when it is flowing and will steal water. The hardest part is finding the "straws" taking water from the ditch. 6 miles of the Acequia Madre has zero parciantes on it, but folks pull from it regardless. Ultimately, it is up to the user if they want to take the water or not. If they don't take the water or don't use all of it, it gets returned to the ditch.

Ms Isaacson then asked Commissioner Montoya to speak to the Acequia Madre and its location through town as she acknowledged that a lot of Santa Feans don't know where the Acequia is. They know about the Acequia Madre, its cultural importance, but not its route through town. Mr Montoya then went on to describe its path through town to Henry Lynch Rd. Mr Montoya made note that it is almost impossible to get water all the way to his property at the end of the ditch. Miche Garcia, a long-time Acequia Madre Association member gave the River Commission some anecdotes of being a child along the Acequia and helping her father and other parciantes maintain the ditch. Ms Garcia

also described the Acequia as the Upper and Lower ditch and said that the Upper ditch is really where most of the water is delivered and used. The return flow to the river is behind the Indian School.

Ms Isaacson used this as a segue into the sub-committee discussion by posing the idea of an Acquia Madre Historical Preservation project that would highlight and bring attention to the Acequia and provide signage or some sort of demarcation of the ditch through town. Perhaps even a storymap or virtual tour of the Acequia.

Before wrapping up this item, Ms Isaacson and Mr Hook review the itinerary for the field trip on August 15th. Detailing the tour starting at the Randall Davey Audubon Center and ending at the confluence of the Cerro Gordo return flows to the Santa Fe River.

7. DISCUSSION AND ACTION ITEMS

- a. River Commission Subcommittee Updates (Zoe Isaacson, Staff Liaison, zrisaacson@santafenm.org)

Ms Isaacson gave an update on Two Mile Pond, that the City's monitoring and data collection is on-going. The second quarterly report is forthcoming and will be available to the public once the report is finalized.

- b. River Commission Goals (Zoe Isaacson, Staff Liaison, zrisaacson@santafenm.gov)

Ms Isaacson began the conversation by suggesting that the River Commission consider developing a storymap for the Acequia Madre. Ms Isaacson went on to describe the types of projects that previous Commissions had discussed in the past. However, because some Commissioners were not present, Ms Isaacson requested that Commissioners begin thinking about projects and send ideas directly to her so she could begin compiling a list. At the next meeting they will dedicate time to ranking and then deciding on the top two or three projects.



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Commissioner Price asked about a vegetation monitoring and the opportunity to engage schools. Ms Isaacson mentioned the SFWA has school curriculum that could possibly be added to to incorporate a vegetation monitoring protocol, but that is not something Ms Isaacson could do on her own. Ms Isaacson did however mention the potential to use UNM grad students to some of this monitoring work and would be interested in exploring this further. A brief discussion continued how to utilize folks less knowledgeable with plant identification to do monitoring, such as focusing on canopy/ground cover rather than species. Ms Isaacson mentioned also that schools do currently have several reaches of the River Adopted, so perhaps they could help monitor and a higher-level monitoring protocol be developed to bring this into their curriculum.

Ms Price also mentioned educating the public on invasive species. She noted that she has neighbors that water invasive elms, while the City is making efforts to eradicate them along the River. She would like to help educate the community so we're all fighting the same fight. To this Ms Isaacson posed the idea of developing a quick flip book that helps identify invasive species that you find along the river that also encourages folks to spend 10 minutes on their evening walk to pull weeds.

Commissioner Riesterer asked how much time they should spend on these projects and how that would work. Ms Isaacson: that depends on the group. We can carve out an hour at each meeting to do breakout sessions, or you can meet on your own. But remember that the expectation is that each commissioner volunteers four hours per month to the Commission. Commissioners also asked about how the information would be shared. Ms Isaacson said that since they are subcommittees with 3 people, they can avoid the Open Meetings Act and work together without the same restrictions. Ms Isaacson began the conversation by suggestion that the River Commission consider developing a storymap for the Acequia Madre. Ms Isaacson went on to describe the types of projects that previous Commissions had discussed in the past. However, because some Commissioners were not present, Ms Isaacson requested that Commissioners begin thinking about projects and send ideas directly to her so she could begin compiling a list. At the next meeting they will dedicate time to ranking and then deciding on the top two or three projects.



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8. MATTERS FROM STAFF

Bill Schneider of the Water Division joined the meeting and encouraged the River Commission to look at water quality; Mr Schneider suggested working with high schools to establish testing locations and work with students to collect samples. Ms Isaacson said that sampling can be difficult because of availability of samplers and the requirements for sample storage and testing. Mr Schneider suggested there are ways to deal with this, and Mr Carey spoke to the idea of perhaps limiting the analytes to those that don't cold storage or to those that can be preserved for longer periods.

Mr Scheider also mentioned that he hopes the River Commission can focus on the downstream reaches; he stated that the upper reaches have for a longtime had the monopoly on the Commission's efforts and the downstream extents should be considered.

Ms Isaacson mentioned that Mr Schneider is heavily involved with the Reuse Pipeline Project and Aquifer Storage and Recovery and would be back to discuss both of these in due time.

9. MATTERS FROM THE PUBLIC

10. MATTERS FROM THE COMMISSION

11. NEXT MEETING: August 15 2024

12. ADJOURN

Persons with disabilities in need of accommodations, contact the City Clerk's office at 955-6521, five (5) working days prior to meeting date.

Meeting was adjourned at 8:01 PM

Zoe Isaacson

Liaison

Chair



MINUTES

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OCTOBER 10, 2024
6:00 PM
VIRTUAL MEETING

1. **CALL TO ORDER**

2. **ROLL CALL**

Members Present:

Chair Heidi Klingel
Santa Fe County Commissioner Anna Hansen
Voting Member Patrick Smyth
Member Bill Carey
Member Eric Montoya
Member Lauren Price
Member Jim Riesterer
Member William Hutchinson

Members Excused:

Voting Member Jacob Lyon

Others Attending:

None

3. **ROLL CALL**

4. **APPROVAL OF AGENDA**

MOTION: Santa Fe County Commissioner Hansen moved, seconded by Member Hutchinson, to Approve the Agenda as Presented.

