



AGENDA

SANTA FE RIVER COMMISSION
JUNE 13, 2024
6:00 PM
CITY OF SANTA FE TRANSIT
CENTER RM #117
2931 RUFINA ST.

PROCEDURES FOR SANTA FE RIVER COMMISSION MEETING

Written Public Comment: Members of the public may submit written comments on legislation by clicking on the comment bubble to the right of the meeting on the public portal at <https://santafe.primegov.com/public/portal> three hours prior to the start of the meeting.

The agenda and packet for the meeting will be posted at <https://santafe.primegov.com/public/portal>.

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **APPROVAL OF AGENDA**
4. **APPROVAL OF MINUTES**
 - a. Approval of the February 15th Meeting Minutes
 - b. Approval of the May 2nd Meeting Minutes
5. **COMMUNICATIONS FROM OTHER AGENCIES/COMMITTEES**

- a. Updates from the Santa Fe Watershed Association (Amara May, Volunteer Coordinator, amara@santafewatershed.org)

6. INFORMATIONAL ITEMS

- a. Farewell to Phil Bove (Heidi Klingel, River Commission Chair, heidiklingel@hotmail.com)
- b. Welcoming of New River Commission Members (Heidi Klingel, River Commission Chair, heidi.klingel@hotmail.com)

7. DISCUSSION AND ACTION ITEMS

- a. Two Mile Pond Quarterly Report (1) Findings (Steven T. Finch, Jr. CPG, PG, Principal Hydrogeologist- Geochemist, John Shomaker and Associates, Inc. sfinch@shomaker.com)
- b. Overview of the Santa Fe Watershed and Sources of Supply (Alan Hook, Water Resources Coordinator, Public Utilities, aghook@santafenm.gov and Zoe Isaacson, River and Watershed Manager, Public Works, zrisaacson@santafenm.gov)

8. MATTERS FROM STAFF

9. MATTERS FROM THE PUBLIC

10. MATTERS FROM THE COMMISSION

- a. Subcommittee Updates: River Talks 2024 & Hydrograph Modeling (River Commission Members County Commissioner Anna Hansen and Pat Smyth, ahansen@santafecountynm.gov, pat@2ndnaturewater.com)

11. NEXT MEETING: Thursday, 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.



MINUTES

SANTA FE RIVER
COMMISSION
FEBRUARY 15, 2024
6:00 PM
VIRTUAL MEETING

1. **CALL TO ORDER**
2. **ROLL CALL**

Members Present:

Member Phil Bove
Member Heidi Klingel
Santa Fe County Commissioner Anna Hansen
Voting Member Patrick Smyth
Voting Member Jacob Lyon

Members Excused:

None

Others Attending:

Zoe Isaacson, River and Watershed Project Administrator
Cassandra Katsiaficas, Clerk

3. **ROLL CALL**
4. **APPROVAL OF AGENDA**

Community member Richard Ellenberg commented about seeing the agenda item to form a subcommittee to review the applications for Commission members, stating that the Commission's members are set by the Governing Body and that he thinks the formation of that subcommittee would be inappropriate.

Staff Liaison Zoë Isaacson replied that it has been standard practice in River Commissions past for the Commission to set a subcommittee to review applications--this subcommittee goes through all applications and makes a winnowed list of people they think would be appropriate for the commission, then the Mayor reviews the list and appoints the next Commissioner. Creating the winnowed list does not prevent the Mayor from seeing all applicants and superseding those suggestions.
Dr. Jerry Jacobi nodded to confirm that the explanation was correct.

Mr. Ellenberg asked a question about the eligibility of people applying for the Commission and Ms. Isaacson clarified that living in or owning a business in the city of Santa Fe is not required to be able to be on the Commission as anyone in Santa Fe County can apply.



MINUTES

SANTA FE RIVER
COMMISSION
FEBRUARY 15, 2024
6:00 PM
VIRTUAL MEETING

MOTION: Voting Member Lyon moved, seconded by Voting Member Smyth, to approve the as presented.

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

For: Member Bove, Member Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon

Against: None

Abstain: None

5. APPROVAL OF MINUTES

a. Approval of the December 14th River Commission Meeting Minutes

MOTION: Voting Member Lyon moved, seconded by Voting Member Smyth, to Approve the December 14th River Commission meeting minutes as presented.

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

For: Member Bove, Member Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon

Against: None

Abstain: None

Amara May introduced new-hire Lorraine Chow (Stewardship & Outreach Coordinator) and shared the upcoming workshops and trainings offered by Watershed Association, including Love your Watershed Day on May 4th, 2024 in DeVargas Park, paired with a week of cleanup events leading up to the event on the 4th.

Ms. Isaacson agreed to promote the event with the help of the City's communications team.

6. COMMUNICATIONS FROM OTHER AGENCIES/COMMITTEES

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

7. INFORMATIONAL ITEMS

- a. Status Updates from Subcommittees (Zoe Isaacson, Staff Liason, zrisaacson@santafenm.gov. 505-955-6853)

1. Mapping Subcommittee: Member Pat Smyth shared a status update on the application project: in process of revamping the application and doing GIS work to better filter and visualize data about reaches, projected flow and distance of wetted river in downstream direction given an average, dry, or critically dry year. Ms. Isaacson made suggestions for a second level data analysis to determine how often the river water reaches past St. Francis, and more.

2. Two Mile Pond Subcommittee: County Commissioner Anna Hansen and Member Jacob Lyon shared about the complexity of developing possible paths forward to recommend to the City, that there are many questions awaiting more info from the OSE (Office of State Engineers), the need to rework the culvert under Serra Gordo, and more.

Chair Klingel shared an idea for the subcommittee to meet with City Councilor Alma Castro to share information about Two Mile Pond. Chair Klingel noted that the subcommittee is tracking the issues but are currently in a holding pattern due to awaiting more info from OSE and the upcoming data studies.

Ms. Isaacson shared an update on Two Mile Pond (originally scheduled to be item 8 In agenda): Ms. Isaacson shared that River & Watershed Division has submitted a Notice of Intent for the FEMA Hazard Mitigation phased grant to provide funding to address the culvert, including engineering analyses, flood analysis/capacity determination, and culvert replacement design. They may find out in next 8 months if funds are awarded. The City is also working on an update to the 2020 Hazard Mitigation Plan to ensure this project and several others qualify for funding.

Ms. Isaacson shared updates on the Ecologic and Hydrologic Studies: Steve Finch from John Shomaker and Associates (JSAI) installed one of three monitoring stations. The City has secured funding and access approvals for 3 of 6 transects for the Ecological Study, defined the scope of work and are starting the study ASAP, within the next month. All data will be made public, synthesized, analyzed

and presented at River Commission meetings which will be opportunities to give input and help refine. Changes can potentially be made after the first year of collecting data once potential gaps in data collection can be identified.

Dr Jacobi noted that the maintenance of the outlet standpipe for Two Mile Pond is one of the biggest factors to the levels of the Pond.

Ms. Isaacson stated that in order to protect the scientific integrity of the studies, the City does not want to make changes during first year of study, and expressed hopes that they can work collaboratively with the TNC, Forest Service, and City Water Department to let the system hang out for a while. Ms. Isaacson said she will advocate for City maintenance of the standpipe.

Dr Jacobi commented that in January of 2013 it was determined that OSE said a Water Right is not required for a natural riparian system. Two Mile Pond is a natural riparian system/wetland. "This was already determined, so why was the restoration channel taken out?"

Ms. Isaacson stated that these are questions for the OSE. The City did not take out the diversion to the restoration channel, the OSE sent a cease and desist. The OSE has come to River Commission meetings before, and as the staff liaison Ms. Isaacson has heard the Commissioners desire to have a direct line of communication with the OSE, and will advocate to have a meeting set up to have discussions on these issues.

Ms. Isaacson also noted that the River & Watershed Division is working on a press release and announcement covering everything just discussed, which should be sent out to the public next week.

8. DISCUSSION AND ACTION ITEMS

- a. Formation of the River Commission Applicant Recommendation Subcommittee (Zoe Isaacson, Staff Liaison, zrisaacson@santafenm.gov. 505-955-6853)

Ms. Isaacson then presented an analysis of the applicants: 34 applicants total; 17 from district 1, 6 from district 2, 0 from district 3, 2 from district 4, the rest from Santa Fe County.

Ms. Isaacson did a lot of leg work to try to get a representative from each district. "We have a good across-the-board demographic; I'm hoping that plays out to have a new member from every district that applied."



MINUTES

SANTA FE RIVER
COMMISSION
FEBRUARY 15, 2024
6:00 PM
VIRTUAL MEETING

A subcommittee of three members to review all applications and create a refined list of recommended applicants to present to the Mayor. Chair Heidi Klingel asked all Members if they had desire to be on the subcommittee and Commissioner Anna Hansen and Member Pat Smyth volunteered.

MOTION: Santa Fe County Commissioner Hansen moved, seconded by Voting Member Lyon, to Motion to create a subcommittee consisting of Chair Klingel, County Commissioner Hansen and Commissioner Smyth to review River Commission applicants and provide recommendations to the Mayor.

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

For: Member Bove, Member Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon

Against: None

Abstain: None

- b. River Commission's Continued Stewardship of the Santa Fe River Reach at Saint Francis (Heidi Klingel, River Commission Chair, heidiklingel@hotmail.com)

Heidi Klingel, Chair asked of the committee what the Commission wants to do regarding the Commission's stewardship of the river reach they have adopted from Louis Montañño Park along West Alameda down to the bridge at St. Francis over the river. Their general suggestion is to do 6 clean-ups per year, however the Commission has not been able to do so. Chair Klingel suggested tabling this project until more Members join the Commission. Amara from Watershed Association noted that even 2 clean-ups per year would be helpful.

Commissioner Hansen suggested that the Sierra Club, who adopted a nearby reach, might be beneficial to reach out to for help cleaning up the reach. Other suggestions: Clean-ups could be posted on NextDoor, there could be a subcommittee that picks a day, organizes, does outreach and makes it happen.



MINUTES

SANTA FE RIVER
COMMISSION
FEBRUARY 15, 2024
6:00 PM
VIRTUAL MEETING

Ms. Isaacson suggested that the Commission could come up with a calendar of predetermined dates so the City can help, for example: City Parks Rangers could go ahead of time and secure the area.

A community member noted that most citizens of Santa Fe don't even know that there is a River Commission and suggested that clean-ups be used as an opportunity to have more community involvement.

Member Pat Smyth noted that on Love your Watershed say this past spring, the Watershed Association had a team cleaning the river while events were going on, and suggested that it would be a good idea to do something in conjunction with this year's event.

Chair Klingel suggested someone step up to spearhead the effort around upcoming Love Your Watershed Day May 4th, and the idea is tabled until next meeting on April 18th.

9. MATTERS FROM STAFF

- a. Two Mile Pond Update (Zoe Isaacson, Staff Liason, zrisaacson@santafenm.gov, 505-955-6853)

To facilitate ease of understanding in conversation, this item was discussed during the Subcommittee sharing time.

10. MATTERS FROM THE PUBLIC

Community member, Lisa Farrand, asked about public accessibility to the river section from St. Francis to Camino Alire, noting the good water flow but steep and densely vegetated area to walk down.

Ms. Isaacson stated that there are access points to the river nearby that are less steep, and that the City's Parks and Open Space Division would not be able to increase management or maintenance due to staffing shortages and the policy of not putting trails in Open Space, as the City already maintains the river trail.

11. MATTERS FROM THE COMMISSION

Commissioner Hansen asked about the previously scheduled election for Vice Chair of the



MINUTES

SANTA FE RIVER
COMMISSION
FEBRUARY 15, 2024
6:00 PM
VIRTUAL MEETING

Commission. Chair Klingel noted that this has been tabled until there are new commissioners present. Ms. Isaacson stated that if Commissioners desire, it can be added to the agenda for the next meeting on April 18 at 6pm, which will also be about the annual approval of the Hydrograph, monitoring results if there is data to present, and welcoming any new members who are present.

12. **NEXT MEETING: April 18 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



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

1. **CALL TO ORDER**

2. **ROLL CALL**

Members Present:

Member Phil Bove
Chair Heidi Klingel
Santa Fe County Commissioner Anna Hansen
Voting Member Patrick Smyth
Voting Member Jacob Lyon

Members Excused:

Member Vanessa Springer
Member Emile Sawyer
Member Rachel Kullman
Member Andrew Black
Member Susan Coulter
Voting Member Daniel Spivak
Voting Member Andrew Erdmann
Voting Member Michael Gonzales

Others Attending:

Zoe Isaacson, River and Watershed Project Administrator
Cassandra Katsiaficas, Clerk

3. **ROLL CALL**

4. **APPROVAL OF AGENDA**

MOTION: Voting Member Lyon moved, seconded by Voting Member Smyth, to Approve the agenda as presented.

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

For: Member Bove, Chair Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

Against: None

Abstain: None

5. APPROVAL OF MINUTES

- a. Approval of the February 15th, 2024 Meeting Minutes.

MOTION: Voting Member Lyon moved, seconded by Voting Member Smyth, to Postpone approval of February 15th meeting minutes until next meeting (June 13th) due to technical issues with downloading from the PrimeGov public portal.

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

For: Member Bove, Chair Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon

Against: None

Abstain: None

6. COMMUNICATIONS FROM OTHER AGENCIES/COMMITTEES

- a. Santa Fe Watershed Association Update (Amara May, Program Coordinator, Santa Fe Watershed Association amara@santafewatershed.org)

Amara May and Mori Hensley presented updates about the upcoming Love Your Watershed Day on Saturday, May 4, with interactive activities that will educate the community on the river, riparian health, stewardship and sustainability. Activities include music, yoga, arts and crafts and more. The LYWD Cleanup had 6-7 groups signed up so far – of steward team members and Public constituents.

They also presented on the successful launch of the Leading Edge Survey, a community project to track the leading edge of flow in the river channel, with hopes of getting the community more involved in

understanding the Living River. Info is on their website, and the survey is easy to use: you don't need an account, and can use a smartphone or browser. Participants would drop a point at the leading edge of the river, where there's a continuous ribbon of flow, helping track where the river is reaching.

7. DISCUSSION AND ACTION ITEMS

- a. Approval of the 2024-25 Target Flow Hydrograph of 1,000 Acre Feet (Alan Hook, Water Resources Coordinator, City of Santa Fe Water Division, aghook@santafenm.gov, (505) 955-4205)

Alan Hook, Water Resources Coordinator, City of Santa Fe Water Division presented this year's Target Flow Hydrograph for approval by River Commissioners.

Heidi Klingel, Zoë Isaacson, and Alan Hook had a prior meeting to develop the 2024-2025 living river hydrograph based on on this years snow pack and snow melt projections. The draft hydrograph reduced peak flows and added extra volume to the mid-season base flow during hotter, drier months. This will help channel saturation and move more water further downstream.

This was presented to the River Commission, much discussion ensued including the information that the San Isidro River Blessing will be on May 19th, which created a need to shift the Hydrograph to accommodate the event. If the channel is wet, the minimum pulse flow required to reach to San Isidro is 6 CFS for about half a day. Also in this discussion, Alan Hook explained how water flow is logistically carried out throughout the city, and briefly described the construction project at Nichols Dam.

Commissioner Jacob Lyon asked about the snow pack this year and if that informs how we should approach this year versus last year. Alan Hook responded that this year the way the run off is hovering barely above the 50% median whereas last year there was a lot of water coming in all at once. This year we don't have the same volume of water, we are hovering above median inflow even though snow pack is about 100% of the 30yr median. 2024 is a good year for snow pack but not going to be like 2023.



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

After much discussion, the River Commission concluded to shift the projected graph up one week with an additional pulse of 6-7CFS to meet the San Isidro Blessing event on May 18th & 19th, at the cost of 4cfs for a week July 1-July 7, making the early July pulse smaller.

From 1CFS, up to 7CFS for May 19, down to 3CFS until early June peak of 5CFS, back to 3cfs, and other pulse of 5CFS starting July 1, which drops off again to 3 CFS and holds through august, drops again until September 1.

* After this meeting concluded, it was relayed to the Commission that the San Isidro Blessing is now scheduled for May 12th. The Commission approved via an email vote the Amended 2024-2025 Living River Target Flow Hydrograph to accommodate the Blessing on May 12, 2024 with a short duration pulse of 7 cfs.

MOTION: Santa Fe County Commissioner Hansen moved, seconded by Voting Member Lyon, to Approve the 2024-2025 Living River Target Flow Hydrograph as amended.

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

For: Member Bove, Chair Klingel, Santa Fe County Commissioner Hansen, Voting Member Smyth, Voting Member Lyon

Against: None

Abstain: None

- b. Subcommittee Updates (Heidi Klingel, River Commission Chair, heidiklingel@hotmail.com)

River Commission Chair Heidi Klingel presented from the Two Mile Pond subcommittee: the committee has been in a holding pattern waiting for more information, and is excited to hear the first results of ecological studies and hydrological studies.

It is always considered a formal inquiry to approach the OSE with



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

questions, which forces the city on a path that it may not be ready to be on at this time. Our City Council needs to be prepared before initiating that conversation with the state engineer.

Zoë Isaacson shared that the City is actively monitoring the Two Mile Pond Complex hopes to make the first set of data public shortly.

The studies are active and once draft is finalized we will post it to the public. The City is also looking into how to make the public interface better, so it's synthesized and easy for the public to understand.

Zoë Isaacson also shared about the City recently submitting notice of intent for a FEMA grant for \$7.8 million that would study Cerro Gordo crossing taking into account the hydrology of the area upstream between Nichols and Cerro Gordo Rd.

River Commissioner Pat Smythe presented an update on the GIS mapping project: Demonstrated the GIS website at this stage, landmarks where the reaches reach. Data from SFWA leading edge survey will be incorporated into the model for realtime updates on the location of water in the river.

- c. Love Your Watershed Day Planning (Heidi Klingel, River Commission Chair, heidiklingel@hotmail.com)

River Commission Chair Heidi Klingel shared that the River Commission will be tabling at LYWD with flyers of the hydrograph and a QR code to the leading edge survey to help track the flow. Also a geology poster about where the living river may reach and info on the history of the Living River ordinance and River Commission.

8. MATTERS FROM STAFF

- a. River Commission Appointments Update (Zoe Isaacson, River and Watershed Manager, zrisaacson@santafenm.gov, (505) 955-6853)

Zoë Isaacson presented that the River Commission had 34 people apply to become commissioners. They have been winnowing those folks down



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

to make list of suggestions for Mayor and are trying to have everyone appointed next week at Governing Body meeting on May 8th, where 5 members are being appointed. Phil Bove will be stepping down. No applicant was disqualified for being in County versus City. Mayor looked at all the applicants.

- b. On-going and Up-Coming Projects (Zoe Isaacson, River and Watershed Manager, zrisaacson@santafenm.gov, (505) 955-6853)

Zoë Isaacson briefly presented some updates including:

Thinning projects are happening on the river with Seeds of Wisdom, removing any elm that has direct canopy conflict with native species, focusing on native stronghold biodiverse areas, and only removing invasives. Large areas have now been mulched from a dead cottonwood.

At Ashbaugh Park, thinning is completed and habitat trees have signs on them; these trees have houses and other features installed to promote use by Northern Flicker and Western Bluebird species.

Also at Ashbaugh Park – the City was awarded \$600k to overhaul the lower part of the park with the Office of Emergency Management, including a massive public outreach campaign, taking stormflows from the channel into the park, and a large scale infiltration gallery. As part of this grant, the City will be managing a large public outreach campaign at 30/60/90% design to ensure community input is received. The package is making its way through governing body, once it is approved they will be soliciting public comment.

Construction of rain gardens on Valley drive will be starting. This project will retrofit 4 bump-outs in the road into rain gardens.

9. MATTERS FROM THE PUBLIC

Dr. Jerry Jacobi inquired about what happened to Fishing Derby – the last one was in 2019. Discussion ensued about the various challenges of the event, including using a lot of water all at once, the diminishment of water resource in recent years, and that Santa Fe Watershed Associations' Love Your Watershed Day as an alternative river



MINUTES

SANTA FE RIVER
COMMISSION
MAY 02, 2024
6:00 PM
VIRTUAL MEETING

festival that brings community to enjoy and learn about the riparian habitat of the river and arroyos, without the use of water. As well as inadequacies of funding and staffing.