VOTE: The motion was approved on the following Roll Call vote:

For: Chair Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Member Carey, Member Montoya, Member Price, Member Riesterer, Member Hutchinson

Against: None

Abstain: None

5. APPROVAL OF MINUTES

- a. Approval of the August 8th, 2024 Meeting Minutes

MOTION: Santa Fe County Commissioner Hansen moved, seconded by Member Hutchinson, to Motion to Table this Vote Until December 12th Meeting until the August 8th, 2024 Minutes Can be Amended as Presented Due to an Error in the Transcription.

VOTE: The motion was approved on the following Roll Call vote:

For: Chair Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Member Carey, Member Montoya, Member Price, Member Riesterer, Member Hutchinson

Against: None

Abstain: None

6. COMMUNICATIONS FROM OTHER AGENCIES/COMMITTEES

- a. Santa Fe Watershed Association Update (Amara May, Director of Stewardship and Outreach, amara@santafewatershed.org)

Mori Hensley, Executive Director of the Santa Fe Watershed Association, gave a debrief on the successes of the Fall Watershed Fest and also discussed the lessons learned from this year's events.

Ms Hensley discussed ongoing workshops and volunteer cleanup efforts.

Ms Hensley took the opportunity to speak to the fact that some of our arroyos and reaches of the Santa Fe River are becoming untenable for volunteers to clean as they are becoming inundated with bio hazards. This has been an alarming trend for volunteers especially for younger volunteers and or folks who are unfamiliar with this type of use. The SFWA is thinking about tailoring their cleanups base on the demographic of the volunteers as some areas may be unsuitable for certain volunteers.



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Commissioner Hansen asked if there are any lessons learned with our pet waste campaigns and if any could apply to the messaging regarding human-based bio hazards. Ms Hensley pointed out that human waste is very different from pet waste and the systemic issues that force humans to use outdoor bathrooms are very different.

Commissioner Carey asked if consideration has been given to port a potties at the new trail head at Siler. Ms Isaacson mentioned that port a potties have been used in the past, however, these have been liabilities as folks push them into the river, set them on fire or vandalize them in other ways. However, they may be a viable option in reaches outside of the downtown area.

Mr Hook asked if there are any hot spots along the River? Ms Isaacson mentioned that there are know hot spots that the Park Rangers make sure to visit more frequently than other reaches. This is a constantly evolving issue as when folks get displaced from one area, they are forced to relocate to another area.

This sparked a great conversation concerning the larger issue of the un-housed in our community and how we can hopefully use these experiences as a conduit to broaden the conversation and hopefully build connection to bring various community groups and nonprofits together. In the meantime, Mori will continue to work with the City's Park Rangers and River and Watershed Section to ensure volunteer safety and continue this discussion on how we can work together to affect change.

7. INFORMATIONAL ITEMS

Alan Hook discussed issues with the transducer below Nichols Reservoir that is currently offline. Water Utility does not seemed interested in replacing it, Alan Hook is urging the Commission to support replacing the transducer.

8. DISCUSSION AND ACTION ITEMS



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- a. Formation of Subcommittees: Determining Projects and Assigning Groups (Heidi Klingel, Santa Fe River Commission Chair, heidiklingel@hotmail.com)

Ms Isaacson presented the subcommittee goals spreadsheet with the rankings of each commissioner. The idea is to have three commissioners on each subcommittee to avoid violations to the open meetings act; if there is a project that a commissioner feels strongly about, they are welcome to work on a project by themselves, although it is encouraged to work in groups. Once subcommittees are assigned, the expectation is that each commissioner spends about four hours a month in service to their project. The Commission can decide to set aside a half-hour to hour of each meeting to regroup and collaborate with their subcommittee.

Chair Klingel mentioned that there seemed to be a common thread between the highest ranked and ongoing projects of the Commission that includes climate change and resiliency. Topics such as stormwater capture and infiltration, aging infrastructure, and invasive species vs. native species were highlighted.

Ongoing Projects include: continuation of the Two Mile Pond subcommittee, updates to the existing Stormwater StoryMap, finishing touches to the leading edge model, river stewardship/cleanup of Louis Montano Park reach.

New subcommittee focus areas include: Hillslope erosion and protection strategies, water quality testing and monitoring, grant writing and identifying funding sources, plant species identification/native vs non-native; ethnobotany, more robust participation at the Love Your Watershed Day (outreach with kids, design fun activities, scavenger hunt, etc.), StoryMap of the history and development of the SF River over time with QR codes in the field so individuals could take a self-guided tour, the history of the Acequia Madre mapping and signage, and mapping stormwater infrastructure to help build out the City's database.

The River Commission will look at the final list of potential subcommittee focus areas and come prepared to join a subcommittee at the next meeting.

9. MATTERS FROM STAFF

- a. River Talks 2024 Debrief (Zoe Isaacson, Staff Liaison, zrisaacson@santafenm.gov)

Over 150 participants, using libraries as venues proved successful at recruiting and accommodating participants.

10. MATTERS FROM THE PUBLIC

John Buchser form River Commission Chair, was unable to attend the meeting but presented a letter urging the Santa Fe River Commission to champion the Closson Street Bridge removal and replacement. He stated that this is a needed crossing for the local community and the City should replace it as soon as possible.

Neil Williams attended this meeting and introduced himself to the Commission as a former member of ther River Taskforce, local longtime resident and retired PE that is especially concerned with the Santa Fe River.

11. MATTERS FROM THE COMMISSION

- a. Modeling the Santa Fe River's Leading Edge (Pat Smyth, Santa Fe River Commission, pat@2ndnaturewater.com)

Commissioner Smyth demonstrated the leading edge model that he and Chair Klingel have been working on. The model uses data captured in several years of studying the the seepage rates of the Living River releases from the Santa Fe River and tying this information geospatially to how far down the channel remains saturated with surface flows. This information can help inform the public on how far downstream they can expect to see a wetted river channel based on the Target Flow Hydrograph. Another element to this model is to bring in the SFWA's leading edge data to track in real time, the leading edge.

- b. Notes from the Water Conservation Committee Presentation (Heidi Klingel, River Commission Chair, heidiklingel@hotmail.com)



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Chair Klingel reported on her presentation at the Water Conservation Committee meeting. Take aways from that meeting included, the idea of partnering to educate the community of the appropriateness Siberian Elms and the importance of promoting biodiversity within our community, riparian ecology and the use of green stormwater infrastructure in helping reduce the dependency on potable water for vegetation establishment.

12. **NEXT MEETING: December 12 2024**

13. **ADJOURN**

Persons with disabilities in need of accommodations, contact the City Clerk's office at 955-6521, five (5) working days prior to meeting date.

Liaison

Chair

Extend the Living River
Reduce Flood Risk
Improve Acequia Flows
Preserve Wildlife Habitat

NEIL WILLIAMS, PE
FEBRUARY 6, 2024

My Background

NM PE # 8309

1995 Co-Chair City River Task Force & River Corridor Master Plan,

1995 City Wastewater Task Force

1997 Board Member SF Watershed Association

2000 Stream / Aquifer Interaction Study

2000-2006 Adopt the River Sponsor

2000 - 2012 Nichols, St Francis & Ricardo stream gages,

2000 La Bajada stream stage gage

2002 Acequia Surveys of San Juan Basin for ISC

2000 – 2006 Paired Basin Monitoring Study

2007 Alire to Frenchy's Channel Restoration Design

2008 Fish Habitat Study Nichols to Two Mile Pond

2011 Aztec Springs Hydrologic Analysis,

2011 Restoration Channel Design and Flood Analysis

2011 Bathymetric Surveys Nichols & McClure Reservoirs

2012 Greenways Conceptual Designs Siler to WWTP

2012 Bishop's Diversion Boulder Drop

2013 Arroyo Chamiso Channel Protection

2013 Restoration Channel Stream Monitoring

2022 Brother's Lane Rain Garden

2009 – present Parciente of Acequias de Llano San Juan, Taos Co.

At sale in 1994 PNM and City Agreed to Share the Cost of:

Sources:

- OSE Dam Safety Bureau files
- City/PMN Purchase Agreement
- Dam Breach 404 Permit Plans
- Dr. Richard Heggen, PE, PHD

1. A bridge bridge at Cerro Gordo Rd to replace the dangerously undersized culvert.
2. Close the Bypass ditch to river flows.
3. Restore all river flows, including floods, to the natural channel via the beaver pond wetlands and Two Mile Pond
4. Remove the concrete flood weir.
5. Restore the Acequia Cerro Gordo to it's historic pre-Two Mile Dam location on the N side of the river.

What Happened ?