10. **MATTERS FROM THE COMMISSION**

11. **NEXT MEETING: May 04 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 adjourned at 8:04 PM

Liaison

Chair

MONTHLY REPORT: April 2024

To: The City of Santa Fe River & Watershed Manager

From: Santa Fe Watershed Association

Date: May 6, 2024

1413 Second Street, Suite 3

Santa Fe, NM 87505

(505) 820-1696 • fax 986-9132

amara@santafewatershed.org

www.santafewatershed.org



Santa Fe
WATERSHED
ASSOCIATION

RE: Adopt-the-River & Adopt-an-Arroyo Programs

Task 1. PLAN FOR RESTORING AND MAINTAINING ADOPTED RIVER REACHES AND ARROYOS

- ✓ 4/13/24, Amma Green Team cleaned Arroyo de los Pinos behind La Farge Library
 - ✓ 4/13/24, NM State Land Office cleaned River Reach 11
 - ✓ 4/13/24 NM State Supreme Court cleaned River Reach 12
 - ✓ 4/15/24, SF Prep cleaned River Reach 3
- CLEANUPS BELOW APPLY TOWARD LYWD COMMUNITY CLEANUP (4/23-5/5)
- ✓ 4/23/24, El Castillo Residents cleaned River Reach 9
 - ✓ 4/25/24, Desert Montessori cleaned River Reach 4
 - ✓ 4/25/24, Ras Rody cleaned River Reach 10
 - ✓ 4/26/24, United Church of SF cleaned River Reach 17
 - ✓ 4/26/24, Positive Energy Solar cleaned Arroyo Mascaras behind Burger King
 - ✓ 4/26/24, Tech 2 Solutions cleaned Arroyo Mascaras across from De Vargas Mall
 - ✓ 4/27/24, Women Who Walk on Water cleaned River Reach 7
 - ✓ 4/27/24, Lisa Farrand and Friends cleaned Frenchy's to Siler
 - ✓ 4/28/24, SF High Honor Society cleaned Arroyo de los Pinos behind La Farge Library
 - ✓ 5/3/24, Longview Asset Management cleaned Acequia Madre from Railyard Park downstream from Caboose along acequia trail
 - ✓ 5/4/24, Ten Thousand Waves cleaned Arroyo Ancha
 - ✓ 5/4/24, Rotary Club of Santa Fe cleaned River Reach 15
 - ✓ 5/4/24, Three Sisters Collective cleaned the River along Full Circle Farm and San Isidro (COUNTY)
 - ✓ 5/5/24, Heather Karlson & Bill Leeson cleaned River Reach 24
 - ✓ 5/5/24, Kierstan Pickens and team cleaned from Romero Park toward San Isidro (COUNTY)

TASK 2. COORDINATE VEGETATION MANAGEMENT IN ACCORDANCE WITH THE CITY'S COMPREHENSIVE VEGETATION MANAGEMENT PLANNING

- ✓ 4/6/24, Raingarden Maintenance Workshop at General Miles Park
- ✓ 4/13/24, Elm Thinning Workshop at Arroyo de los Pinos between St. Francis and Pacheco
- ✓ Working more regularly with the S3 Trash Pandas and the Governor's Citizen's Counsel

- ✓ Will continue steward training sessions to make sure folks are familiar with best practices when working in their adopted river and arroyo reaches

Task 3. REPORT ON STEWARDS AND MONETARY SPONSORS

- ✓ See map of all reaches/sponsors/stewards [here](#).
- ✓ As SFWA is in the process of updating the Adopt program, we are working with sponsors and stewards to see who is still dedicated to their involvement.
- ✓ We are also reassessing recruitment and retention strategies for both sponsors and stewards
- ✓ Director of Stewardship and Community Outreach, Amara May sends out sponsor invoices and renewal letters and continues approaching potential Sponsors.
- ✓ Stewardship and Community Outreach Coordinator, Lorraine Chow, is tracking Steward renewals, approaching new potential Stewards and “Angel” Volunteers, and encouraging current steward teams to clean their reaches and, occasionally, other reaches in need of a cleanup.

TASK 4. ORGANIZE AND SUPPORT TRASH REMOVAL AND VEGETATION MANAGEMENT

Reach Report for April 2024 totals for **FY 2023-24** are as follows:

	Reaches/visits	Volunteers	Trash Bags Collected	Volunteer Hours
Totals through March				
River	60	349	618	558.50
Arroyos	8	77	251	170.5
April				
River	13	80	112	139
Arroyos	8	107	288	250.5
Totals	89	613	1,269	1,118.5

The value of the volunteers' in-kind contributions in City river reaches and arroyos to date in **FY 23/24** is approximately **\$37,492.06** (1,119.5 hours @ \$33.49; see www.independentsector.org/volunteer_time).

Additional garbage removed: 120lbs of scrap metal and two shopping carts (35lbs each)

The approximate total weight of trash collected to date in **FY 23/24** is **9.52 tons** (1,269 bags * 15 lbs/bag * 1/2000 tons/lb)

TASK 5. POST SIGNS FROM ARMIJO PARK TO FRENCHY’S FIELD

MONTHLY REPORT: April 2024

To: The City of Santa Fe River & Watershed Manager

From: Santa Fe Watershed Association

Date: May 6, 2024

- ✓ We recently updated all signs and will continue regularly checking signs for wear and tear. Signs are from Cerro Gordo Road to Siler Bridge.
- ✓ SFWA continues reassessing sign installation for the arroyo reaches.

TASK 6. PROVIDE TRAINING AND EDUCATION FOR VOLUNTEERS REGARDING RIVER & ARROYO RESTORATION

- ✓ Current and upcoming steward workshops include Raingarden Maintenance, Elm Thinning, Sharps and Biohazards, and Weeding and Invasive Species Identification.
- ✓ During cleanups Amara and Lorraine attend, they speak to the volunteers about water conservation and water challenges in the Southwest.
- ✓ We are working on developing more virtual education and outreach materials.
- ✓ We created four educational videos, in both English and Spanish, that live on our YouTube channel and via our website, and will record as many steward trainings as possible to serve as evergreen resources.

TASK 7. ORGANIZE THREE ANNUAL COMMUNITY-WIDE EVENTS

- ✓ Love Your Watershed Day was on May 4, 2024. Over 250 participants at the event in the park, 139 steward volunteers for the massive cleanup, 295 volunteer hours, 5,215 pounds of trash collected.
- ✓ Our next big community clean up and event will be in September 2024

TASK 8. COORDINATE WITH CITY STAFF TO TAKE ALL ACTIONS IN COMPLIANCE WITH THE CITY.

- ✓ Amara May notifies River and Watershed Manager Zoe Isaacson and Parks Superintendent about each Steward clean-up outing to schedule trash collection. She also relays observations received from Stewards to Zoe Isaacson.

TASK 9. SEND MONTHLY REPORTS OF WORK DONE THE PREVIOUS MONTH.

- ✓ We are hereby providing report of activity for April 2024 to the City of Santa Fe River and Watershed Manager.

TASK 10. CONDUCT PUBLIC OUTREACH TO PROMOTE PROGRAMS AS WELL AS TO THANK SPONSORS AND STEWARDS. INCLUDE PRESENTATIONS TO NEIGHBORHOOD MEETINGS AND COMMUNITY EVENTS, AND MAINTAIN A WEB SITE.

- ✓ We have been using social media sites as well as volunteermatch.com and nextdoor, to thank volunteers and to recruit new volunteers for River and Arroyo Stewardship.
- ✓ We are exploring virtual ways to promote and educate the community further.

Submitted by: Amara May, Director of Stewardship and Community Outreach



City of Santa Fe, New Mexico

1st Two Mile Pond Quarterly Report Findings



03 June 2024

Background: How Did We Get Here?

Two Mile Pond, located above the Cerro Gordo crossing of the Santa Fe River, holds cultural and ecological value as a beloved remnant of a larger reservoir formed by the Two Mile Dam, which was decommissioned in 1994 due to safety concerns. Since 2009, a portion of the water from the upper watershed, up to 1,000 acre-feet, has flowed through McClure and Nichols Reservoirs as part of the "Living River" initiative. Previously, some of this water was diverted to maintain flow in Two Mile Pond. However, in 2018, the State Engineer's Office mandated a halt to surface water diversions into the pond. By spring 2023, the structure facilitating flow into the pond was dismantled, and concerns about stagnation prompted City staff to clean the outflow pipe, regulating the water surface elevation to the designated level set in 1994.

The riparian area stretching from the base of Old Stone Dam to the outflow of Two Mile Pond represents the valley's lowest point and is sustained by groundwater from river seepage and regional sources. Consequently, perennial flow through Two Mile Pond continued throughout 2023. The wetted valley, spanning over 5 acres, is expected to endure despite the suspended diversions. Notably, the open water area of Two Mile Pond is less than 1 acre.

The City of Santa Fe, in collaboration with John Shomaker and Associates, Inc. (JSAI), is embarking on a thorough evaluation of the Two Mile Pond area. This initiative includes conducting hydrologic monitoring and ecological assessments aimed at understanding ecosystem and watershed dynamics. The project involves measuring inflow and outflow at four dedicated monitoring stations, studying the pond's ecosystem, and monitoring landscape changes through the establishment of six permanent transects for ecological assessment. By leveraging this data, the City aims to develop evidence-based policies and future management strategies, ensuring the continued delivery of ecological benefits and quality of life enhancements to the community.

Summary of Findings:

The Two-Mile Pond Complex riparian area emerged after the decommissioning of Two-Mile Dam and Reservoir in 1994 and has remained relatively stable in size for the past two decades. Significant tree growth has been observed around Old Stone Dam since 2005. Soil moisture levels in the area vary, with a large extent rated as moist to wet. Stream flow at Two-Mile Pond Complex originates from groundwater discharge at Old Stone Dam, ranging from 0.16 to 0.40 cfs with an average of 0.24 cfs in the first quarter of the year. As of March 7th, 2024, the riparian area's condition is rated between "good" and "excellent," and further monthly field investigations will track changes in both biotic and abiotic metrics, expecting increased species diversity as biotic life rebounds from dormancy.



City of Santa Fe, New Mexico

1st Two Mile Pond Quarterly Report Findings



Frequently Asked Questions:

1. What is the purpose of this monitoring report?

The monitoring report aims to assess the riparian area of the Two-Mile Pond Complex. It provides insights into the current conditions, health of the system, and effects due to changes in the hydrologic regime. It presents data collected, assessment of the data, and observations to understand the current conditions and health of the riparian system.

2. Who conducted the monitoring?

The monitoring was conducted by John Shomaker & Associates, Inc. (JSAI), contracted by the City of Santa Fe Public Works Department.

3. What are the key features of the Two-Mile Pond Complex?

The Two-Mile Pond Complex includes the Restoration Channel, remnants of the Old Stone Dam and decommissioned Two-Mile Dam, and an established riparian area along the Restoration Channel.

4. What areas were monitored?

The monitoring area spans from the Restoration Channel staff gauge to the decommissioned Two-Mile Dam, focusing on the riparian area associated with the Restoration Channel and Two-Mile Pond Complex. Six monitoring transects were identified for assessment.

5. What methods were used for monitoring and assessment?

The monitoring follows standardized riparian monitoring and assessment methods described by the New Mexico Rapid Assessment Method (NMRAM) Field Guide prepared by the New Mexico Environment Department Surface Water Quality Bureau. These methods include evaluating landscape context, biotic metrics, abiotic metrics and soil moisture.

6. What does ecological monitoring cover and why is it important?

The assessment evaluates wetland condition using both remote and field-collected data, encompassing landscape context (buffer integrity, connectivity, wetland size, land uses), biotic features (relative native plant composition, invasive species cover, and native tree regeneration), abiotic metrics (physical patch diversity, channel equilibrium, stream bank stability, and soil surface condition), and soil moisture. These monitoring efforts help to evaluate the impact of changes in streamflow conditions and track the health of the riparian system, which is crucial for maintaining biodiversity and ecological balance.

7. What is the significance of the riparian area?

The riparian area is crucial for maintaining ecological balance and providing habitat. It plays a vital role in supporting biodiversity and preserving water quality in the Santa Fe River system.



City of Santa Fe, New Mexico

1st Two Mile Pond Quarterly Report Findings



8. What are the concerns regarding streamflow changes?

Changes in streamflow conditions through the Two-Mile Pond Complex, particularly due to the cessation of diversions and storage of water, may impact the established riparian system. This monitoring aims to assess any such impacts.

9. What data and information were used in the assessment?

Existing data and information, including NMED riparian habitat mapping, historical aerial imagery, and streamflow monitoring data from the Santa Fe Water Division, and site characterization data collected both remotely and, in the field, were compiled and analyzed.

10. What are NDMI and NDVI images, and how were they used?

Normalized Difference Moisture Index (NDMI) and Normalized Difference Vegetation Index (NDVI) images are utilized to determine vegetation water content, monitor droughts, and to quantify green vegetation in the area.

11. What are the main findings of the monitoring?

The riparian area is in good to excellent condition (A to B ranking) with moist to wet soils observed during the investigation. Streamflow through the complex originates from groundwater discharge at the base of Old Stone Dam.

12. What is the significance of the riparian ranking?

An excellent condition (A) riparian system indicates intact functions and processes, while a good condition (B) system may have minor disturbances or factors affecting condition.

13. What are the recommendations for future monitoring?

Monthly field investigations are recommended to assess potential changes in biotic and abiotic metrics, with a focus on observing recovering biotic life and monitoring changes throughout the investigation duration.

14. Will there be enhancements made to data collected moving forward?

Yes. Following a comprehensive review of the report by City staff, it became evident that there were opportunities for further improvement in the data collection carried out by our consultants. Consequently, a decision was made to augment the existing data parameters. In addition to the ongoing monitoring efforts, consultants will now gather fundamental water quality metrics at most transects and significantly enhance species identification efforts.

May 2024

First Quarter 2024 Monitoring Report Two-Mile Pond Complex Riparian Survey City of Santa Fe, New Mexico



*Photo by Dustin Schwartz
Two-Mile Pond, March 7, 2024*

prepared by



JOHN SHOMAKER & ASSOCIATES, INC.
WATER-RESOURCE AND ENVIRONMENTAL CONSULTANTS
505-345-3407 • www.shomaker.com

prepared for



**FIRST QUARTER 2024 MONITORING REPORT
TWO-MILE POND COMPLEX RIPARIAN SURVEY,
CITY OF SANTA FE, NEW MEXICO**

prepared by

Steven T. Finch, Jr., CPG, PG

Dustin Schwartz

Annie McCoy, CPG

Sherry Galemore

JOHN SHOMAKER & ASSOCIATES, INC.

Water-Resource and Environmental Consultants

2611 Broadbent Parkway NE

Albuquerque, New Mexico 87107

505-345-3407

www.shomaker.com

prepared for

City of Santa Fe

Public Works Department

May 17, 2024



CONTENTS

	page
1.0 INTRODUCTION.....	1
1.1 Project Background.....	1
1.2 Scope of Work.....	5
2.0 SUMMARY OF EXISTING DATA AND INFORMATION.....	6
2.1 NMED SWQB.....	6
2.2 Google Earth Images.....	6
2.3 NDMI Images.....	8
2.4 NDVI Images	8
2.5 Streamflow Monitoring.....	8
3.0 RIPARIAN MONITORING	12
3.1 March 7, 2024 Field Investigation	12
3.1.1 Landscape Context	12
3.1.2 Biotic Metrics.....	13
3.1.3 Abiotic Metrics.....	13
3.1.4 Summary Riparian Metrics Ranking.....	14
3.1.5 Soil Moisture.....	15
4.0 SUMMARY OF FINDINGS	18
5.0 REFERENCES.....	19

TABLES

	page
Table 1. Summary of the historical images for Two-Mile Pond Complex.....	6
Table 2. NMRAM scoring and ranking description.....	12
Table 3. Average scores for landscape context metrics	12
Table 4. Average scores for biotic metrics.....	13
Table 5. Average scores for abiotic metrics.....	14
Table 6. Summary of Two-Mile Pond Complex riparian area metrics ranking.....	15

ILLUSTRATIONS

	page
Figure 1. Map of Santa Fe watershed showing location of Two-Mile Pond Complex.....	2
Figure 2. Map showing location City of Santa Fe Reservoirs, Santa Fe River, and Two-Mile Pond receiving watershed.....	3
Figure 3. Landscape-scale map showing the Two-Mile Pond Complex and area of investigation on June 7, 2023 aerial photograph.	4
Figure 4. Map showing NMED SWQB defined riparian habitat zones for Two-Mile Pond Complex.....	7
Figure 5. Map of Two-Mile Pond Complex showing streamflow monitoring stations:.....	10
Figure 6. Hydrographs for First Quarter 2024 of (a) Santa Fe River next to Two Mile Pond, (b) Santa Fe River below Two Mile Pond returns, and (c) Two-Mile Pond returns (below Two-Mile).....	11
Figure 7. Map showing March 7, 2024 soil moisture distribution for the lower half of the Two-Mile Pond Complex.	16
Figure 8. Map showing March 7, 2024 soil moisture distribution for the upper half of the Two-Mile Pond Complex.	17

APPENDICES**(follow text)**

Appendix A. Historical Google Earth Images of Two-Mile Pond Complex

Appendix B. NDMI Images for Two-Mile Pond Complex

Appendix C. NDVI Images for Two-Mile Pond Complex

Appendix D. March 7, 2024 Field Investigation Forms

Appendix E. Field Photos

**FIRST QUARTER 2024 MONITORING REPORT
TWO-MILE POND COMPLEX RIPARIAN SURVEY,
CITY OF SANTA FE, NEW MEXICO**

1.0 INTRODUCTION

John Shomaker & Associates, Inc. (JSAI) was contracted by City of Santa Fe Public Works Department to provide monthly monitoring of the Two-Mile Pond Complex riparian area from the Restoration Channel staff gage to decommissioned Two-Mile Dam (Figs. 1 through 3). The monitoring area is focused on the riparian area associated with the Restoration Channel and Two-Mile Pond Complex. Six monitoring transects have been identified for assessment of riparian conditions (Fig. 1). JSAI utilized standardized riparian monitoring and assessment methods described by New Mexico Rapid Assessment Method (NMRAM) Field Guide prepared by the New Mexico Environment Department Surface Water Quality Bureau (NMED SWQB) (Muldavin et al., 2022). The NMRAM field guide provides procedures for conducting a rapid ecological assessment of wetlands and riparian areas in the Montane Riverine Wetland Subclass, that occur along unconfined mountain streams and rivers at elevations between 6,000 and 8,500 feet above mean sea level (ft amsl).

1.1 Project Background

The Santa Fe River begins in the Sangre de Cristo Mountains and flows to the Rio Grande. The Two-Mile Pond Complex is in the upper reach of the Middle Santa Fe River hydrologic system (Fig. 1). Reservoirs were established in the Middle and Upper Santa Fe River hydrologic system as a result of securing and developing water supply for the City of Santa Fe (Fig 2). The City reservoirs include:

- Old Stone Dam constructed in 1880, but silted in by 1904
- Two-Mile Dam and Reservoir constructed in 1893 and decommissioned in 1994
- Granite Point (McClure) Dam and Reservoir constructed in 1926
- Nichols Dam and Reservoir constructed in 1943

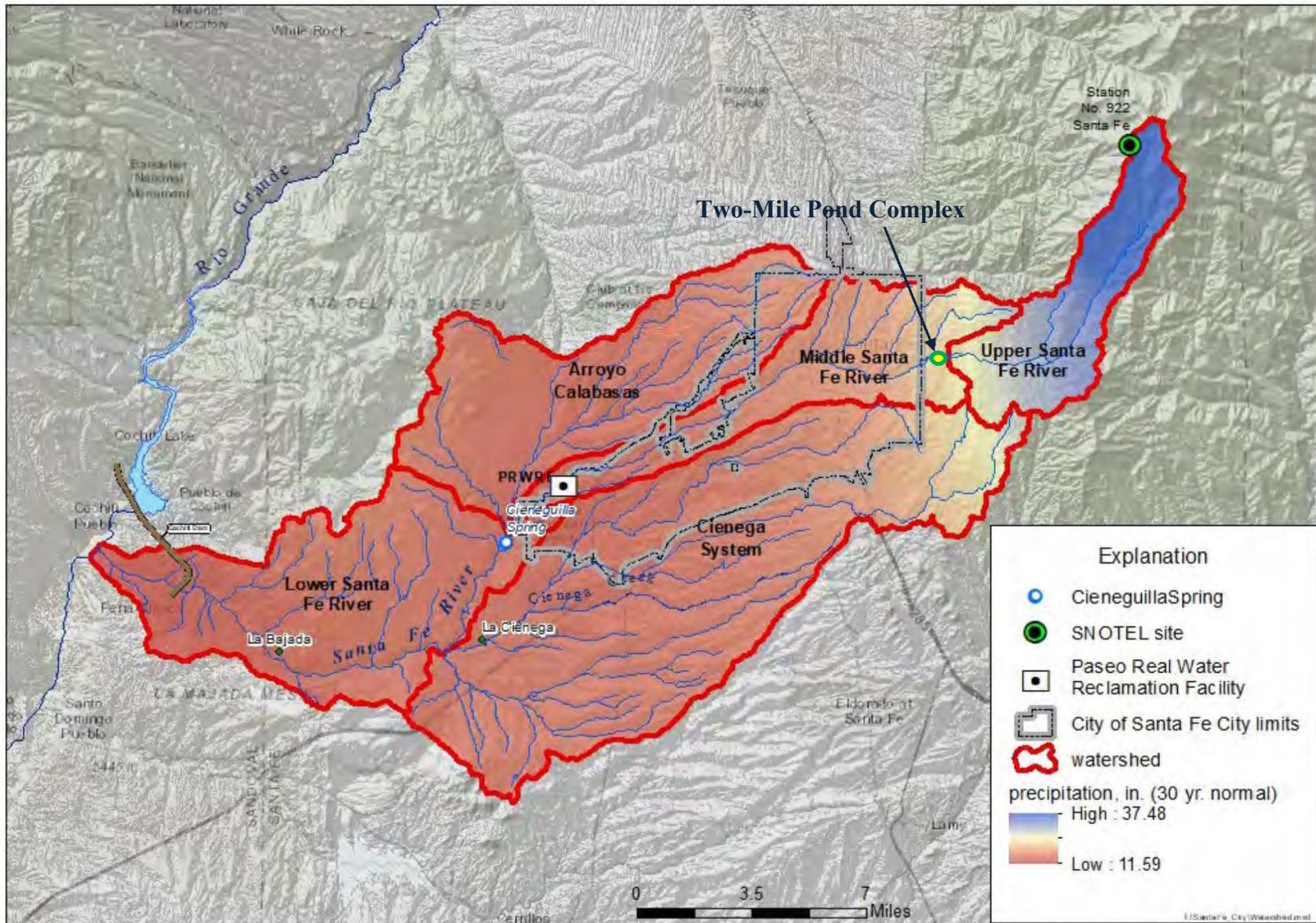


Figure 1. Map of Santa Fe watershed showing location of Two-Mile Pond Complex.