WADING DISCHARGE MEASUREMENTS

Gage Below
Nichols Reservoir



Stream Gaging

Paige Grant
Downloading
Data
at Gage Below
Nichols Reservoir



Stream Gage

Restoration Channel
flowing toward
Old Stone Dam
2012



Stream Gage

Above St.
Francis Dr



Stream Gage

Ricardo Road
August 24, 2000

890 cfs



Stream Gage

2005 USFS La Bajada Abandoned Uranium Mine



PAIRED BASIN STUDY
2001 - 2006

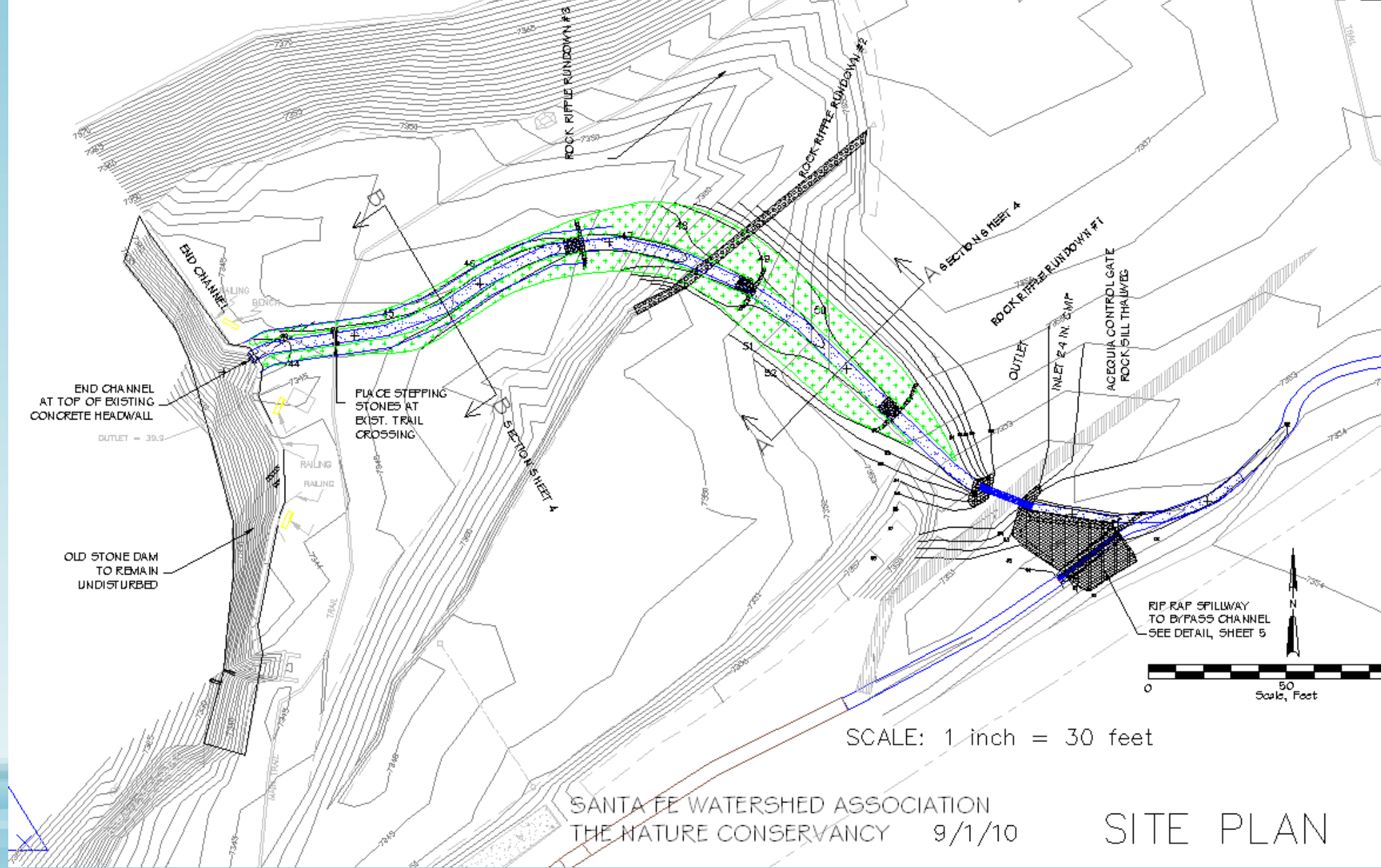
CREEK RESPONSES TO THINNING AND
BURNING

- FLOWS
- TURBIDITY
- TEMPERATURE
- CONDUCTIVITY
- RAINFALL



Restoration Channel Design 2010

Approved
by:
CITY
OSE
NMED
ACOE



2012 RESTORATION CHANNEL CONSTRUCTION



Bob Findling,