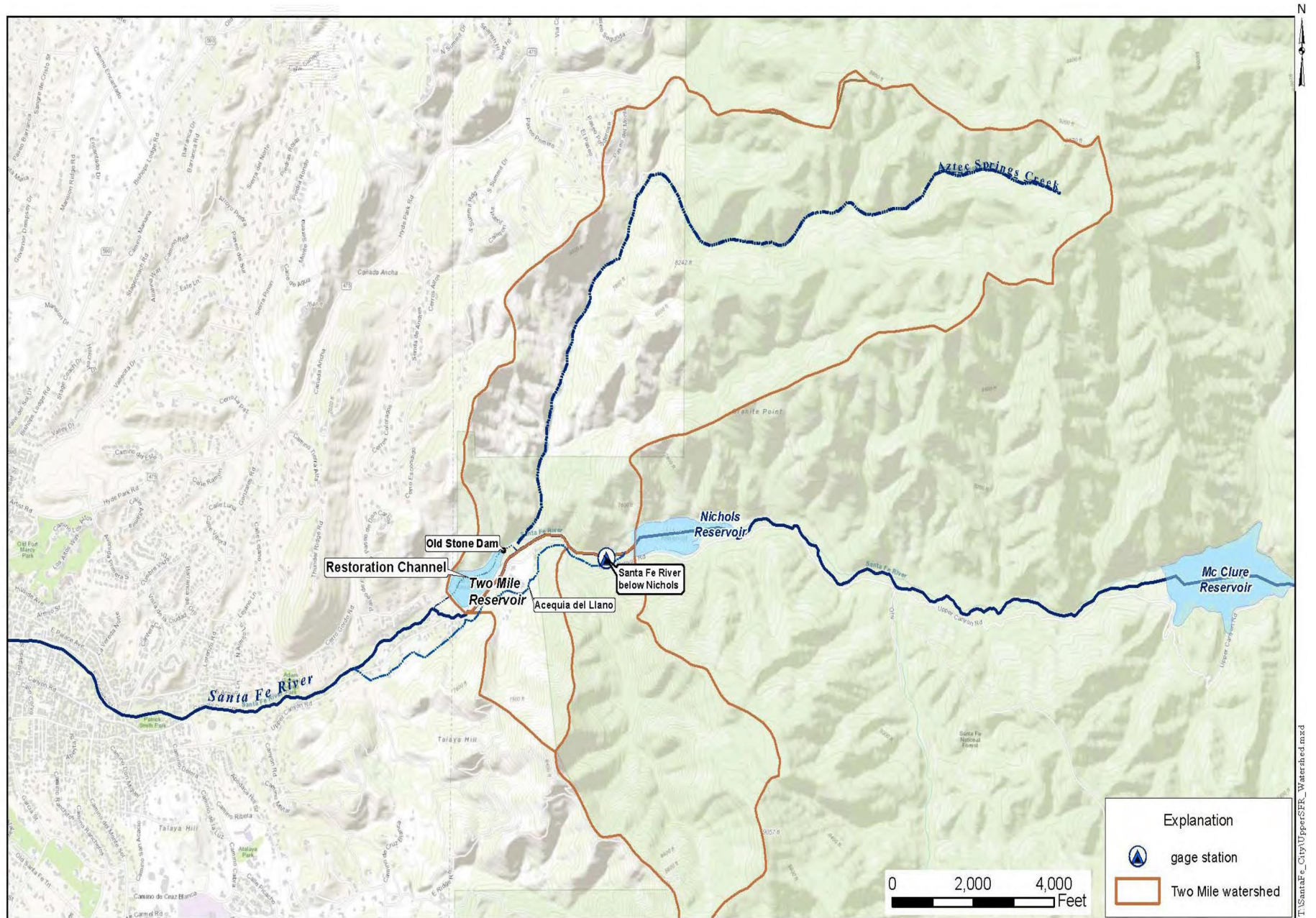


Figure 2. Map showing location City of Santa Fe Reservoirs, Santa Fe River, and Two-Mile Pond receiving watershed.

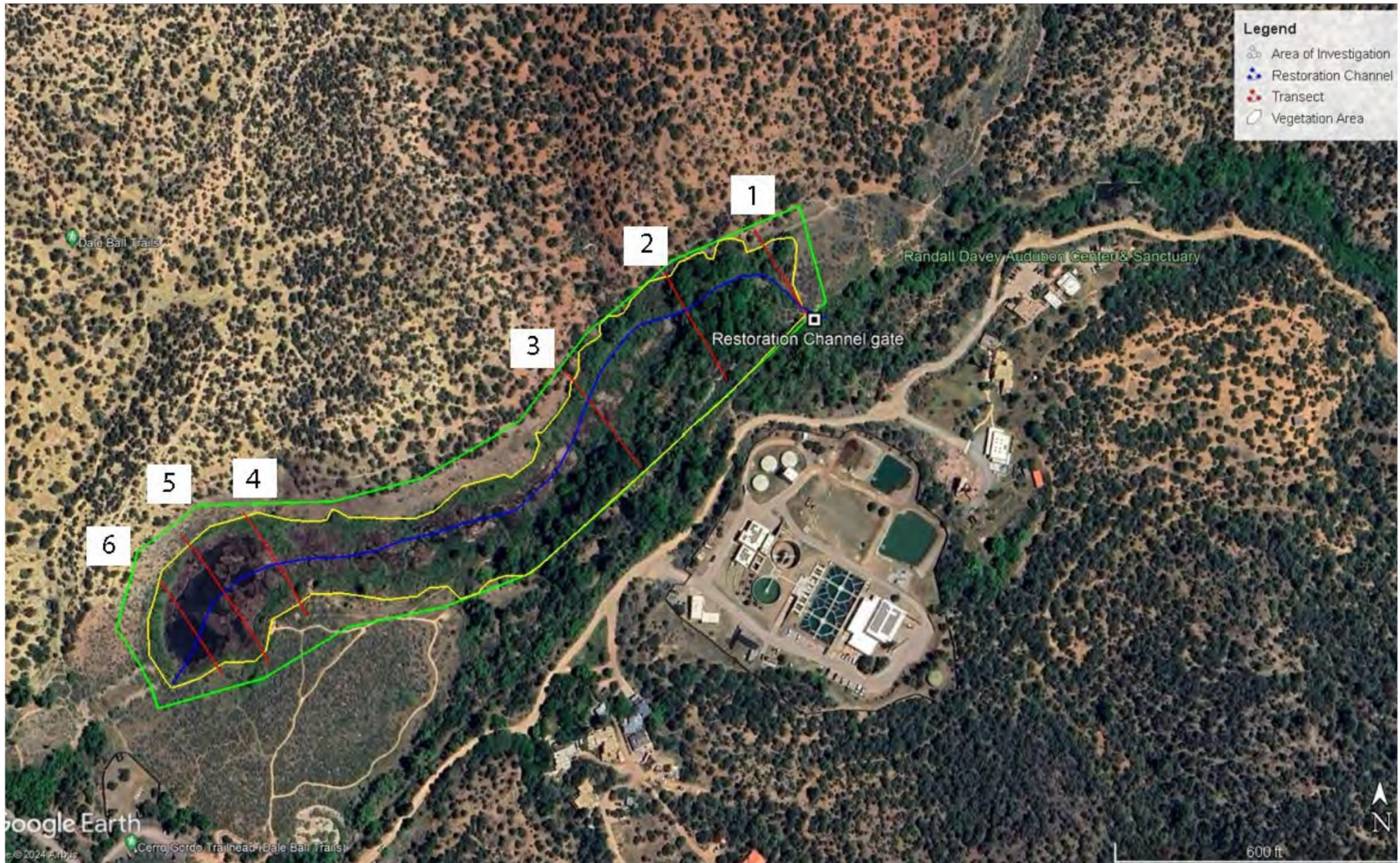


Figure 3. Landscape-scale map showing the Two-Mile Pond Complex and area of investigation on June 7, 2023 aerial photograph.

The Two-Mile Pond Complex is the result of restoration of the decommissioned Two-Mile Dam that was constructed in the Santa Fe River canyon. The Two-Mile Pond Complex was donated to The Nature Conservancy (TNC) in 2000, which converted it into the “Santa Fe Canyon Preserve.” Features of the Two-Mile Pond Complex include:

- Restoration Channel
- Remnants of Old Stone Dam
- Remnants of decommissioned Two-Mile Dam
- Established riparian area along the Restoration Channel in the former footprint of Two-Mile Reservoir

The City of Santa Fe Ordinance 2012-10 established the Santa Fe River Target flows for a Living River Initiative. Target Flows are Santa Fe River flows originating from above McClure Reservoir that are bypassed (water that flows past a diversion or storage facility) and released to Santa Fe River at the base of Nichols Dam. Since 2012, target flows have run through Two-Mile Complex via the Santa Fe River and Restoration Channel. Other bypass flows include those for court ordered acequia deliveries downstream of the Two-Mile Complex.

Santa Fe River bypassed flows are waters of the State. In 2023, the New Mexico Office of the State Engineer (NMOSE) determined that Restoration Channel diversions from the Santa Fe River and storage in Two-Mile Pond had no supporting water right permit, and ordered a stop to these diversions and storage of water. There are concerns that these changes in streamflow conditions through the Two-Mile Pond Complex will alter the established riparian system. The primary objective of assessing the Two-Mile Pond Complex riparian area is to determine current conditions and health of the system, and affects due to changes to the hydrologic regime.

1.2 Scope of Work

The intentions of the quarterly monitoring reports are to provide a summary of the project, present data collected to date, to provide an assessment of the collected data, and to present observations and findings. The quarterly monitoring reports are to include:

- field datasheets (Appendix D)
- landscape map (Fig. 3)
- sampling rank and score and assessment summary (Table 2)
- stressor checklist (Appendix D)
- sampling area rank and score and assessment summaries (Table 6)
- water flows and budget from the streamflow monitoring network
- observed changes in surface water and soil moisture conditions

2.0 SUMMARY OF EXISTING DATA AND INFORMATION

Available existing data and information were compiled for the Two-Mile Pond Complex, which were limited to NMED riparian habitat mapping, historical imagery, and streamflow monitoring performed for Santa Fe Water Division.

2.1 NMED SWQB

The NMED SWQB has prepared a riparian habitat map of the Two-Mile Pond Complex portion of the Santa Fe River (Fig. 4). Each colored section represents a different habitat in the Two-Mile Pond area. These Habitats were used as a guideline in completing Worksheet 5 and B1 of the Montane Riverine Wetlands field worksheets. It should be noted that habitat IA1 in this model appears to be exaggerated and was not included in the field observations.

2.2 Google Earth Images

Google Earth historical aerial imagery for the Two-Mile Pond Complex were available for 1991 to 2023. Historical imagery can be referenced from Appendix A. The Restoration Channel and area of investigation were placed on each image for reference. A summary of the historical images reviewed is presented in Table 1. The Two-Mile Pond Complex riparian area begins around 1996, and significant tree canopies are observed by 2005. Since Two-Mile Dam and Reservoir were decommissioned, the riparian area was established and ponded water has been observed in Two-Mile Pond.

Table 1. Summary of the historical images for Two-Mile Pond Complex

Google Earth image date	approximate combined area of riparian and surface water (acres)	observations
May 25,1991	na	Two-Mile Reservoir operational
October 8, 1996	8.86	4 years after Two-Mile decommissioned
December 6, 2002	9.52	significant drought period
May 10, 2004	8.32	prior to SFR target flows
April 26, 2005	9.67	established tree canopies
May 8, 2009	9.39	water present in Two-Mile Pond
June 16, 2011	8.38	beaver ponds present
October 2, 2013	9.96	beaver ponds present
November 1, 2015	10.00	water present in Two-Mile Pond
June 10, 2017	9.64	water present in Two-Mile Pond
March 2, 2021	9.38	water present in Two-Mile Pond
June 7, 2023	10.40	water present in Two-Mile Pond

SFR – Santa Fe River

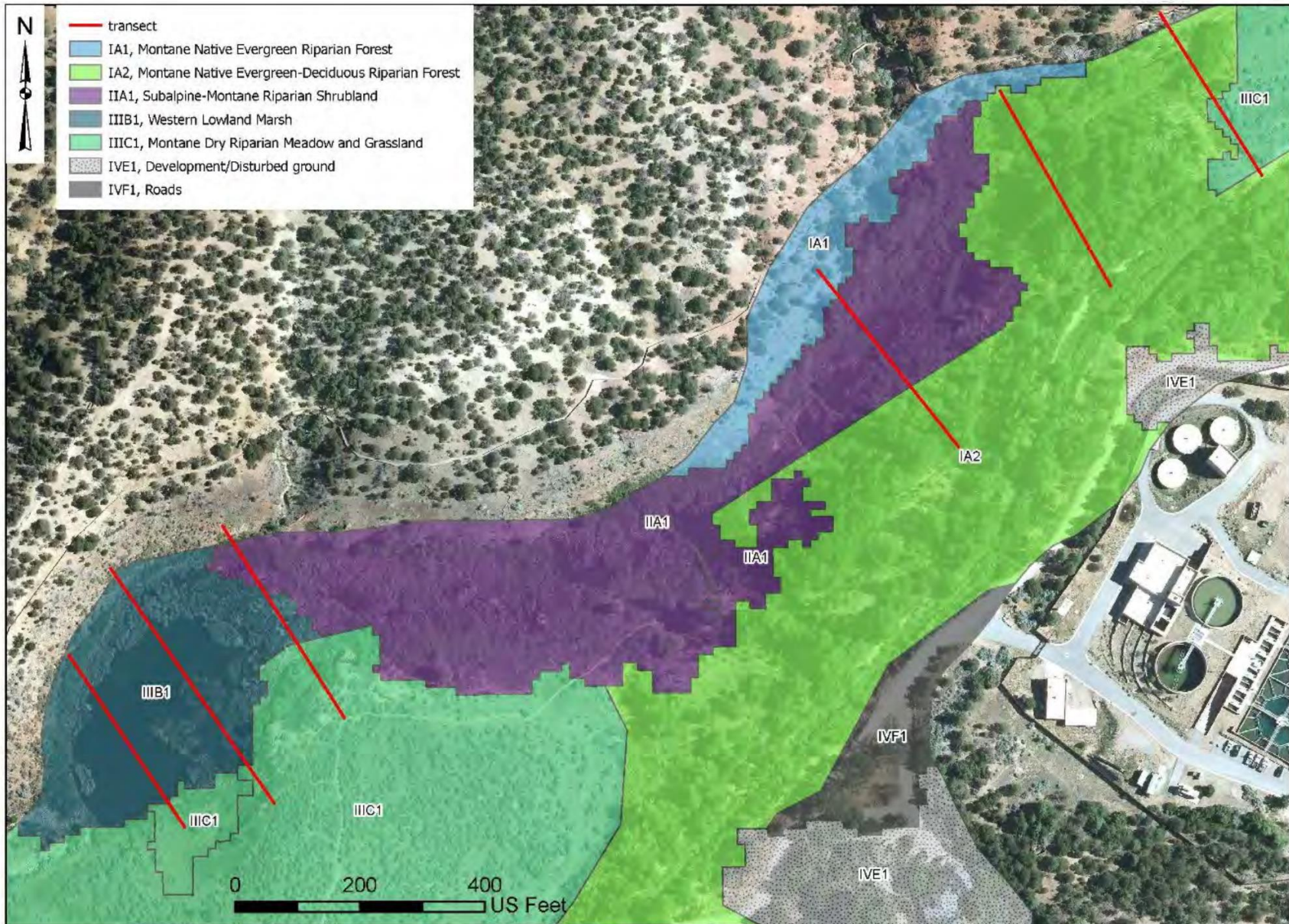


Figure 4. Map showing NMED SWQB defined riparian habitat zones for Two-Mile Pond Complex.

The combined riparian and surface-water area was estimated from each historical image after 1996. Over the last 28 years, the combined riparian and surface-water area has varied between 8.32 and 10.40 acres. For 2013 to current, the average area has been about 10 acres. The primary change in the riparian area has been the development of the tree canopy, particularly from 2005 to current.

2.3 NDMI Images

Normalized Difference Moisture Index (NDMI) from Modified Copernicus Sentinel Data is used to determine vegetation water content and monitor droughts. The values range from -1 to 1 with negative values representing barren soil, values around zero correspond to water stress, and positive values represent vegetative canopy without water stress. NDMI images for January 16, 2024, February 5, 2024, and March 3, 2024 can be referenced from Appendix B. The quality of the imagery depends on degree of cloud cover.

2.4 NDVI Images

Normalized Difference Vegetation Index (NDVI) from Modified Copernicus Sentinel Data are used to quantify green vegetation. It is a measure of the state of vegetation health based on how plants reflect light at certain wave lengths. The values range from -1 to 1 with negative values representing water, values around zero correspond to barren areas of rock, sand, or snow, low positive values represent shrub and grassland, and high positive values represent forested areas. NDVI images for January 16, February 5, 2024 and March 3, 2024 can be referenced from Appendix C.

2.5 Streamflow Monitoring

The City of Santa Fe Water Division has contracted JSAI to install and maintain several continuous streamflow monitoring points in the Two-Mile Pond Complex area (Fig. 5).

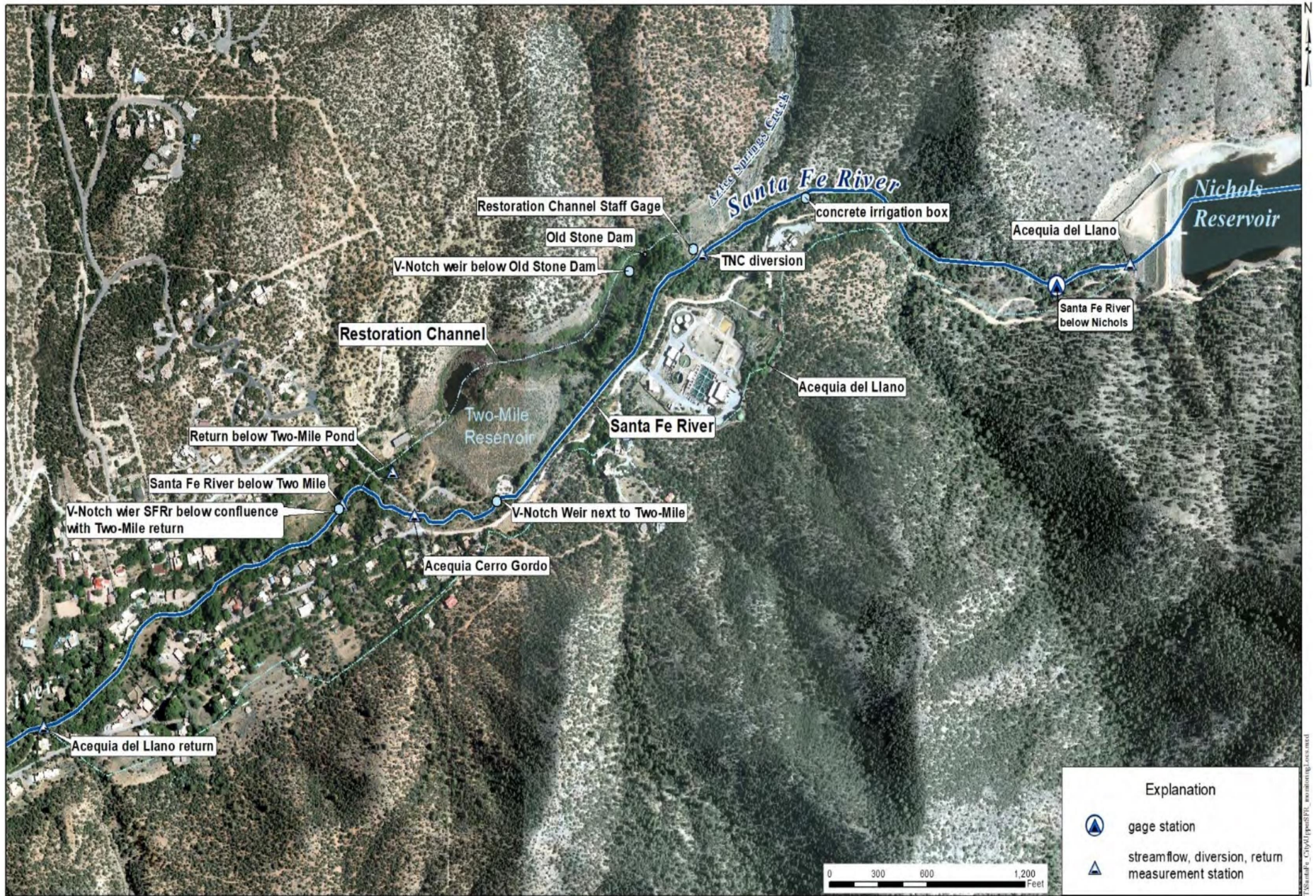
The gage *Santa Fe River below Nichols* monitors all bypass flows below Nichols Dam. The river channel at the gage *Santa Fe River below Nichols* was clogged with fallen trees during this last winter, which affected access and potentially validity of recorded streamflow data. Therefore, data from this monitoring point are currently not available until it is compared to measured flows from Santa Fe Water operations at Nichols Reservoir.

The Two-Mile return 6-inch Parshall flume monitors all streamflow exiting the Two-Mile Pond Complex. JSAI has been monitoring this flume for the past few years. There have been issues with maintaining the flume, such as suspended sediment and organic debris clogging the ports for the stilling well and flume entrance. Transducer data from the flume are currently under review, however field measurements are presented on Figure 6.

An existing 90° v-notch weir in the Santa Fe River next to Two-Mile Pond was modified by expanding the weir dimensions. At the beginning of March 2024, the v-notch weir was built up and equipped with a stilling well and transducer to accommodate flow measurements up to 6 cubic feet per second (cfs). The v-notch weir next to Two-Mile Pond measures Santa Fe River flows upstream of the Two-Mile Pond return (Fig. 5).

At the beginning of February 2024, a 90° v-notch weir was installed in the Santa Fe River below the confluence of Two-Mile Pond returns and Santa Fe River. The weir is equipped to provide continuous monitoring of flows up to 6 cfs in the Santa Fe River below Two-Mile Pond return.

Hydrographs were prepared for the time period January 1 to March 31, 2024 (Fig. 6). Santa Fe River flows next to Two Mile Pond had a base flow of 0.1 from Nichols Dam ranged from 0.1 to 0.5 cfs during the First Quarter of 2024. Streamflow measured at the Two-Mile return flume ranged from 0.16 to 0.40 cfs, and average 0.24 cfs during the First Quarter of 2024. Santa Fe River flows below the confluence with Two-Mile Pond returns ranged from 0.1 to 0.7 cfs. Water temperature is plotted with measured flows which ranged between 0 and 16 degrees Celsius.



aerial photography: Vivid-USA 2016

Figure 5. Map of Two-Mile Pond Complex showing streamflow monitoring stations:

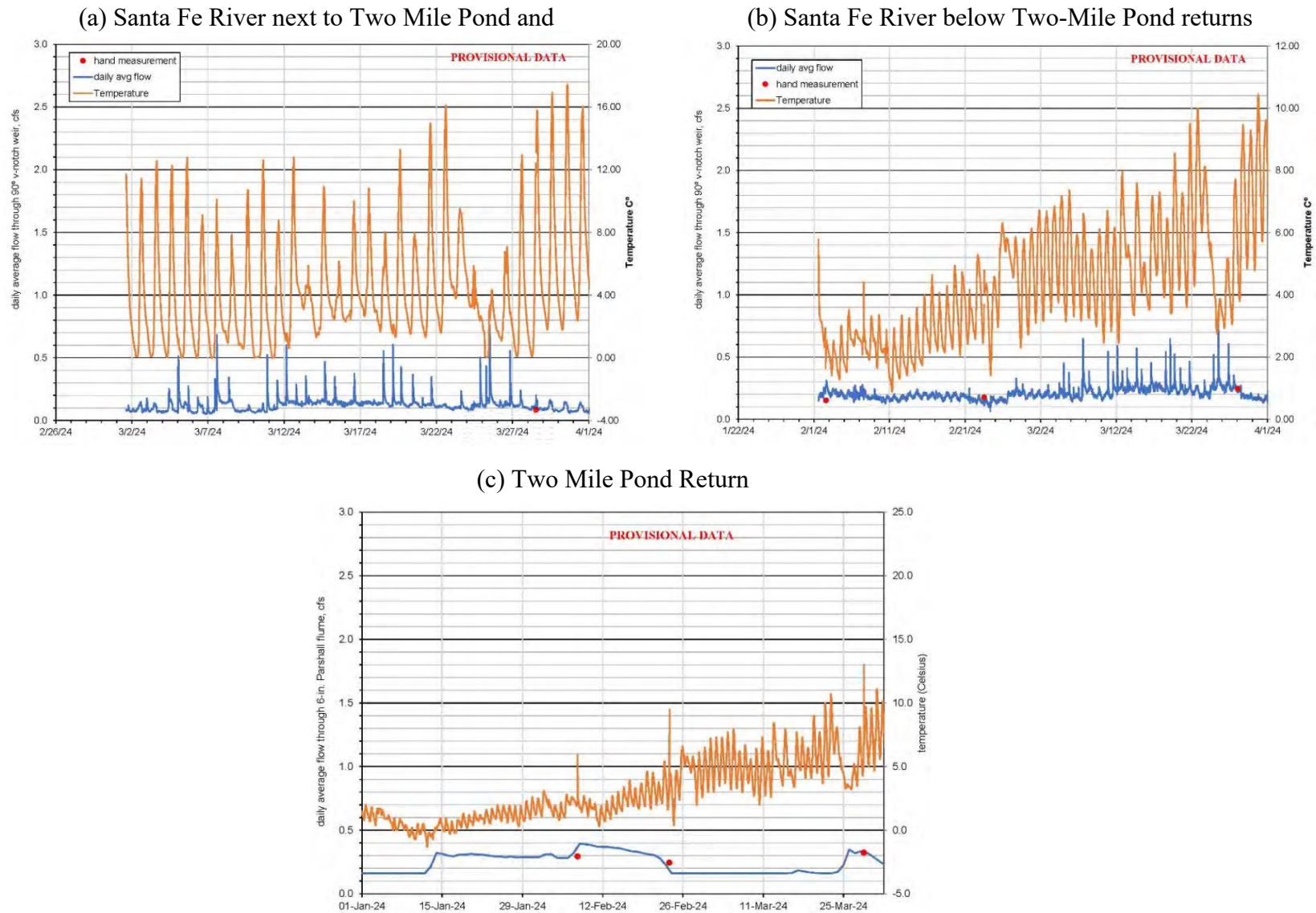


Figure 6. Hydrographs for First Quarter 2024 of (a) Santa Fe River next to Two Mile Pond, (b) Santa Fe River below Two Mile Pond returns, and (c) Two-Mile Pond returns (below Two-Mile).

3.0 RIPARIAN MONITORING

The monitoring period is January to December 2024. Field investigations are performed monthly during the growing season between March and November.

3.1 March 7, 2024 Field Investigation

The New Mexico Rapid Assessment Method (NMRAM) Montane Riverine Wetlands data sheets for assessment of Two-Mile Pond on March 7, 2024 can be referenced from Appendix D, including the stressor checklist. Field photographs are presented in Appendix E.

Category scores are graded on a scale from 1 to 4 (higher numbers are more desirable indicating better health and riparian condition). Table 2 is a summary of the scoring and ranking method. Each transect is graded independently and the resulting grades are multiplied against a weighted ratio and combined to give each transect a wetland condition score.

Table 2. NMRAM scoring and ranking description

rank	score	description
A	≥3.25 - 4.0	excellent condition
B	≥2.5 - <3.25	good condition
C	≥1.75 - <2.5	fair condition
D	1.0 - <1.75	poor condition

NMRAM - New Mexico Rapid Assessment Method

3.1.1 Landscape Context

Landscape maps (Figs. 3 and 4, Appendix A) and field observations were used to evaluate the Landscape Context metrics such as surrounding land use and riparian connectivity. A summary of the landscape context metric scoring is presented as Table 3.

Table 3. Average scores for landscape context metrics

landscape context metric	average score
buffer integrity index	3.00
riparian corridor connectivity	4.00
relative wetland size	4.00
surrounding land use	2.00
total	3.25

3.1.2 Biotic Metrics

Biotic metric scores were calculated using the Montane Riverine Wetlands Field Guide method of ranking a riparian area. Each category has a set of biotic measurements and observations that are recorded in the field and then combined to result in a final ranking for the riparian area. Table 4 shows the average of all six transects for the total biotic component of Two-Mile Pond reservoir. Results from all transects can be found in Appendix D.

Table 4. Average scores for biotic metrics

biotic metrics	average scores*
relative native plant community composition	2.83
vegetation horizontal patch structure	2.83
vegetation vertical structure	2.83
native riparian tree regeneration	3.00
invasive exotic plant species cover	2.83
total	2.87

* As plant life becomes more active and easier to identify, the biotic data and subsequent score will include species and riparian indicators

Along six different transects of the investigated area biotic factors were documented. Signs of birds, deer, and some insects were seen throughout the area below Old Stone Dam. New seedlings and sprouts of spring growth were popping up throughout the entire area but most of the flora was still dormant from winter. An area just north of Transect 3, which is located between Two-Mile Pond and the ‘beaver dams,’ was particularly populated with many birds. No birds were specifically identified but the noise coming from the area was distinct and notable. Gold fish were seen swimming in Two-Mile Pond, which was surrounded by dormant cattails and willows. Overall biotic life is recovering from the winter and more flora and fauna are expected to appear in the following months.

3.1.3 Abiotic Metrics

Scores were calculated using the Montane Riverine Wetlands Field Guide method of ranking a riparian area. Each category has a set of abiotic measurements and observations that are recorded in the field and then combined to result in a final ranking for the riparian area. There are four abiotic metrics that reflect the physical status of the riparian area:

1. Physical Patch Complexity, which is a measure of the physical structural complexity of a site that contributes to ecological richness.
2. Channel Equilibrium, which is the assessment of the degree of channel aggradation or degradation relative to reference equilibrium conditions.

3. Steam Bank Stability and Cover, which is a measure of stream bank soil/substrate stability and erosion potential that reflect overall stream bank stability.
4. Soil Surface Condition reflects anthropogenic soil disturbance impacts within the sampling area

Because of the circumstances of Two-Mile Pond “Floodplain Hydrologic Connectivity” was not accounted for since its results could be misleading and its importance is not relevant to this particular investigation. Table 5 shows the average of all six transects for the total abiotic component of Two-Mile Pond reservoir. Results from all transects can be found in Appendix D.

Table 5. Average scores for abiotic metrics

abiotic categories	average score
physical patch diversity	2.50
channel equilibrium	4.00
stream bank stability and cover	4.00
soil surface condition	3.67
total	3.54

Two-Mile Pond is covered in leaves and debris from winter especially in the high forest areas of the reservoir. The leaves have drifted down and in some areas of the stream, ‘beaver dams’ or stormflow dams have been created and can hold a significant amount of water, which creates micro-habitats across the area below Old Stone Dam. The channels and waterways themselves are surrounded by thick walls of willows and cattails that keep the banks from eroding. The streams themselves appear to be in a state of equilibrium and there are no signs of active degradation or aggradation that were noticeable at this time. The anthropogenic disturbance also appears low considering the popularity of the area’s trails. Overall, the abiotic components of the riparian area appear to rank on the higher end of the scoring throughout Two-Mile Pond Complex.

3.1.4 Summary Riparian Metrics Ranking

The Landscape Context, Biotic, and Abiotic metrics for each transect are ranked and scored using NMRAM. The weighted average for each metric is calculated, tabulated, and ranked using the scoring method summarized in Table 2. The Two-Mile Pond Complex riparian area ranking is summarized in Table 6. For Landscape Context metrics, the surrounding land use has the lowest score because of urban encroachment. The weighted average scores for Biotic metrics were all similar. For Abiotic metrics, the Physical Patch Diversity had the lowest score. Transects 1, 2, and 6 have a riparian ranking of B, where Transects 3, 4, and 5 have a riparian ranking of A. The difference between A and B ranking is attributed to the dry portions of the transects on the margin of the riparian area.

Table 6. Summary of Two-Mile Pond Complex riparian area metrics ranking

NMRAM	weight	transects						
metric description	wt	1	2	3	4	5	6	total
landscape context								
buffer integrity index	0.25	3.0	3.0	3.0	3.0	3.0	3.0	3.0
riparian corridor connectivity	0.25	4.0	4.0	4.0	4.0	4.0	4.0	4.0
relative riparian size	0.25	4.0	4.0	4.0	4.0	4.0	4.0	4.0
surrounding land use	0.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0
biotic								
relative native plant community composition	0.20	2.0	4.0	2.0	4.0	3.0	2.0	2.8
vegetation horizontal patch structure	0.20	2.0	2.0	4.0	3.0	3.0	3.0	2.8
vegetation vertical structure	0.20	3.0	3.0	3.0	3.0	3.0	2.0	2.8
native riparian tree regeneration	0.20	2.0	4.0	3.0	3.0	3.0	3.0	3.0
invasive exotic plant species cover	0.20	3.0	4.0	3.0	3.0	2.0	2.0	2.8
abiotic								
physical patch diversity	0.25	2.0	2.0	3.0	2.0	3.0	3.0	2.5
channel equilibrium	0.25	4.0	4.0	4.0	4.0	4.0	4.0	4.0
stream bank stability and cover	0.25	4.0	4.0	4.0	4.0	4.0	4.0	4.0
soil surface condition	0.25	4.0	2.0	4.0	4.0	4.0	4.0	3.7
major attribute								
landscape context	0.30	3.3	3.3	3.3	3.3	3.3	3.3	3.3
biotic	0.35	2.4	3.4	3.0	3.2	2.8	2.4	2.9
abiotic	0.35	3.5	3.0	3.8	3.5	3.8	3.8	3.5
RIPARIAN CONDITION SCORE	Σ	3.0	3.2	3.3	3.3	3.3	3.1	3.2
RIPARIAN RANK		B	B	A	A	A	B	B

3.1.5 Soil Moisture

Soil moisture was measured every 15 feet from the southeast end of a transect to the northwest end. Moisture was measured using a conductance-style moisture meter, which had a probe depth 6 inches. The moisture meter gives results from a scale of 1 to 10, which is a relative indicator of moisture based on conductivity of water in the soil. This device helps us get a general idea of where water might be concentrated in the ground and over time, we will be able to see how this parameter changes. The northwest side of these transects are not always accessible due to thick willows but readings are made until water is reached or until willows become too thick to enter. Willow thickets indicate high moisture areas. Field notes from the soil monitoring can be found in Appendix D.

The soil moisture data for March 7, 2024 were contoured, interpretations were made between data points using imagery (see Figs. 7 and 8).

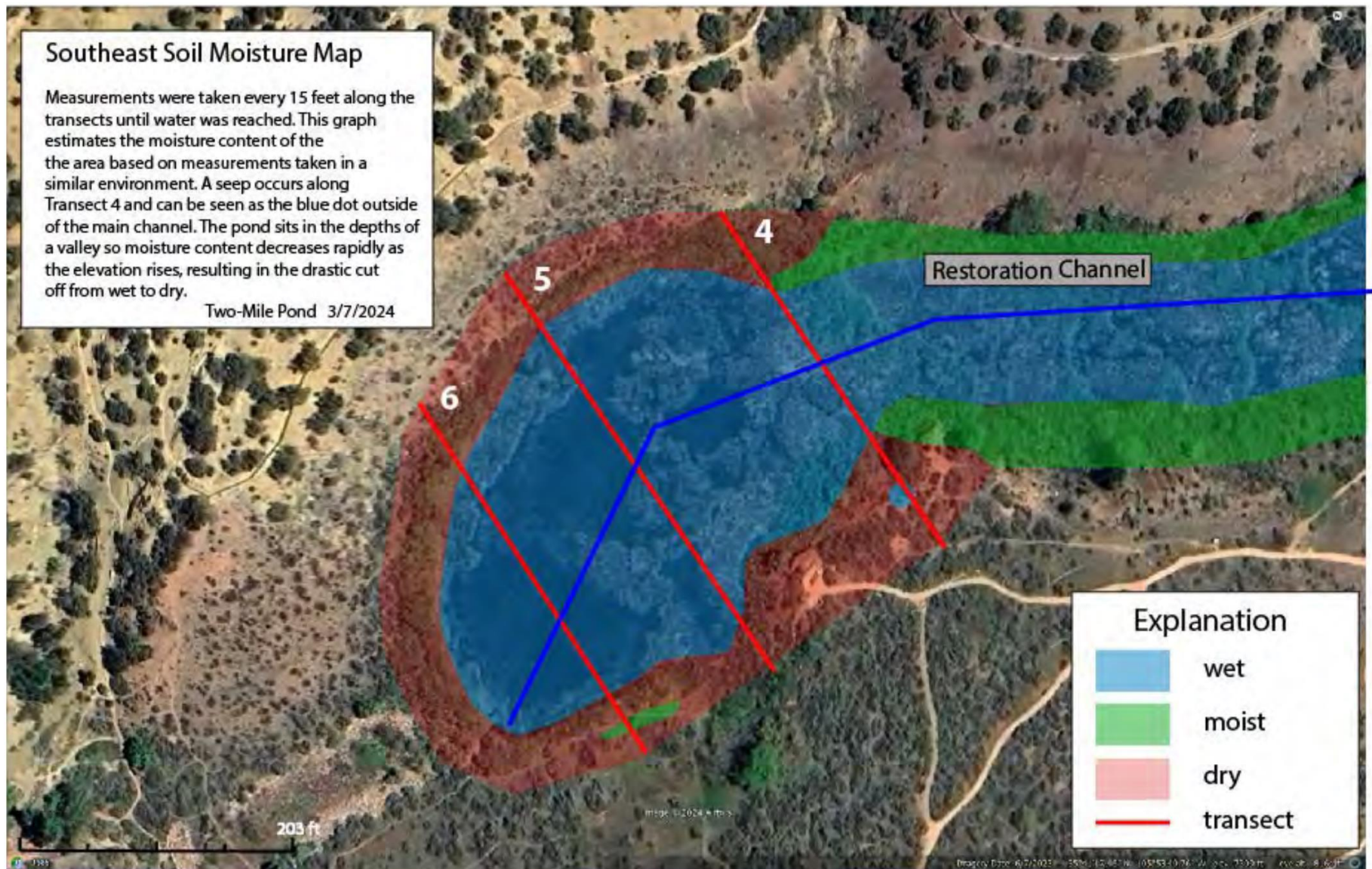


Figure 7. Map showing March 7, 2024 soil moisture distribution for the lower half of the Two-Mile Pond Complex.

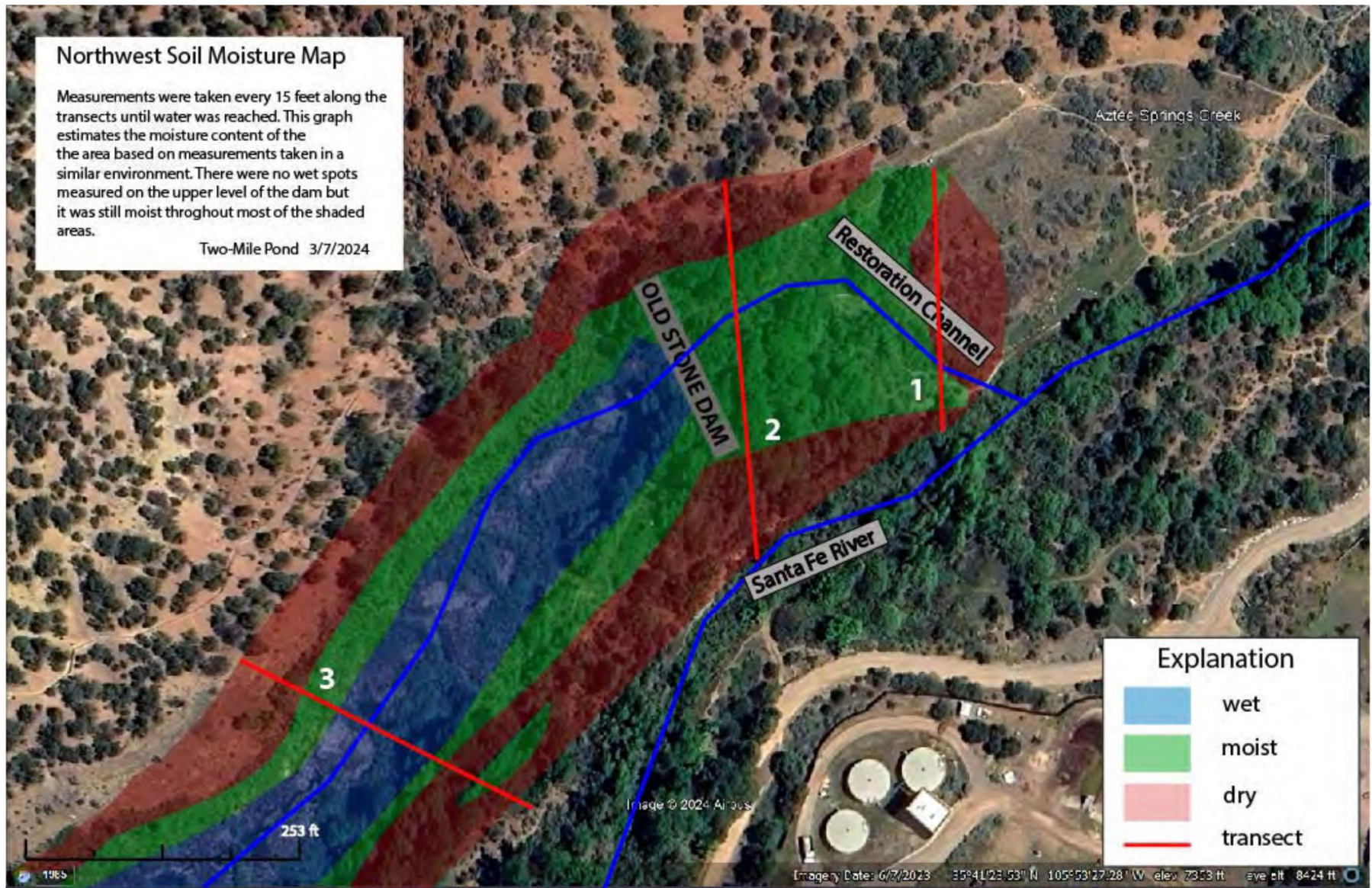


Figure 8. Map showing March 7, 2024 soil moisture distribution for the upper half of the Two-Mile Pond Complex.