The Nature
Conservancy



Steve Carson,
Rangeland
Hands





**Dr. Jerry Jacobi,
River Commission**

RESTORATION CHANNEL

April 17, 2012

**FIRST LIVING RIVER FLOWS
OVER OLD STONE DAM**

RESTORATION CHANNEL

JUNE 2012

LIVING RIVER FLOWS



RESTORATION CHANNEL

July 2012

LIVING RIVER FLOWS
OVER STONE DAM

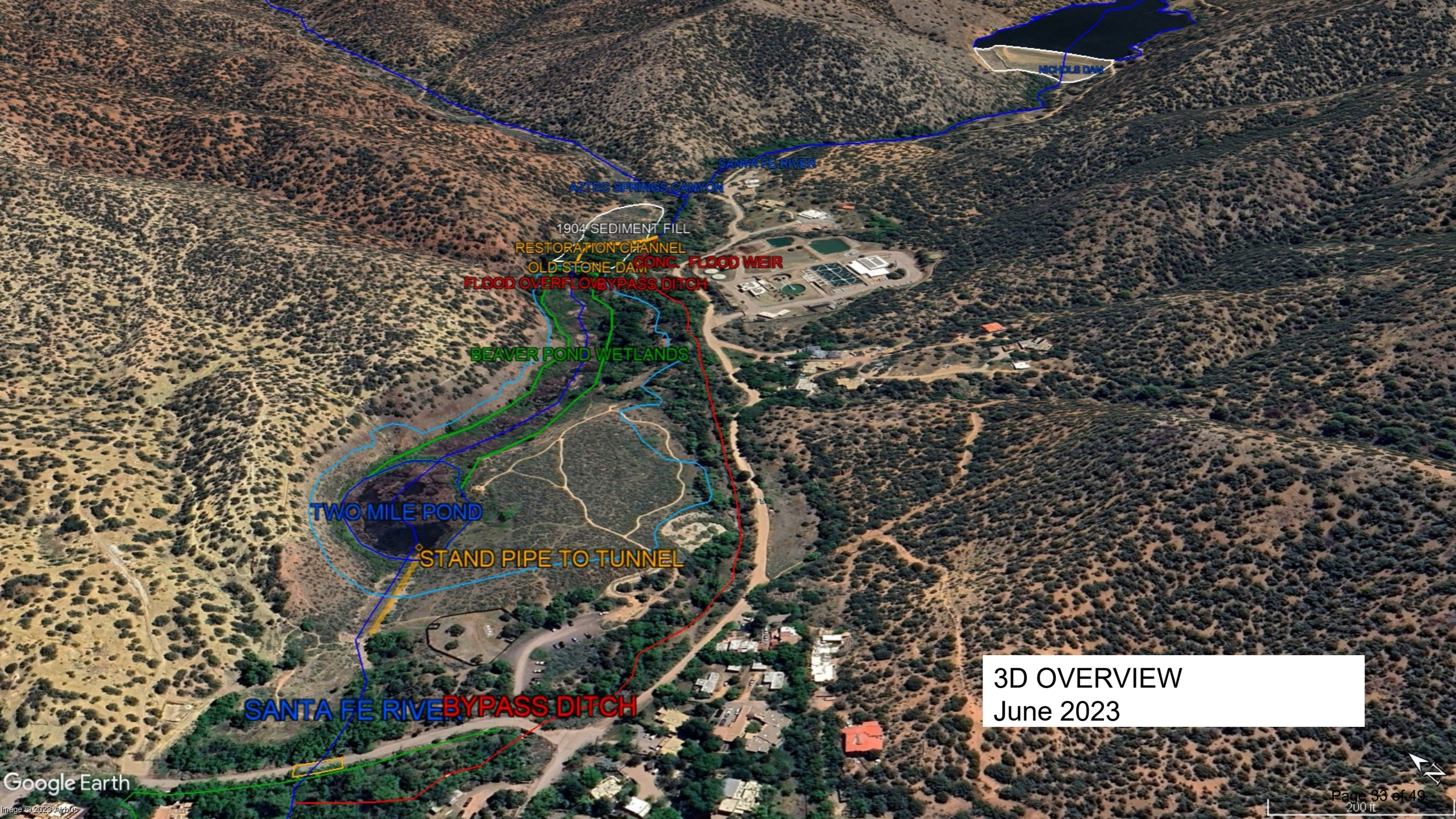


RESTORATION CHANNEL

July 2012

LIVING RIVER FLOWS
OVER STONE DAM





NICHOLS DAM

SANTA FE RIVER

AZTEC SPRINGS CANYON

1904 SEDIMENT FILL

RESTORATION CHANNEL

OLD STONE DAM

CONG. FLOOD WEIR

FLOOD OVERFLOW BYPASS DITCH

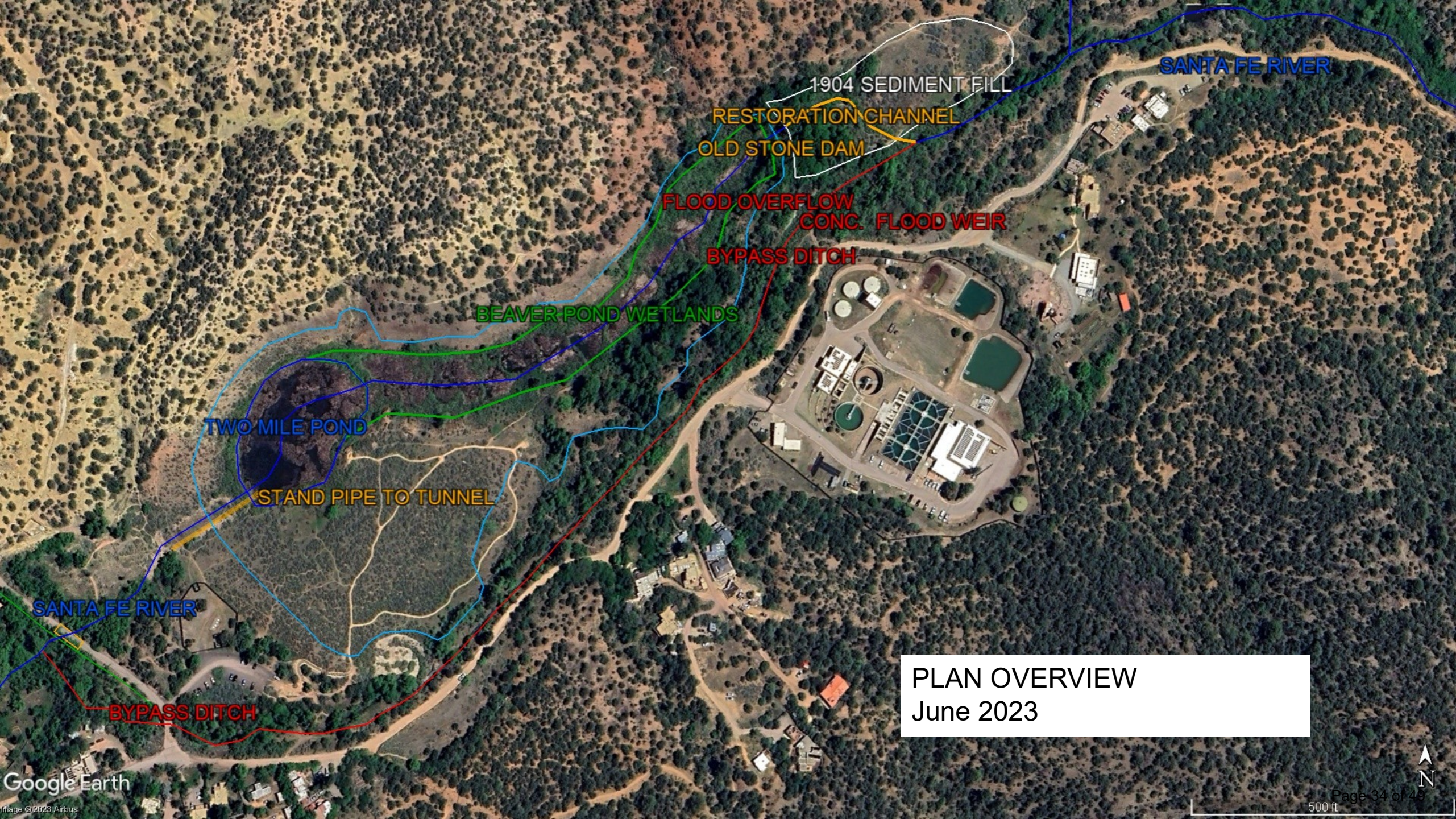
BEAVER POND WETLANDS

TWO MILE POND