4.0 SUMMARY OF FINDINGS

The Two-Mile Pond Complex riparian area started after the decommissioning of Two-Mile Dam and Reservoir in 1992, and has been about the same size for over the last 20 years. Large tree canopies above and below Old Stone Dam became evident around 2005. See historic imagery in Appendix A.

During the March 7, 2024 field investigation, most of the soils in the Two-Mile Pond riparian area are moist to wet, with the exception of the upstream end above Old Stone Dam and the southern margins of the upper half of the area of investigation (see Figs. 7 and 8).

Streamflow through Two-Mile Pond Complex during the First Quarter originated from groundwater discharge at the base of Old Stone Dam. The outflow from Two-Mile Pond ranged from 0.16 to 0.40 cfs, and averaged 0.24 cfs.

For March 7, 2024, the Two-Mile Pond Complex riparian ranking is between B (good condition) and A (excellent condition). An excellent condition (A) riparian system has intact functions and processes, diverse vegetative communities with almost no exotic weeds, is relatively large compared to its historical size, and has natural buffers. These riparian systems are largely undisturbed and provide an excellent habitat for native flora and fauna.

A good condition (B) is somewhat degraded in response to environmental stressors. Riparian areas with a B ranking have various combinations of relatively minor disturbances or factors negatively affecting condition (e.g. some alteration of the hydrological regimes; evidence of on-site anthropogenic disturbances; a reduction of vegetative community and structural diversity with the presence of some exotic weeds).

The current conditions of Two-Mile Pond Complex riparian area look promising to provide a good-excellent ecosystem for the coming year. Additional, monthly field investigations are needed to assess potential changes in biotic and abiotic metrics. Monthly field investigations will be conducted and with increased biotic life recovering from dormancy more species are expected to be identified and monitored to observe the changes in Biotic and Abiotic metrics throughout the duration of the investigation.

5.0 REFERENCES

- Modified Copernicus Sentinel Data, <https://www.sentinel-hub.com/> Modified Copernicus Sentinel data [2024]/Sentinel Hub
- Muldavin, E.H., Bader, B., Milford, E.R., McGraw, M., Lightfoot, D., Nicholson, B., and Larson, G., 2011, New Mexico Rapid Assessment Method: Montane Riverine Wetlands, Version 1.1. Final report to the New Mexico Environment Department, Surface Water Quality Bureau, Santa Fe, New Mexico, 90 pp. and appendices.
- Muldavin, E., Milford, E., Triepke, J., Gonzalez, C., Urbanovsky, A., McCartha, G., Kennedy, A., Chauvin, Y., Smith, J., Leonard, J., Elliot, L., Hanberry, P., Diamond, D., and Clark, A.E., 2022, New Mexico Riparian Habitat Map (NMRipMap): Version 2.0 Plus. New Mexico Natural Heritage, Museum of Southwestern Biology, University of New Mexico; USDA Forest Service, Southwest Region; Missouri Resource Assessment Partnership (MoRAP), University of Missouri, and USDA Forest Service, Geospatial Technology and Applications Center (GTAC), Salt Lake City, UT, Accessible at nhnm.unm.edu/riparian/nmripmap.

APPENDICES

Appendix A.

Historical Google Earth Images of Two-Mile Pond Complex

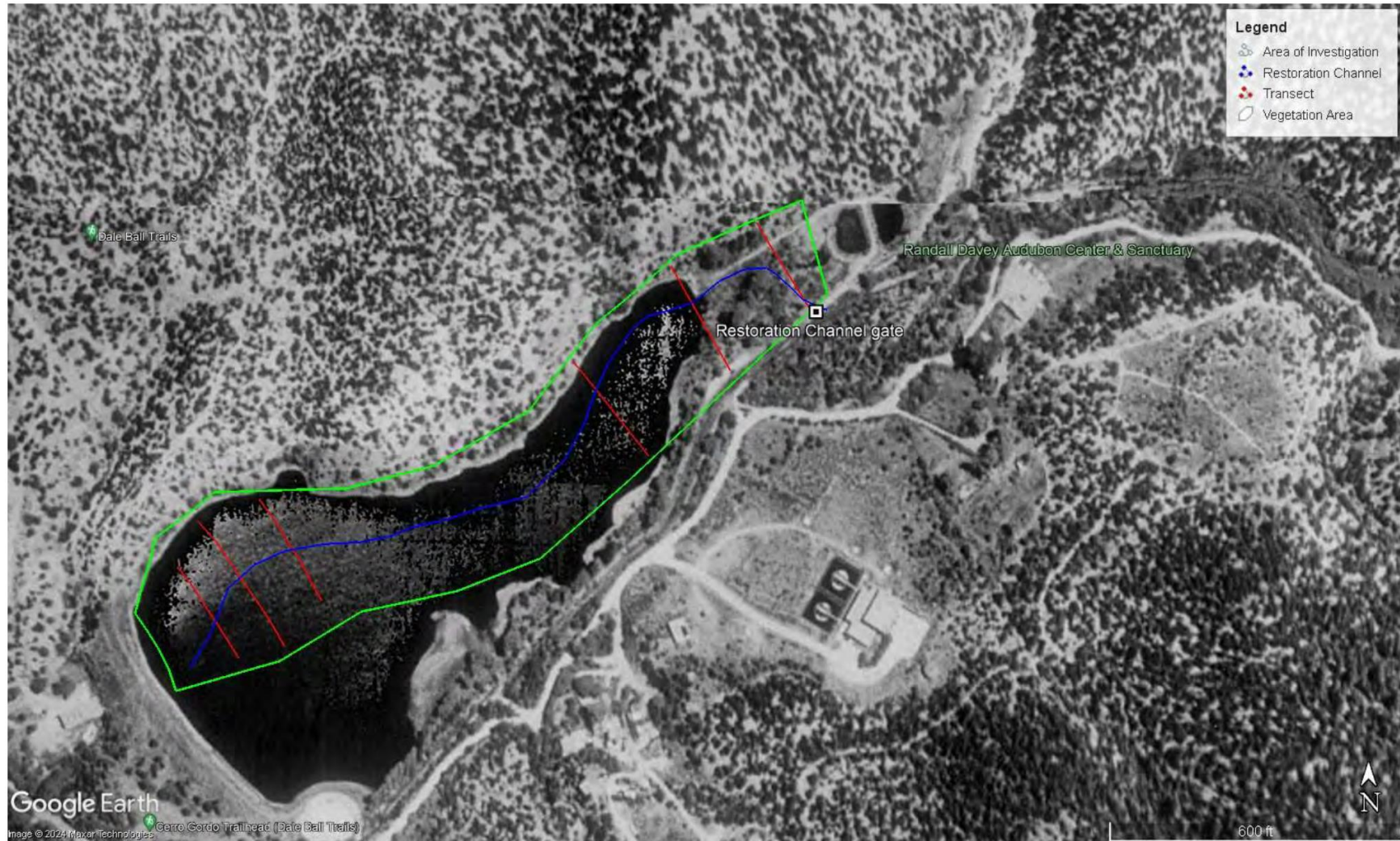


Figure A1. Historical image of Two-Mile Pond Complex dated May 25, 1991.

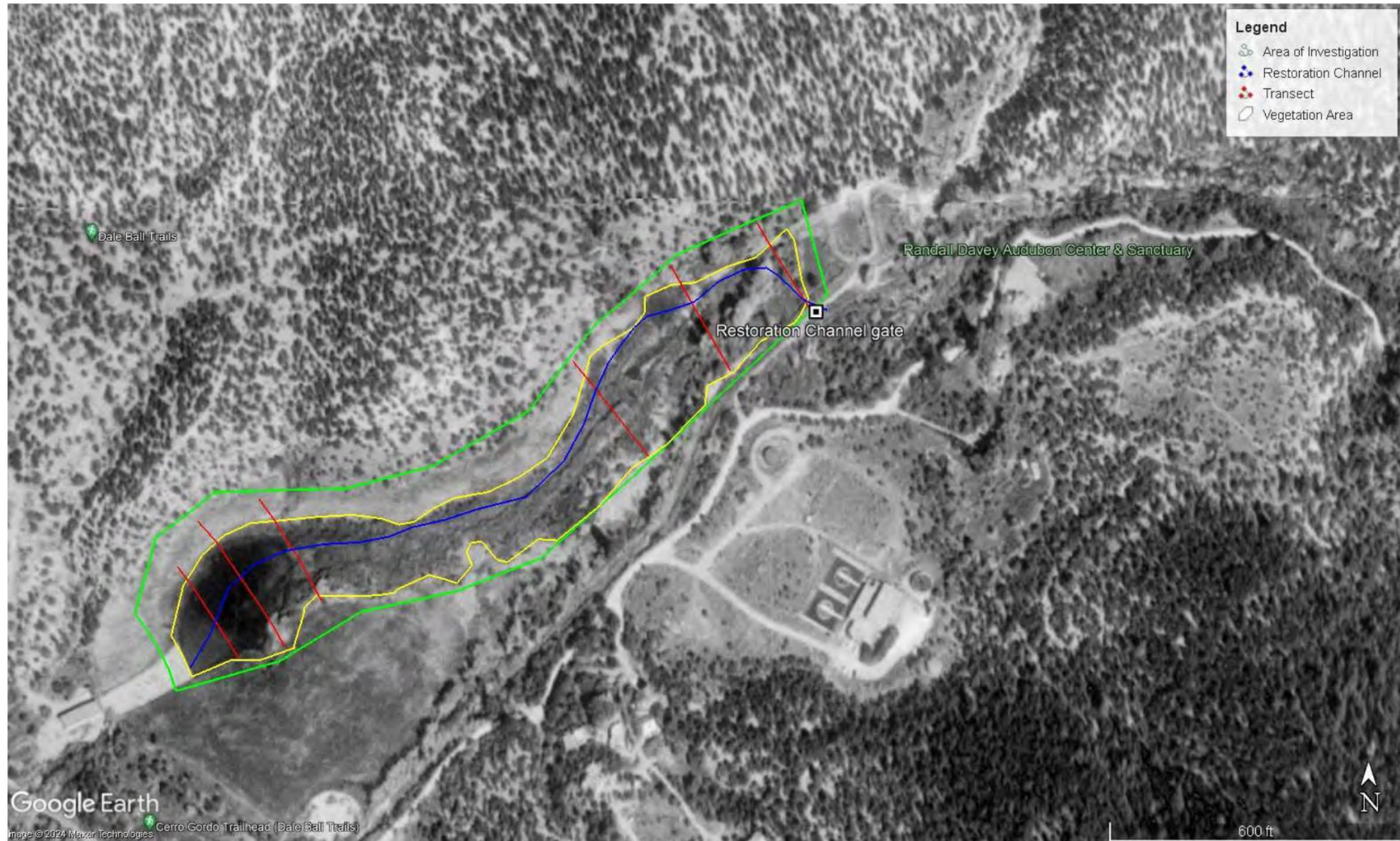


Figure A2. Historical image of Two-Mile Pond Complex dated August 10, 1996.

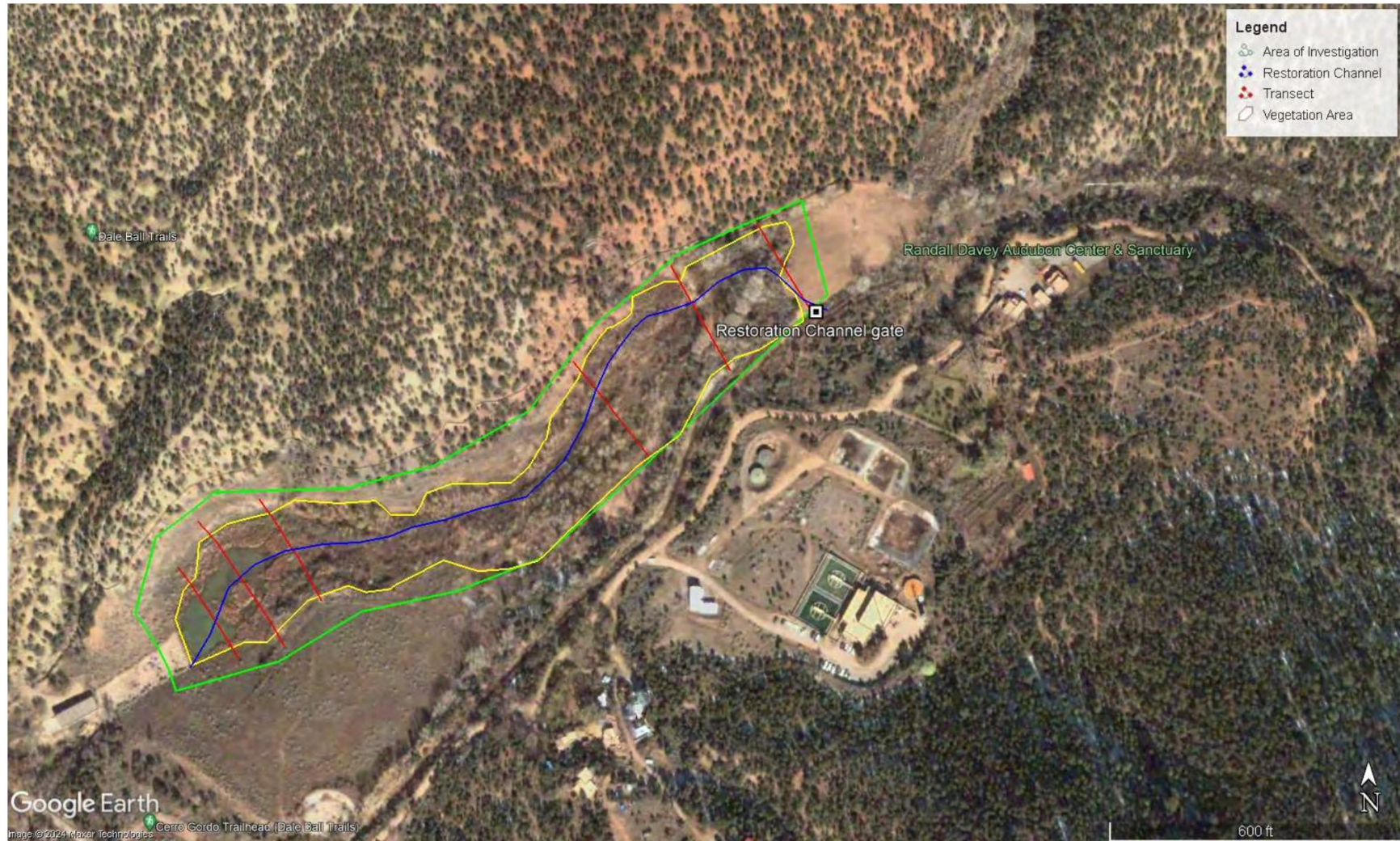


Figure A3. Historical image of Two-Mile Pond Complex dated December 6, 2002.

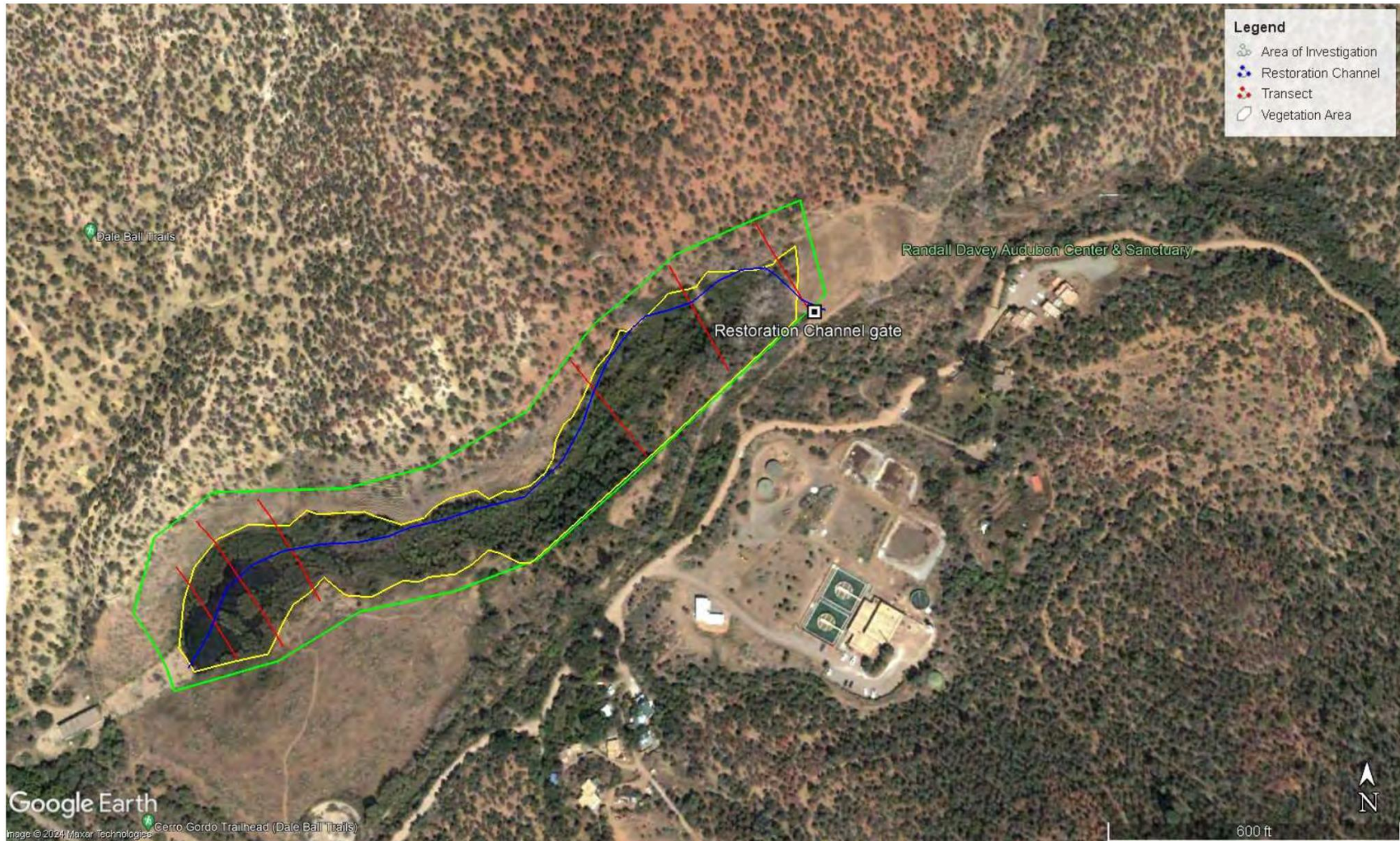


Figure A4. Historical image of Two-Mile Pond Complex dated May 10, 2004.



Figure A5. Historical image of Two-Mile Pond Complex dated April 26, 2005.

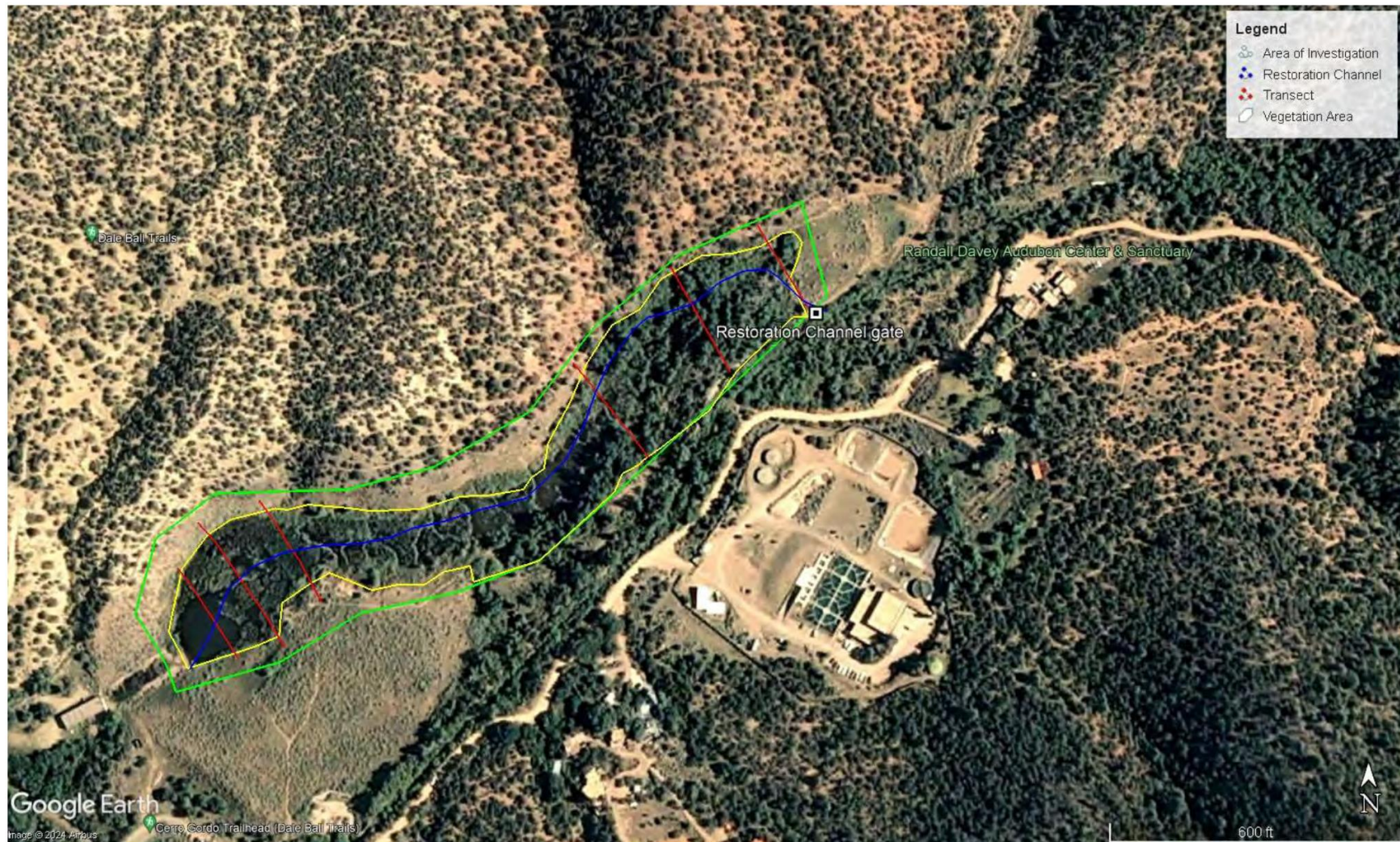


Figure A6. Historical image of Two-Mile Pond Complex dated May 8, 2009.