STAND PIPE TO TUNNEL

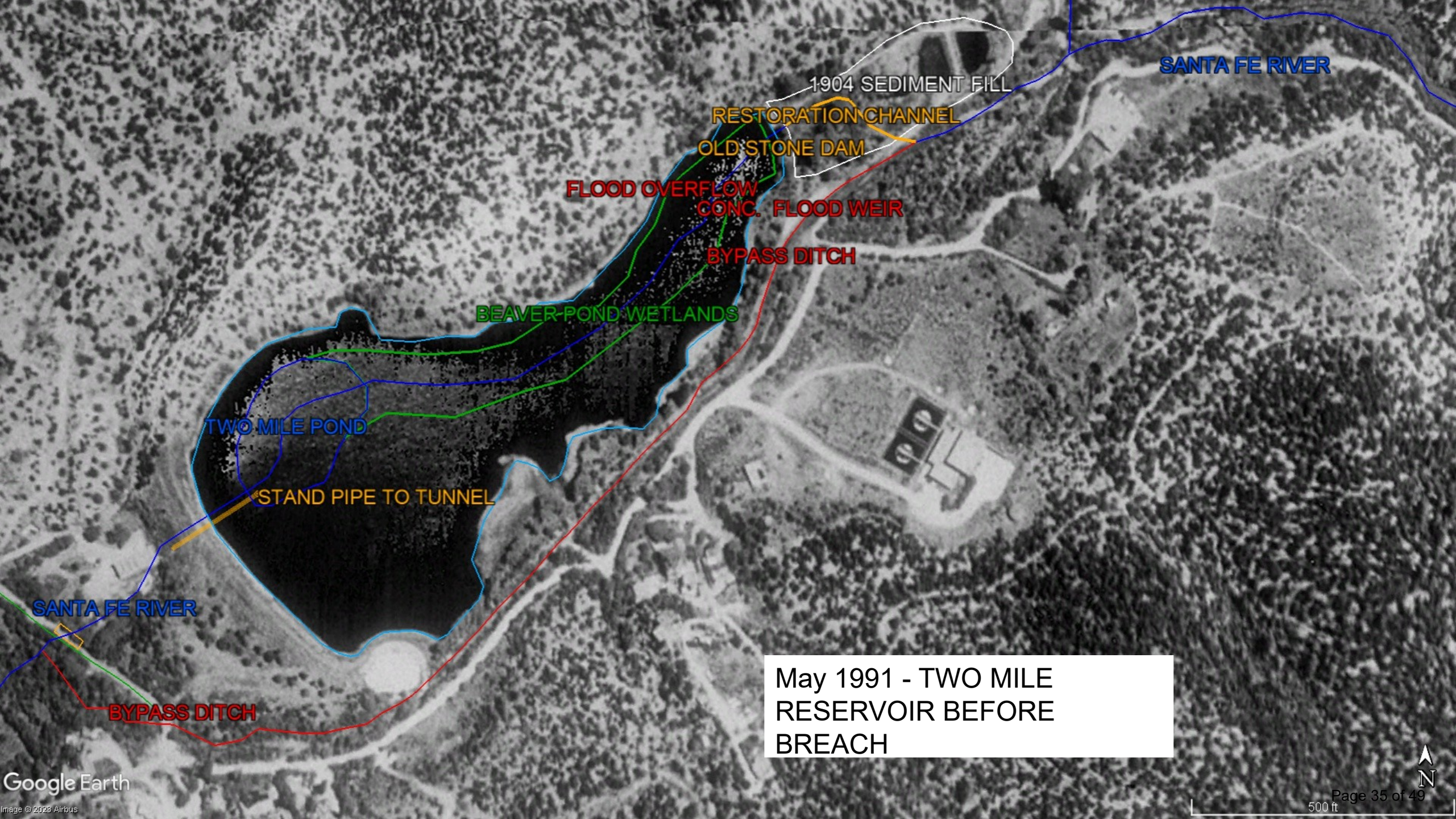
SANTA FE RIVER BYPASS DITCH

3D OVERVIEW
June 2023



PLAN OVERVIEW
June 2023





SANTA FE RIVER

1904 SEDIMENT FILL

RESTORATION CHANNEL

OLD STONE DAM

FLOOD OVERFLOW
CONC. FLOOD WEIR

BYPASS DITCH

BEAVER-POND WETLANDS

TWO MILE POND

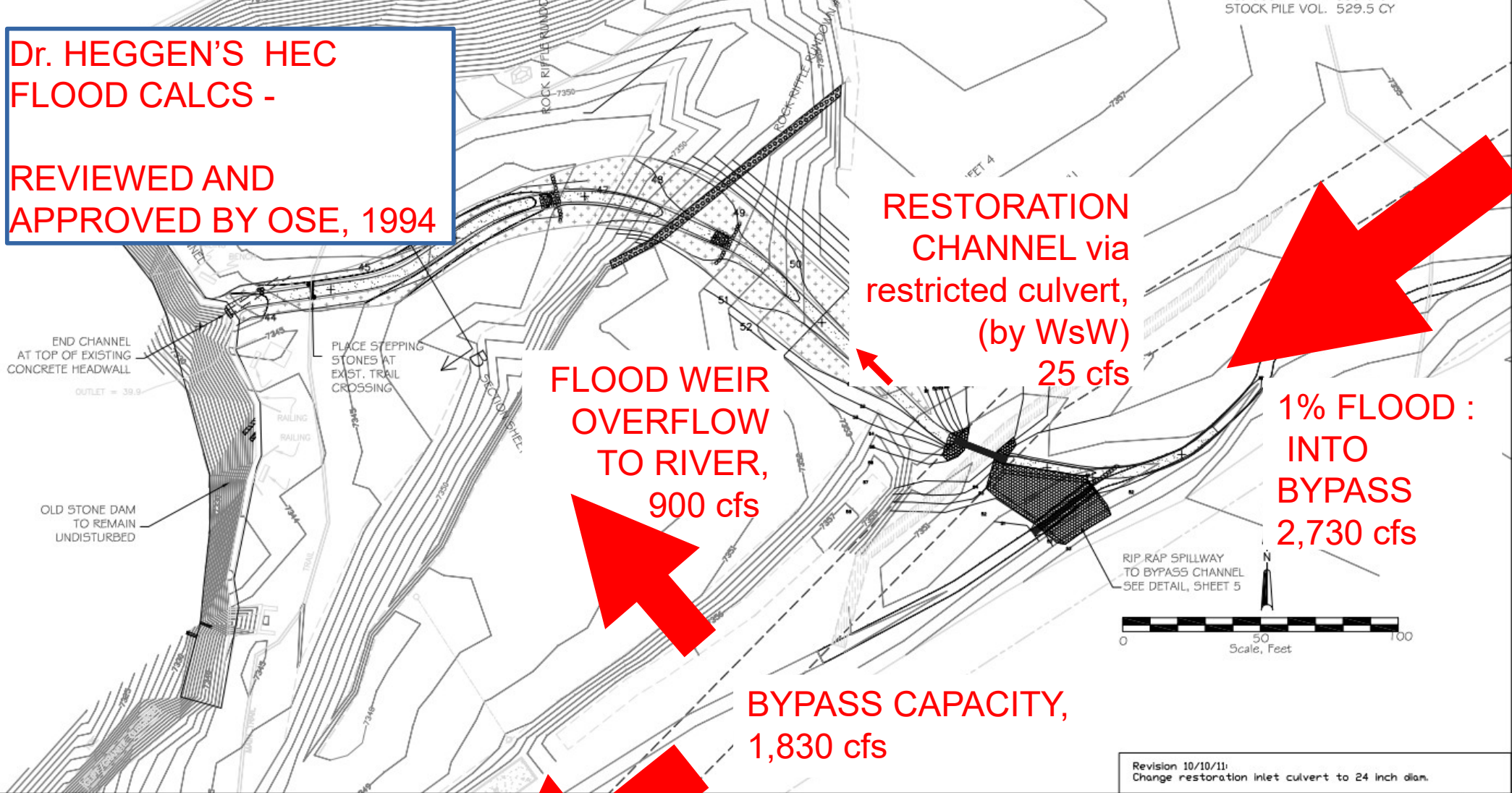
STAND PIPE TO TUNNEL

SANTA FE RIVER

BYPASS DITCH

May 1991 - TWO MILE
RESERVOIR BEFORE
BREACH

**Dr. HEGGEN'S HEC
FLOOD CALCS -
REVIEWED AND
APPROVED BY OSE, 1994**



WATERSHED WEST

ENGINEERING - HYDROLOGY - RESTORATION
1288 Lejano Lane, Santa Fe, NM 87501
Tel: 505.982.5180 FAX: 505.982.9208
Website: www.watershedwest.com