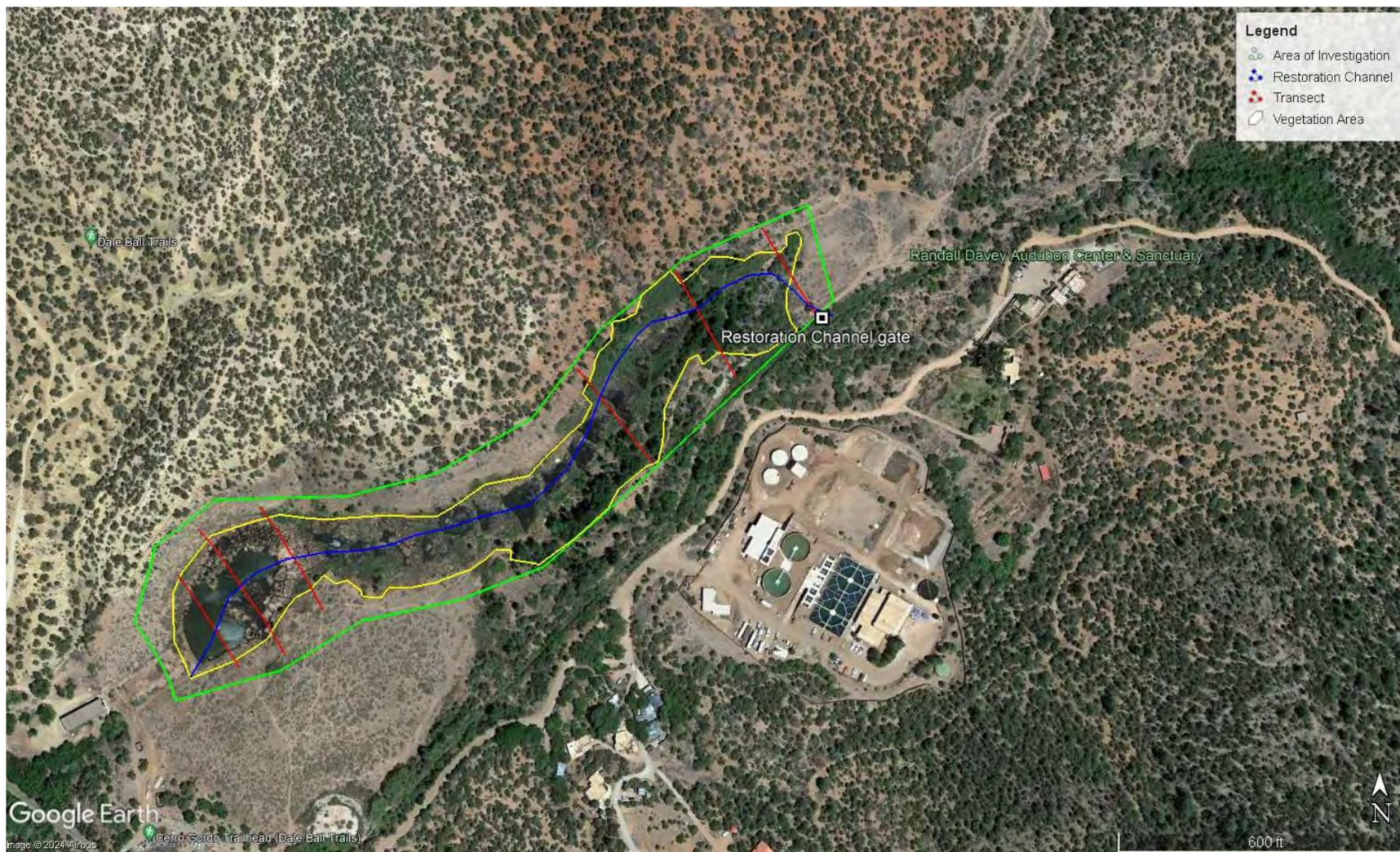


Figure A7. Historical image of Two-Mile Pond Complex dated June 16, 2011.

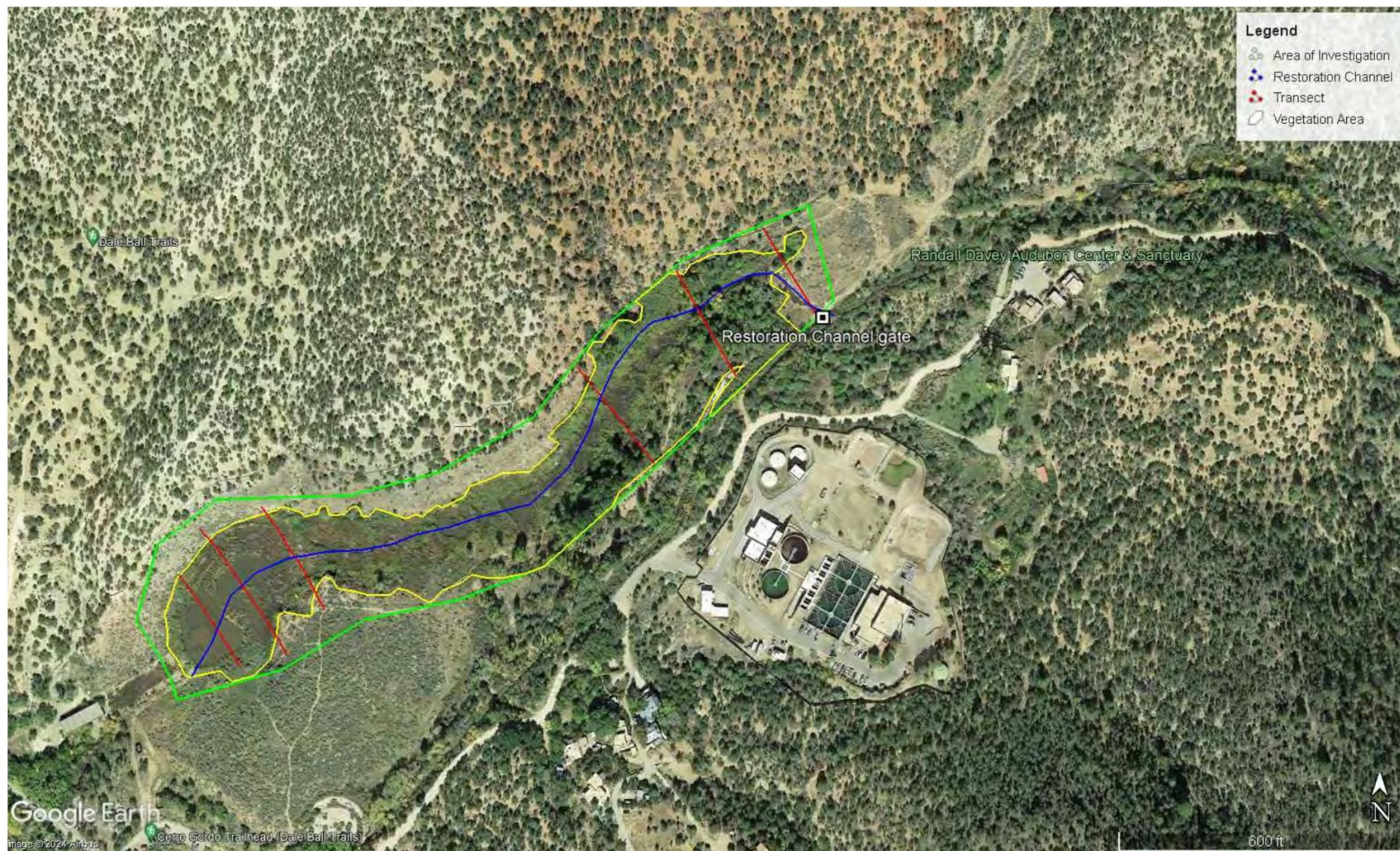


Figure A8. Historical image of Two-Mile Pond Complex dated October 2, 2013.

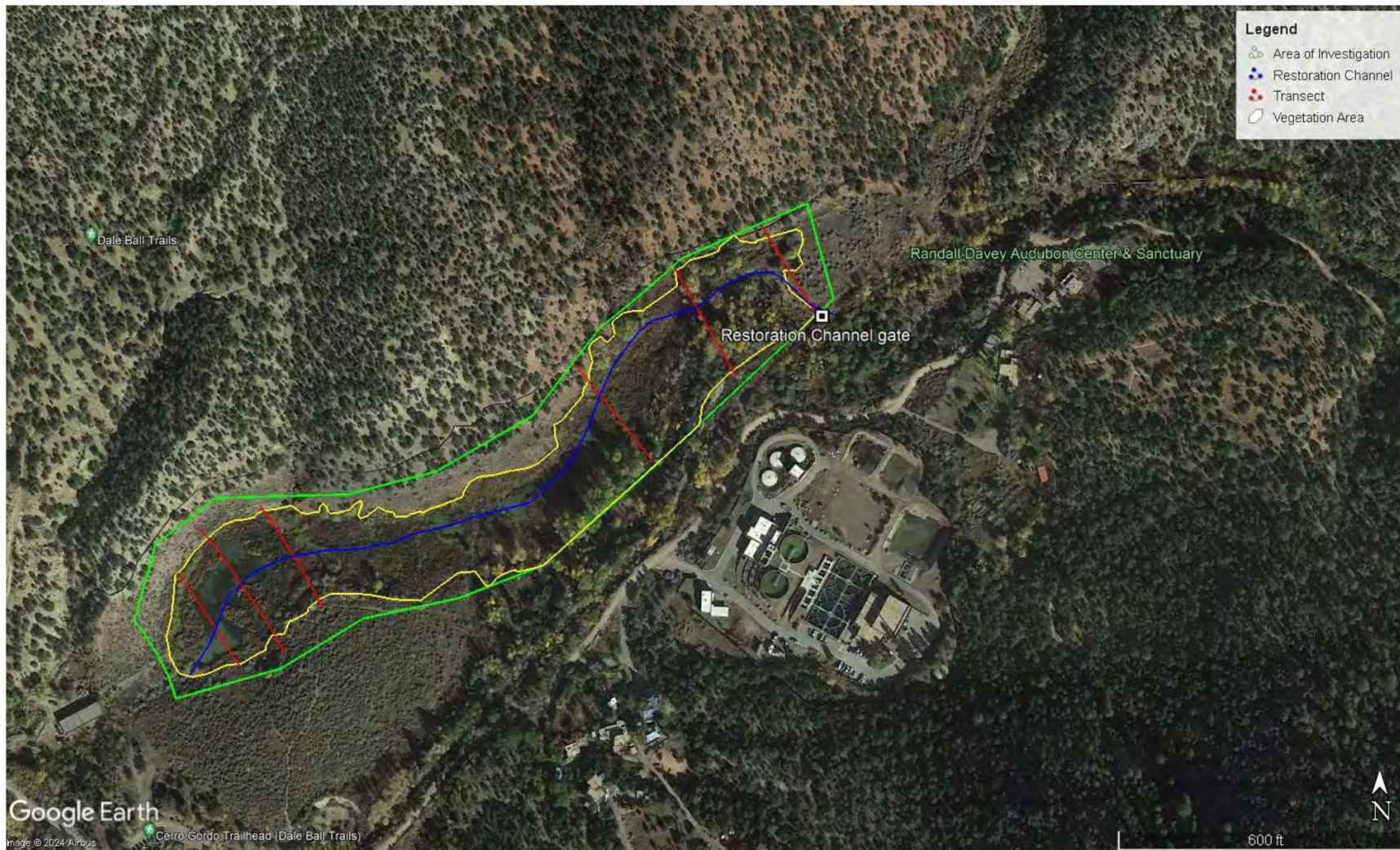


Figure A9. Historical image of Two-Mile Pond Complex dated November 1, 2015.

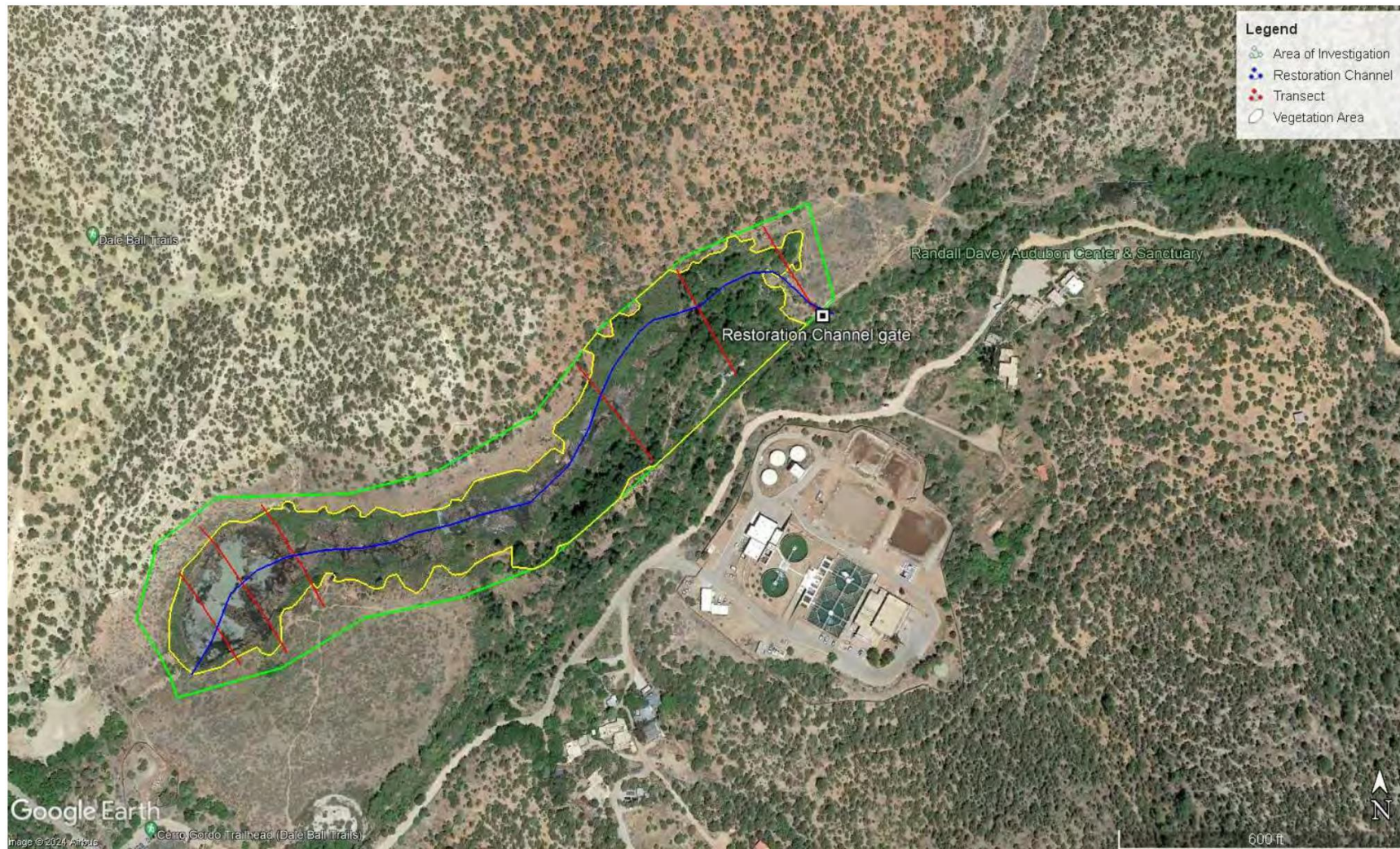


Figure A10. Historical image of Two-Mile Pond Complex dated June 10, 2017.



Figure A11. Historical image of Two-Mile Pond Complex dated March 2, 2021.

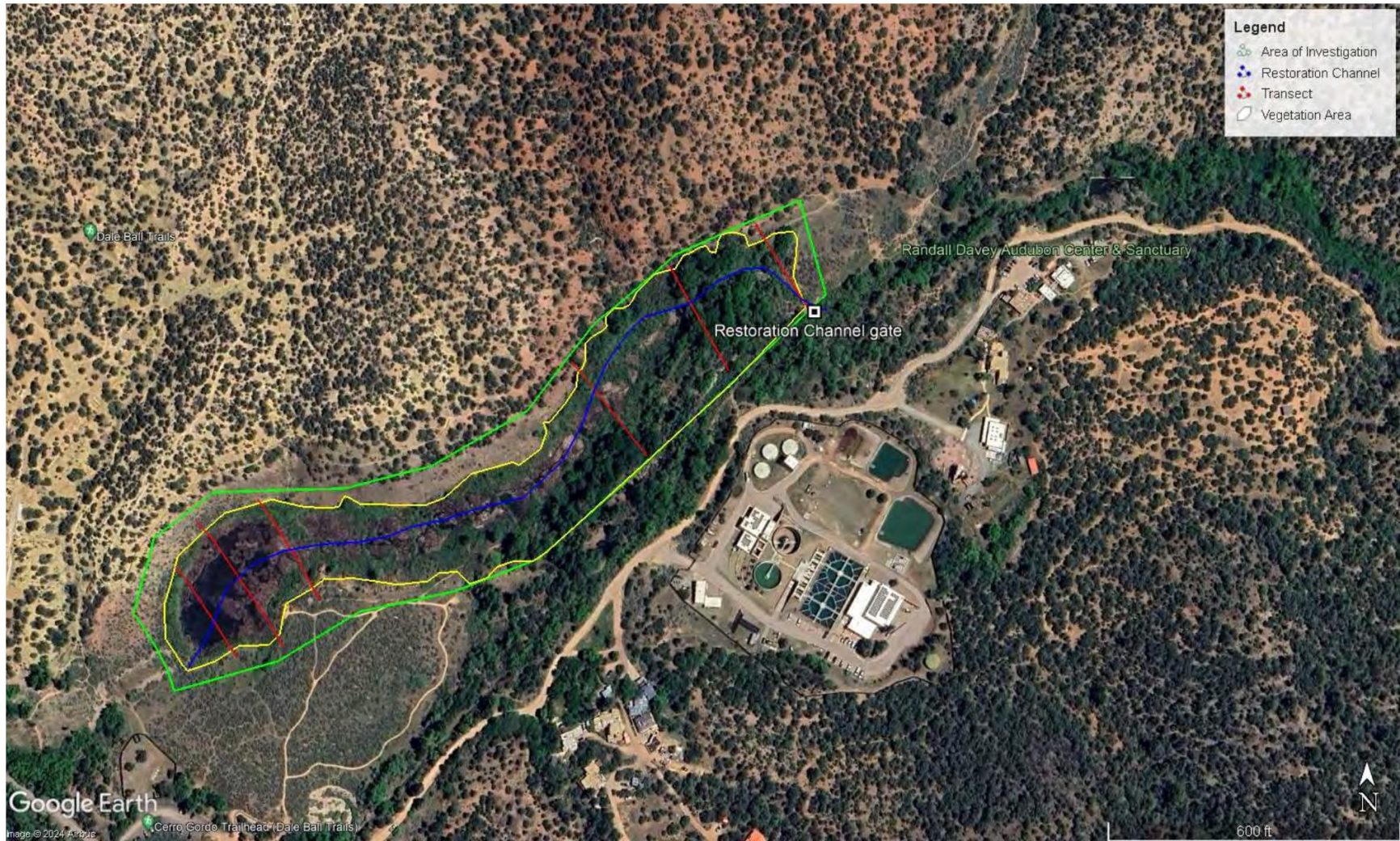
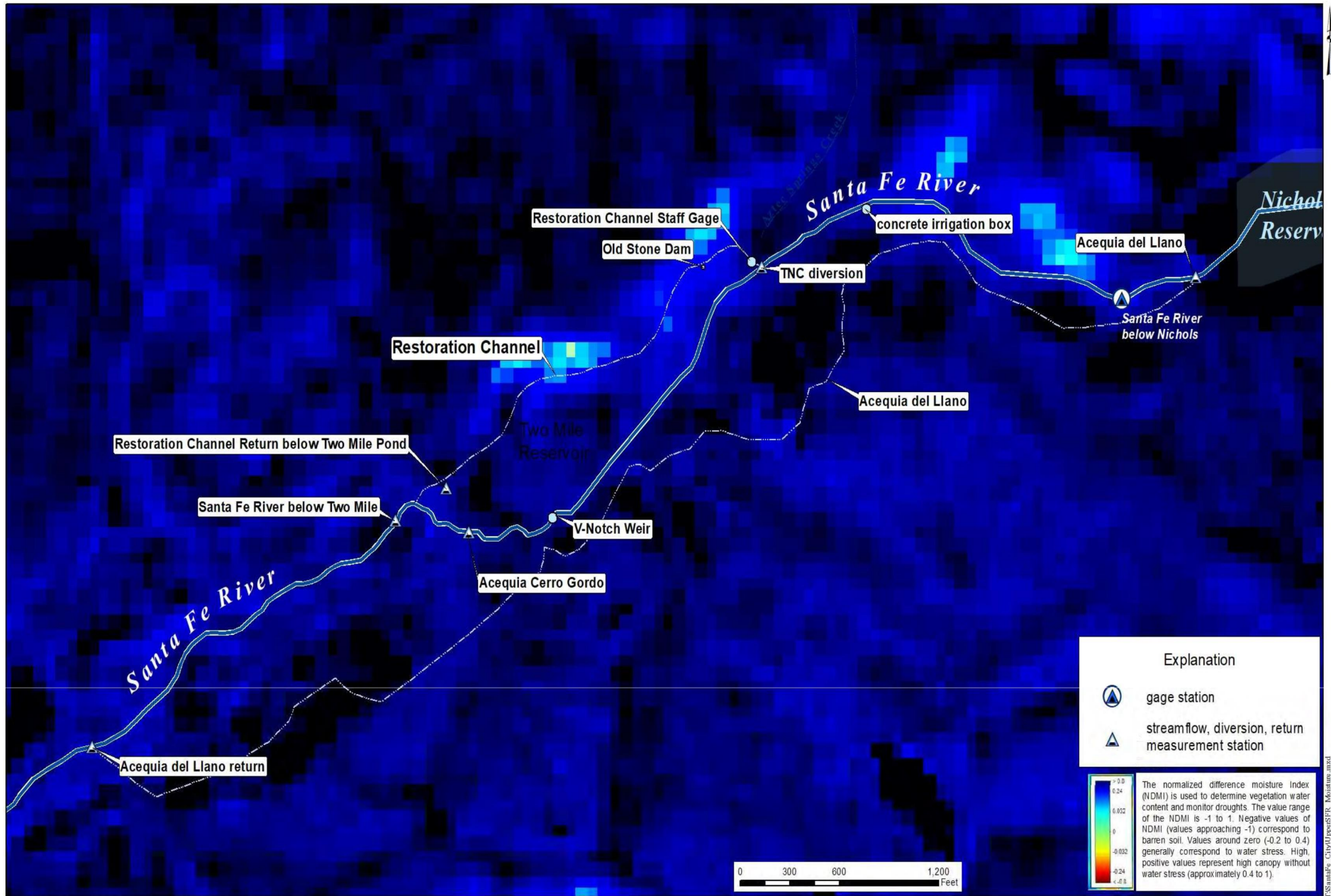


Figure A12. Historical image of Two-Mile Pond Complex dated July 6, 2023.