RIVER RESTORATION ENGINEERING, LLC

10000 Guline st NW Albuquerque, NM 87107
505-344-3315 FAX: 505-344-0698
Website: www.riverrestoration.com

Revision 10/10/11:
Change restoration inlet culvert to 24 inch dian.

SANTA FE RIVER RESTORATION
AT OLD STONE DAM, SANTA FE, NM

RESTORATION PLAN

Scale: 1 INCH = 16 FT 10/10/11

Sheet
2
of
6

Bypass Ditch Cleaning in 1972

Photo source OSE
Dam Safety Bureau



An Efficient Channel for Acequia Delivery

Narrow,
Clear of
vegetation



The Bypass Channel Today



Tree growth clogs the Bypass and will cause major flood water to spill over the concrete weir here.





SANTA FE RIVER

AZTEC SPRINGS CANYON

1904 SEDIMENT FILL

RESTORATION CHANNEL

OLD STONE DAM

CONC. FLOOD WEIR

BYPASS DITCH

FLOOD OVERFLOW

BYPASS FLOOD OVERFLOW

Google Earth

Image © 2023 Airbus

100 ft



FLOOD ZONES - Nichols to Cerro Gordo Rd

Santa Fe County
GIS Flood Zone
Mapping 2023

Note: TM Reservoir
area still shows 30
years after breach.



THE BYPASS DITCH LEAKS

Bypass seepage ranged from -0.5 cfs at base flow up to -1.75 cfs during acequia deliveries

Average Measured Loss - 0.304 cfs

THE NATURAL CHANNEL GAINS

Natural channel below Two Mile pond flowed from +0.3 to +0.5cfs from infiltration without any river input

Average Measured Gain+ 0.320 cfs

JSAI

All loss occurs in Bypass Channel

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Table 6. Water budget for the Santa Fe River from below Nichols Reservoir to below Two Mile Pond, July 23, 2018 to March 16, 2019

component	station	average flow (cfs)
inflow	below Nichols river station	0.527
midpoint	Stilling Well A bypass station	0.458
outflow	Stilling Well B bypass station	0.154
outflow	TNC Restoration Channel return below Two Mile Pond	0.320
net loss		0.053

**John Shomaker Assoc. Inc.,
June 30, 2019 Monitoring
Results, – Table 6 , p26**

POND SIZING: IF POND IS EXCAVATED TO A UNIFORM 6 FEET DEEP

1.6 ACRE MAX WATER SURFACE

6 FEET DEEP, 3:1 SIDE SLOPES

8.5 ACRE FEET TOTAL VOLUME

ACEQUIA RELEASES :

ACEQUIA DELIVERY = APPROX. 3.5 ACRE FEET/ WEEK
(99 AF/Y, 28 WK SEASON)

DRAWDOWN ON ACEQUIA RELEASE DAYS - APPROX. 2.5 FT

POND INFLOWS :

NICHOLS ACEQUIA TRANSFERS = APPROX. 3.5 ACRE FEET/ WEEK

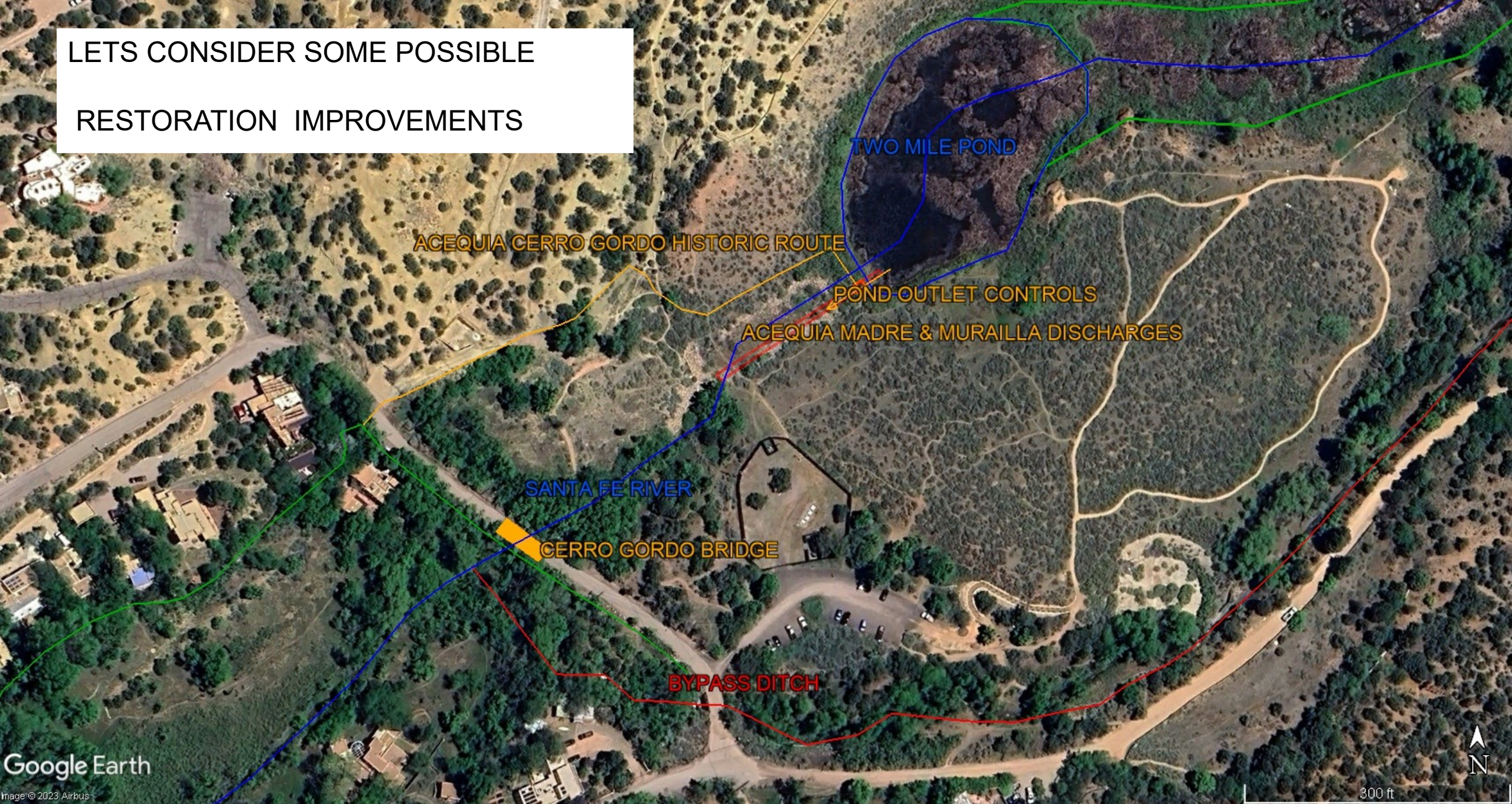
NATURAL INFLOW = APPROX. 4.2 ACRE FEET / WEEK (0.3 CFS)

LIVING RIVER INFLOW = VARIES



EXISTING POND SPILLWAY
WAS ENGINEERED FOR
1% FLOOD - 2,700 cfs

LETS CONSIDER SOME POSSIBLE RESTORATION IMPROVEMENTS



The Bypass Channel Creates Problems

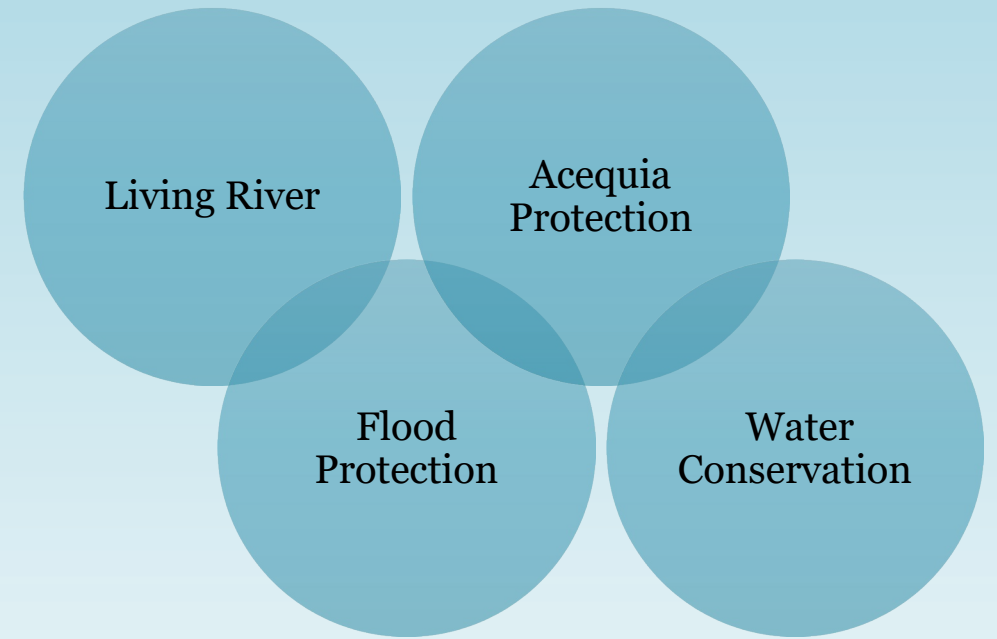
- *It had* an engineering purpose 113 years ago, but now it's a **Public Works Liability**
- The Bypass is now overgrown and clogged with trees.
- A major storm will cause the spillway to dump uncontrolled flood water upstream of Cerro Gordo Rd
- When the flood spillway overflows (as designed) it will likely flood and destroy Cerro Gordo Road and damage properties through downtown Santa Fe
- PNM and the City did not completed the bridge and other flood work recommended in their 1994 purchase agreement
- No one is responsible for Bypass maintenance - and most of it is now TNC land.
- The Bypass loses water continuously. Retiring it will save drinking water.

We need to Retire the Bypass:

- Splitting flows through two parallel half mile long channels wastes water by seepage.
- Using the Bypass means **less water** for acequias, living river flows and our municipal drinking water supply.
- The Bypass increases flood risk for the community
- Continuing to use the Bypass divides the community, without benefit to anyone.
- It's a headache for the Water Division, the Acequias, and the Public
- We're very interested in our water history - but no one loves the Bypass.
- ***Santa Fe loves its natural river !***

Solutions are on City Property

- BUILD A BRIDGE ON CERRO GORDO RD
- RETIRE THE BYPASS & ROUTE FLOWS TO THE NATURAL CHANNEL
- IMPROVE & PERMIT TWO MILE POND WITH OUTLET CONTROLS FOR ACEQUIA RELEASES
- REMOVE THE STANDPIPE & PLUG THE TUNNEL. LET THE POND OVERFLOW VIA ITS EXISTING SPILLWAY
- RESTORE ACEQUIA CERRO GORDO TO ITS HISTORIC ACCESS ROUTE ON NORTH SIDE OF RIVER
- RESTORE THE AREA BETWEEN THE POND AND CERRO GORDO RD FOR RIPARIAN VALUES AND WATER HISTORY PARK FEATURES



January 2025						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February 2025						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

March 2025						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April 2025						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May 2025						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June 2025						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July 2025						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August 2025						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2025						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 2025						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November 2025						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December 2025						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			