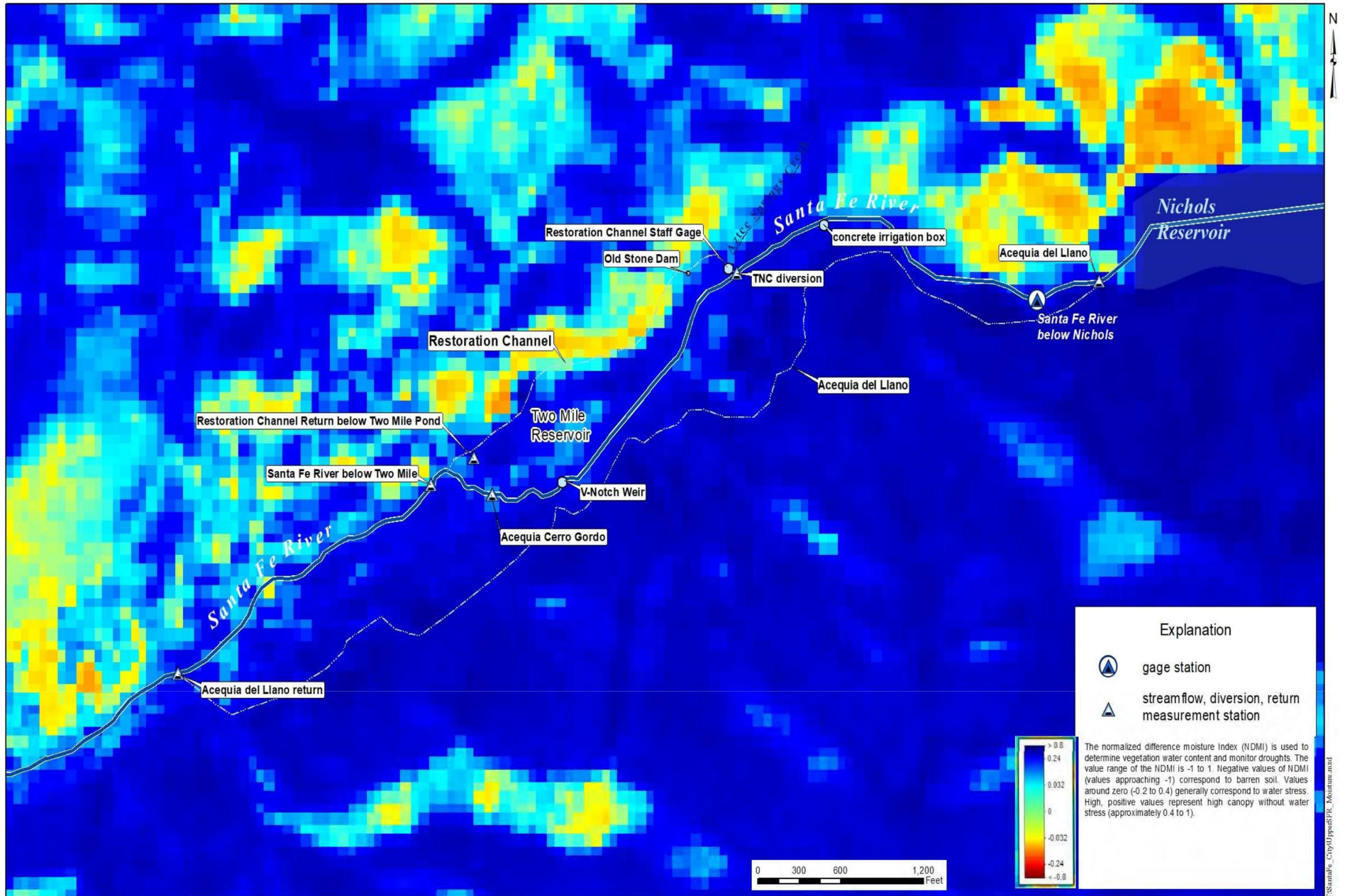
Appendix B.

NDMI Images for Two-Mile Pond Complex



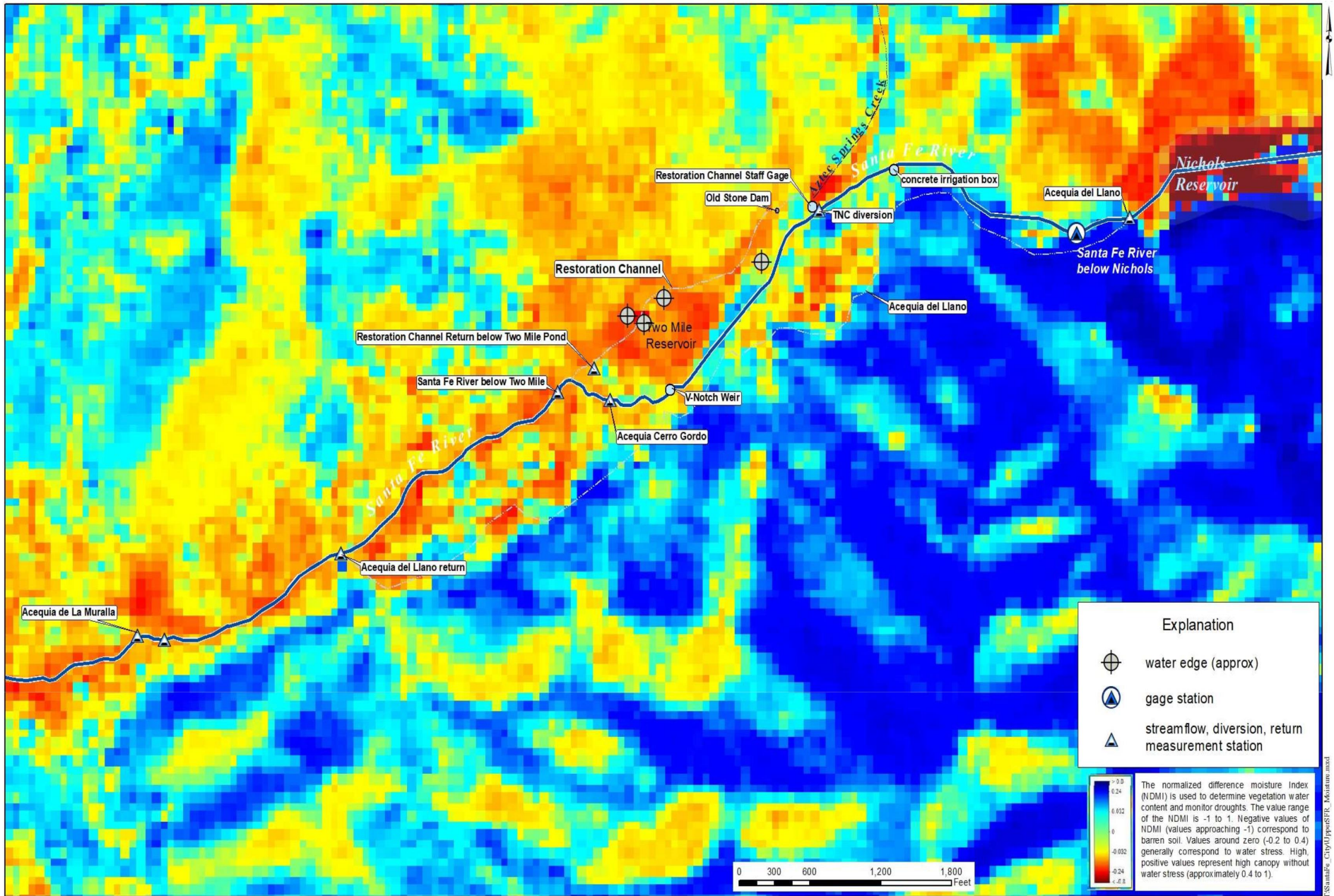
Normalized Difference Moisture Index (NDMI): Jan. 16, 2024

Figure B1. NDMI image of Two-Mile Pond Complex for January 16, 2024.



Normalized Difference Vegetation Index (NDVI): March 3, 2024

Figure B2. NDVI image of Two-Mile Pond Complex for February 5, 2024.



Normalized Difference Moisture Index (NDMI): March 3, 2024

Figure B3. NDMI image of Two-Mile Pond Complex for March 3, 2024.

Appendix C.

NDVI Images for Two-Mile Pond Complex

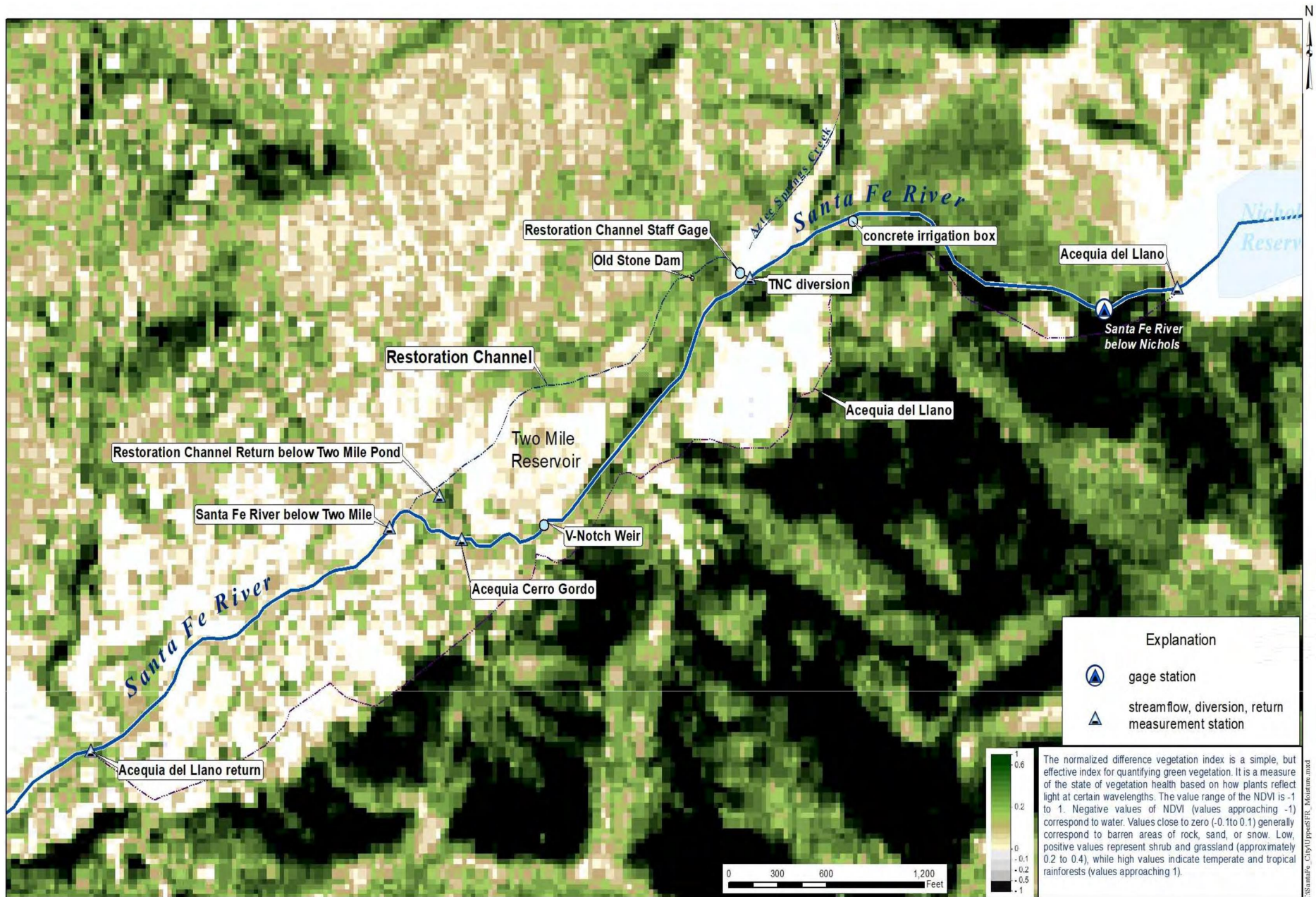
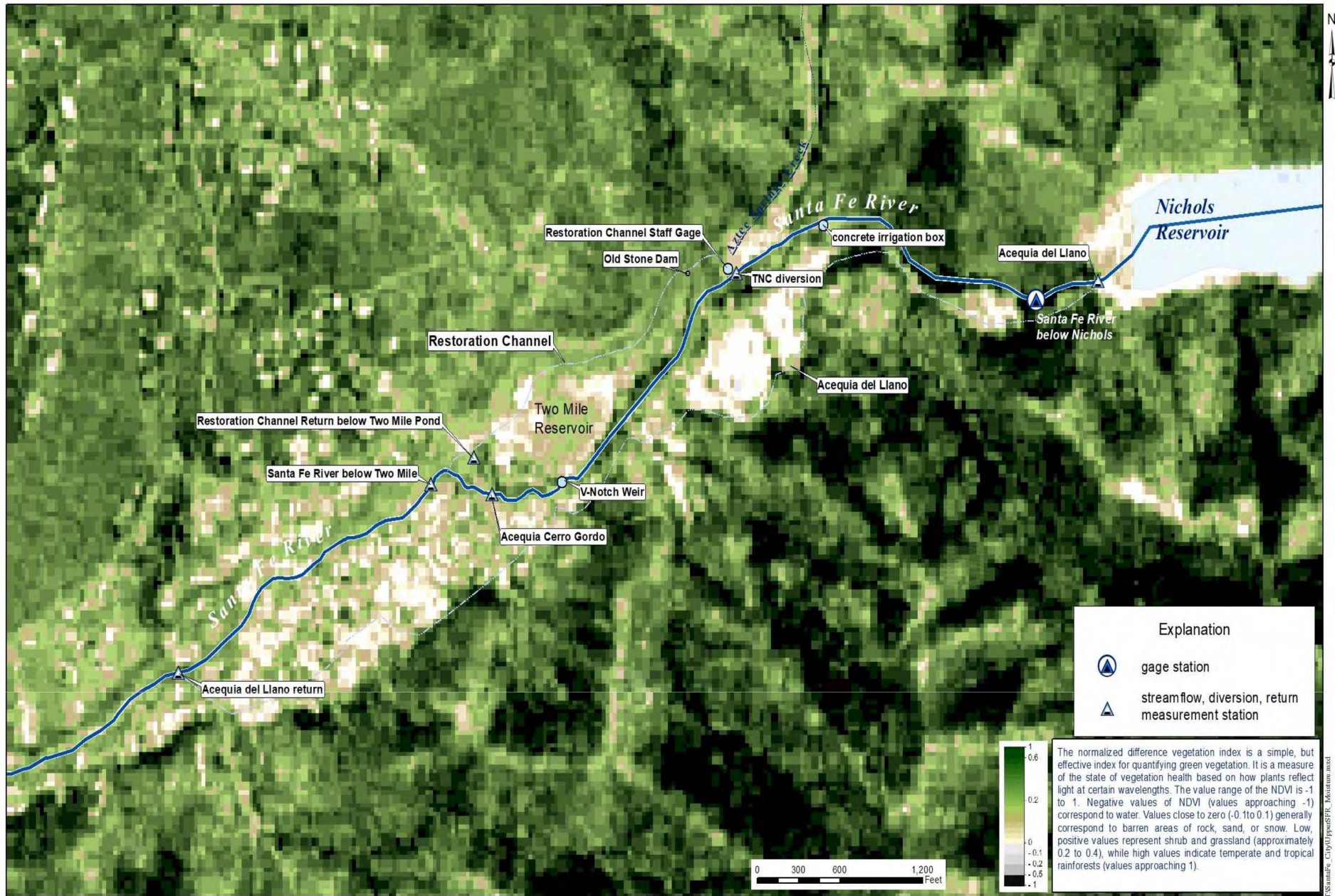
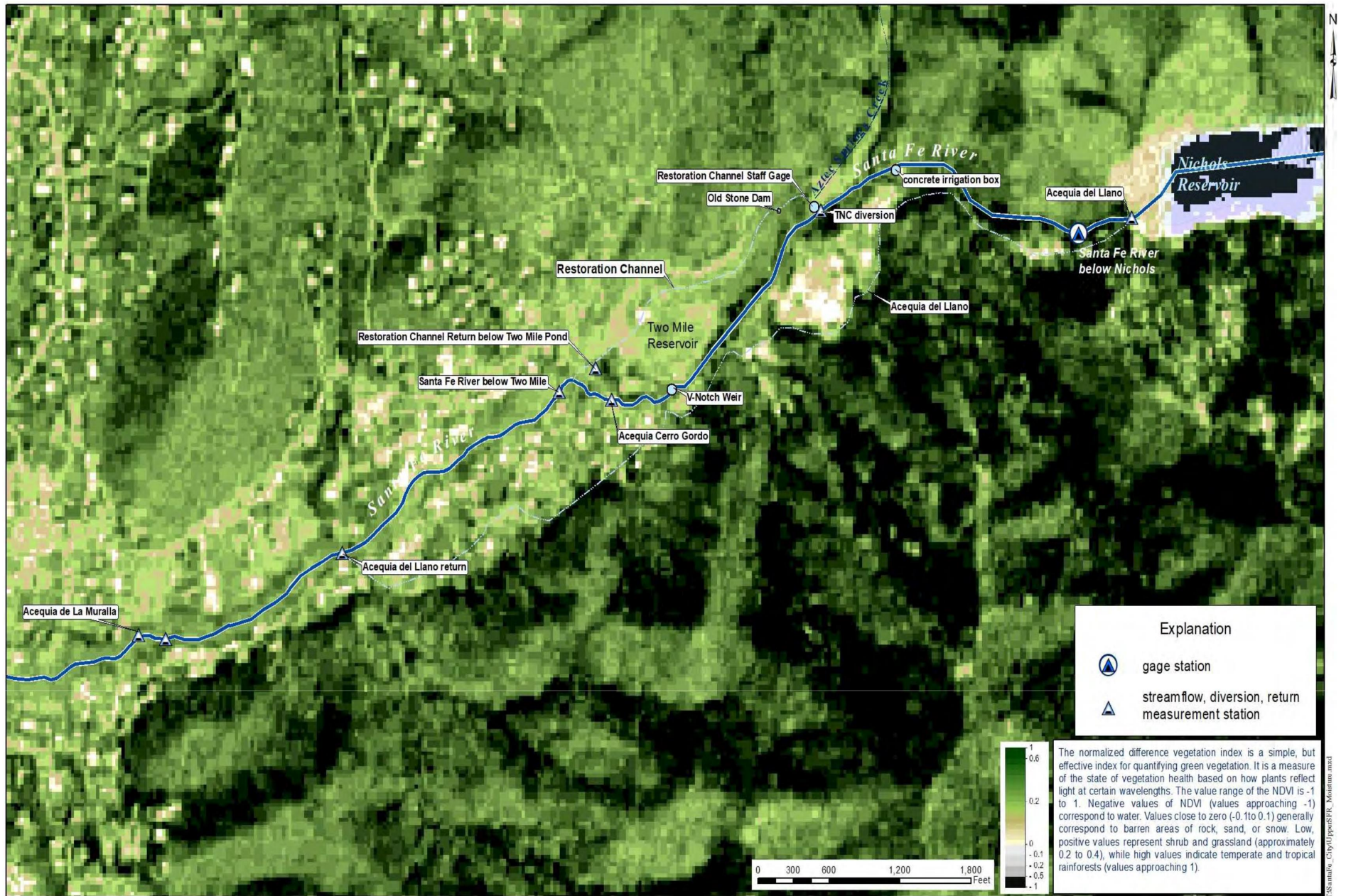


Figure C1. NDVI image of Two-Mile Pond Complex for January 16, 2024.



Normalized Difference Vegetation Index (NDVI) March 3, 2024

Figure C2. NDVI image of Two-Mile Pond Complex for February 5, 2024.



Normalized Difference Vegetation Index (NDVI): March 3, 2024

Figure C3. NDVI image of Two-Mile Pond Complex for March 3, 2024.

Appendix D.

March 7, 2024 Field Investigation Forms



DAILY FIELD LOG

ACTIVITY: March Monitoring
GEOLOGIST: DCS AM

DATE: 3/7/24
CLIENT: Santa Fe
PROJECT: 2 Mile Pond Monitoring

08:55 DCS met with Annie in South east parking lot by transect 6

09:04 Arrived at transect 6
 transect 6 Lat long WGS 84
 South 35° 41' 15.2" N 7370
 105° 53' 41.2" W

Transect 6 South Water Edge 35 41 15.6" N 7350
 105 53 41.5" W

10:16 Transect 5 35 41 15.9 7328
 South edge 105 53 39.9
 Water edge/
 Cat tail start 45' about 307° NW

10:59 Transect 4 35 41 16.7 7325
 South end 105 53 38.6

Transect 4 35 41 17.4 7302
 Cat tail edge S 105 53 39.2

11:00 A seep in the hill comes out 30 feet south of the rock.

11:32 Arrived at Transect 3
 Transect 3 SEnd 35 41 20.0 7315
 105 53 29.5

12:00 Hiked Through T 3 "Beaver Dam" 35 41 20.3
 105 53 30.3



DAILY FIELD LOG

ACTIVITY: March Monitoring
 GEOLOGIST: DCS + AM
 DATE: 3/7/24
 CLIENT: Santa Fe
 PROJECT: 2 mile Pond Monitoring

12:55	North side Transect 2	35	41	24.8	7370
		105	53	26.9	
	South side transect 2	35	41	23.8	7365
		105	53	26.8	
13:29	North side T1	35	41	25.6	7380
		105	53	24.6	
	South side T2	35	41	23.5	7376
		105	53	24.5	

We walked 343° North from "car turn in"
 ≈ 13:45 Annie left and DCS met up with SF and Findley and others

14:35 Finished Weir getting last measurements

Cat tail edge 35 41 16.1
 105 53 43.2

15:02 took pictures all along cat walk
 No visible spot to get pond depth
 or cat tail line due to 80ft thick
 wall of willows



DATE: 3/7/24
 CLIENT: City Of Santa Fe
 PROJECT: Two Mile Pond Riparian Assessment

North Side T2	35	41	24.8	7370	
Log start of debris	105	53	26.9		
South Side T2	35	41	23.8	7365	
	105	53	26.8		
North Side T1	35	41	25.6	7380	
	105	53	24.6		
South Side T1	35	41	23.5	7376	
	105	53	24.5		✓

2024 MOISTURE MEASUREMENT FORM

PAGE: 1 OF 1

DATE: 3/7 -

CLIENT: Santa Fe

PROJECT: Riparian Assessment

SITE LOCATION: Transect 1

ACTIVITY: Moisture Measurement

GEOLOGISTS: DCS+AM



Moisture Meter Description: Standard Green 1-10 gage meter,

Distance from SE endpoint in feet	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Average
	3/7										
6	3										
15	0										
30	2										
45	2										
60	3										
75	2										
90	2										
105	3										
120	1										
135	3										
150	3										
165	1										
180	3										
195	3										
210	2										
225	5										

Middle of Channel

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet

SA Code SF2MI []	SA Name : Two Mile Pond Reservoir	Project : Riparian Assesement
A de Tsct [/]	AU Name : Transect []	WOI : Two Mile Pond Reservoir
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299 (m) 2224.7
Ecoregion 6.0 NWFM		

SA General Location and Boundary (Rationale, comments)
 A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.

Driving Directions
 Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.

Ownership The Nature Conservative and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland?	no
--------------------------------------------------------------------	---------------------------	-------------------------	---------------------------	----

Surveyor Role	Surveyor Name	Surveyor Initials
Landscape	Dustin and Annie	DCS+AM
Biotic	"	"
Abiotic	"	"
Stressors	"	"

Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	3/7 /24	Start Time	13:29	End Time	13:45

SA Description

SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)

Starting to get into High desert like environment. The water has recently been discontinued to this area. But all plants appear to still be representative of how the vegetation previously looked

SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)

When getting near the edge of the valley we see more deciduous trees in the area. Aside from that it is mostly High desert.

SA Abiotic Condition (hydrological alterations [e.g., dams, walls etc.]; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)

This area had a stream that ran through it that is now no longer flowing.

Assessment Summary (Overall site condition summary and comments after the field data is collected.)

This area is like a control group because I don't expect this area to change very much.

Provisional Field Score	3.04	Rank	B	Surveyor(s)	DCS/Am	Final Score	3.04	Rank	B	Initials	DCS	Date	3/7/24
-------------------------	------	------	---	-------------	--------	-------------	------	------	---	----------	-----	------	--------

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

NMRAM - SA Rank Summary Worksheet: Montane Riverine Wetlands 2.5			
Metric Description	Rating	Wt	Final Score
Landscape Context		Σ 1.0	3.25
L1. Buffer Integrity Index	3	0.25	0.75
L2. Riparian Corridor Connectivity	4	0.25	1.0
L3. Relative Wetland Size	4	0.25	1.0
L4. Surrounding Land Use	2	0.25	0.5
Biotic		Σ	
B1. Relative Native Plant Community Composition	2	0.2	.4
B2. Vegetation Horizontal Patch Structure	2	0.2	.4
B3. Vegetation Vertical Structure	3	0.2	.6
B4. Native Riparian Tree Regeneration	2	0.2	.4
B5. Invasive Exotic Plant Species Cover	3	0.2	.6
Abiotic		Σ	
A1. Floodplain Hydrologic Connectivity	1	0.15	0.15
A2. Physical Patch Diversity	2	0.25	.5
A3. Channel Equilibrium	4	0.25	1
A4. Stream Bank Stability and Cover	4	0.25	1
A5. Soil Surface Condition	4	0.15	0.6

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	2.4	0.35	0.84
Abiotic	3.5	0.35	1.225
SA WETLAND CONDITION SCORE Σ			3.04
SA WETLAND RANK =			3.04 B

SA Wetland Rank		
Rank	Score	Description
A	≥3.25 - 4.0	Excellent Condition
<u>B</u>	≥2.5 - <3.25	Good Condition
C	≥1.75 - <2.5	Fair Condition
D	1.0 - <1.75	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	1 No water running through
			2 Exotic species
			3 No stream.

Stressor Comments (Evaluation of risk)

This area is mostly high desert which puts it at small risk because the lack of water shouldn't change much

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other	<input type="checkbox"/>	<input type="checkbox"/>	Other

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)	486.58 (ft)		

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c on the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
Banks	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA1				
2	IA2	Low as surface 0%	None	unknown	Maple, Pinon Juniper, chinise
3	IIA1				
4	IIIB1				
5	IIIC1	0	> 2%	Mullein	Willows around channel grandma grass wild eye blue stem chinise
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tall Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3				CT Score 4			
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	Raw ⁴	% SA ⁵	Wt Score ⁶			
A	2	Maple N	Pinon N	Chinisa N	Willow N						4.0	30%	1.2
B	5			Willow N	Chinisa N	blc stem N	wild Rye N				2.0	70%	1.4
C													
D													
E													
F													
G													
H													
I													
J													
K													
L													
M													
N													
O													
Final Weighted Score⁷												2.6	

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤6m (20 feet) and >25% total stratum cover; 3. Herbaceous (graminoids and forbs) >10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

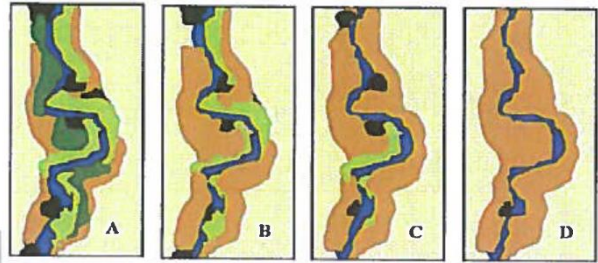
SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

Rating	CT Final Weighted Score	
<input type="radio"/> 4	≥ 3.75	<10% non-native
<input type="radio"/> 3	≥ 3.25 and <3.75	10% ≤ 20% non-native
<input checked="" type="radio"/> 2	> 2.0 and <3.25	20% ≤ 50% non-native
<input type="radio"/> 1	≤ 2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Rating	Description
<input type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input checked="" type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula $VST(\text{type}) = \text{Sum}(\%SA \text{ for CTs with same VST}) \times 100$. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA		40	50			10	

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input checked="" type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
	5	6W	
<input type="radio"/> 2	2 or 1 and 2		
	5		
	6W		
<input type="radio"/> 1	6S		
	6H		
	7		

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

B4 - Native Riparian Tree Regeneration

Table B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input checked="" type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method

Invasive cover (%)

Rating	Invasive Species Cover %
<input type="radio"/> 4	0%
<input checked="" type="radio"/> 3	>0% - <1%
<input type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10

Additional CTs and Biotic Metric Comments:

Area is very dry since recovering from winter.
 This transect is mostly high desert but does have some deciduous trees on the far NW side.

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variagated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

*limited because only middle segment
and no stream*

Table A2. Rating for Physical Patch Complexity

Rating	Description
<input type="radio"/> 4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
<input type="radio"/> 3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
<input checked="" type="radio"/> 2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
<input type="radio"/> 1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.

SA CODE : SF2MI [1]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [1]

Surveyor Initials : DCS

Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input checked="" type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE: SF2MI [1]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [1]

Surveyor Initials: DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unkno". Rank Major Stressors in Dominant Stressor column (Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	Water No longer flows here
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

Additional Comments: Area is mostly High desert. Small stream No longer has water

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet

SA Code SF2MI [2]	SA Name : Two Mile Pond Reservoir	Project : Riparian Assesement
SA Code Tsc [2]	AU Name : Transect [2]	WOI : Two Mile Pond Reservoir
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299 (m) 2224.7
Ecoregion 6.0 NWFM		

SA General Location and Boundary (Rationale, comments)

A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.

Driving Directions

Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.

Ownership The Nature Conservatve and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland? No
-------------------------------------------------------------------	---------------------------	-------------------------	------------------------------

Surveyor Role	Surveyor Name	Surveyor Initials
Landscape	Eustin	DS
Biotic	Annie	AM
Abiotic	Dustin	DS
Stressors	Both	DS

Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	Start Time	End Time			
3/7	12:55	13:29			

SA Description

SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)

Above the Dam along the overlook path, this area gets a lot of hikers and used to have a stream run through it.

SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)

This area had the highest variety of plants with many different trees shrubs and grasses. More than any other location.

SA Abiotic Condition (hydrological alterations {e.g., dams, walls etc.}; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)

This area has an abandoned stream that runs through the middle of it.

Assessment Summary (Overall site condition summary and comments after the field data is collected.)

This area is the most diverse the lack of water will likely kill the 20ft thick walls of willow trees around the stream. Ground is covered in leaves.

Provisional Field Score 3.215	Rank B	Surveyor(s) DS	Final Score 3.215	Rank B	Initials DCS	Date 3/7/24
-------------------------------	--------	----------------	-------------------	--------	--------------	-------------

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DS

NMRRAM - SA Rank Summary Worksheet: Montane Riverine Wetlands 2.5

Metric Description	Rating	Wt	Final Score
Landscape Context		Σ 1.0	3.25
L1. Buffer Integrity Index	3	0.25	0.75
L2. Riparian Corridor Connectivity	4	0.25	1.0
L3. Relative Wetland Size	4	0.25	1.0
L4. Surrounding Land Use	2	0.25	0.5
Biotic		Σ	
B1. Relative Native Plant Community Composition	4	0.2	.8
B2. Vegetation Horizontal Patch Structure	2	0.2	.4
B3. Vegetation Vertical Structure	3	0.2	.6
B4. Native Riparian Tree Regeneration	4	0.2	.8
B5. Invasive Exotic Plant Species Cover	4	0.2	.8
Abiotic		Σ	
A1. Floodplain Hydrologic Connectivity	-	0.25	-
A2. Physical Patch Diversity	2	0.25	.5
A3. Channel Equilibrium	4	0.25	1
A4. Stream Bank Stability and Cover	4	0.25	1
A5. Soil Surface Condition	2	0.25	.5

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	3.4	0.35	1.19
Abiotic	3	0.35	1.05
SA WETLAND CONDITION SCORE Σ			3.215
SA WETLAND RANK = 3.215			B

SA Wetland Rank		
Rank	Score	Description
A	≥3.25 - 4.0	Excellent Condition
B	≥2.5 - <3.25	Good Condition
C	≥1.75 - <2.5	Fair Condition
D	1.0 - <1.75	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	1 lots of trail use
			2 No water going to stream
			3 Abandoned stream.

Stressor Comments (Evaluation of risk)

This area is high popularity in the park with a lot of trails and benches. No water is going through the stream anymore. Could kill Willow trees.

SA CODE : SF2MI [2]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [2]

Surveyor Initials : DCS

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other	<input type="checkbox"/>	<input type="checkbox"/>	Other

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)	486.58 (ft)		

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c on the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Plant Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA2	0%	None	Elm? unknown	Horse tail, Juniper, Restoration channel is dry vent along rock path
2	IA2	" "	" "	" "	" " Around the channel 20ft on either side is more dense Willow
3	IIA1				
4	IIIB1				
5	IIIC1				
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tall Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3				CT Score 4	
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	Raw ⁴	% SA ⁵	Wt Score ⁶	
A	Z	Cottonwood N	Elm u	Willow N	Juniper N	Horsefall type u	Bluestem wood red u	3.75	100%	3.75	
B											
C											
D											
E											
F											
G											
H											
I											
J											
K											
L											
M											
N											
O											
Final Weighted Score⁷										3.75	

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤ 6m (20 feet) and > 25% total stratum cover; 3. Herbaceous (graminoids and forbs) > 10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

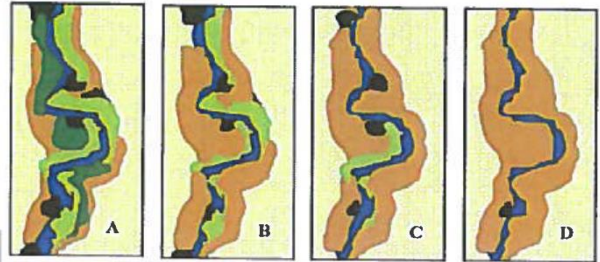
SA CODE : SF2MI [2]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [2]

Surveyor Initials : DCS

Table B1. Relative Native Plant Community Composition Rating		
Rating	CT Final Weighted Score	
<input checked="" type="radio"/> 4	≥ 3.75	<10% non-native
<input type="radio"/> 3	≥ 3.25 and <3.75	10% ≤20% non-native
<input type="radio"/> 2	> 2.0 and <3.25	20% ≤50% non-native
<input type="radio"/> 1	≤2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Table B2. Rating for Vegetation Horizontal Patch Structure	
Rating	Description
<input type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input checked="" type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula $VST(\text{type}) = \text{Sum}(\%SA \text{ for CTs with same VST}) \times 100$. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA	50			50			

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input checked="" type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
	5	6W	
<input type="radio"/> 2	2 or 1 and 2		
	5		
	6W		
<input type="radio"/> 1	6S		
	6H		
	7		

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

B4 Native Riparian Tree Regeneration

Table B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input checked="" type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method Invasive cover (%)

Table B5. Ratings for Invasive Exotic Plant Species Cover

Rating	Invasive Species Cover %
<input type="radio"/> 4 <input checked="" type="checkbox"/>	0%
<input type="radio"/> 3	>0% - <1%
<input type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10

Additional CTs and Biotic Metric Comments:

More of a High forest environment with lots of diversity. New life starting all around but mostly covered in leaves and other debris.

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variagated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

limited because only middle segment and lack of water source

Table A2. Rating for Physical Patch Complexity

Rating	Description
4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

Table A3. Rating for Channel Equilibrium	
Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Table A4. Stream Bank Stability and Cover Rating	
Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [2]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [2]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input checked="" type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE : SF2MI [2]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [2]

Surveyor Initials : DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unkno". Rank Major Stressors in Dominant Stressor column(Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

Additional Comments *Water , shut off to 'water is shut off to this area'*

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet					
SA Code SF2MI [3]	SA Name : Two Mile Pond Reservoir			Project : Riparian Assesement	
A Code Tsc [3]	AU Name : Transect [3]			WOI : Two Mile Pond Reservoir	
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299	(m) 2224.7	Ecoregion 6.0 NWFM	
SA General Location and Boundary (Rationale, comments) A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.					
Driving Directions Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.					
Ownership The Nature Conservative and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland?	No	
Surveyor Role	Surveyor Name			Surveyor Initials	
Landscape	Dustin			DS	
Biotic	Annie			AM	
Abiotic	Dustin			DS	
Stressors	Both			DS	
Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	Start Time	End Time			
3/7/24	11:32	12:55			
SA Description					
SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)					
This Area is the middle of the wet land with beaver dams and larger forested trees.					
SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)					
Everything is dry in this area vegetation wise, There were small gnats flying around the water/dammed area.					
SA Abiotic Condition (hydrological alterations {e.g., dams, walls etc.}; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)					
This area had a storm flow/Beaver dam. This dam held water ~ 7 inches above the ground level.					
Assessment Summary (Overall site condition summary and comments after the field data is collected.)					
This area is very dry right now around dam and covered in leaves, Not much ground is viewable except on the trail.					
Provisional Field Score 3.338 Rank A	Surveyor(s) DCS	Final Score 3.338 Rank A	Initials DCS	Date 3/7/24	

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

NMRRAM - SA Rank Summary Worksheet: Montane Riverine Wetlands 2.5

Metric Description	Rating	Wt	Final Score
Landscape Context		Σ 1.0	3.25
L1. Buffer Integrity Index	3	0.25	0.75
L2. Riparian Corridor Connectivity	4	0.25	1.0
L3. Relative Wetland Size	4	0.25	1.0
L4. Surrounding Land Use	2	0.25	0.5
Biotic		Σ	
B1. Relative Native Plant Community Composition	2	0.2	0.4
B2. Vegetation Horizontal Patch Structure	4	0.2	0.8
B3. Vegetation Vertical Structure	3	0.2	0.6
B4. Native Riparian Tree Regeneration	3	0.2	0.6
B5. Invasive Exotic Plant Species Cover	3	0.2	0.6
Abiotic		Σ	
A1. Floodplain Hydrologic Connectivity	-	0.3	-
A2. Physical Patch Diversity	3	0.25	0.75
A3. Channel Equilibrium	4	0.25	1.0
A4. Stream Bank Stability and Cover	4	0.25	1.0
A5. Soil Surface Condition	4	0.25	1.0

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	3.06	0.35	1.05
Abiotic	3.75	0.35	1.312
SA WETLAND CONDITION SCORE Σ			3.338
SA WETLAND RANK =			3.338 A

SA Wetland Rank		
Rank	Score	Description
A	≥3.25 - 4.0	Excellent Condition
B	≥2.5 - <3.25	Good Condition
C	≥1.75 - <2.5	Fair Condition
D	1.0 - <1.75	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	1 Tralls
			2 Beaver Dam n
			3 lack of water

Stressor Comments (Evaluation of risk)

This Area is capable of holding a lot of water in the stormflow/Beaver Dam, lack of water could affect this.

SA CODE : SF2MI [3]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [3]

Surveyor Initials : DCS

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other _____	<input type="checkbox"/>	<input type="checkbox"/>	Other _____

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)			486.58 (ft)

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c in the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
Banks	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Plant Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA1				
2	IA2	70	72%	Mullein	Cotton wood and elm ground is dead leaves and branches
3	IIA1	70% ^{veg}	N/A	None	Beak grain/grass willows cat tails beaver damming/3 horn reeds
4	IIIB1				
5	IIIC1				
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tall Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3		CT Score 4			
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	Raw ⁴	% SA ⁵	Wt Score ⁶	
A	2	Elm U N	Catbark N	Willow N	-	Fluellen E	Some grass U	2.4	50	1.2	
B	3	Catbark N	-	Willows N	-	Catbark N	Beetgrass U	2.5	50	1.25	
C											
D											
E											
F											
G											
H											
I											
J											
K											
L											
M											
N											
O											
Final Weighted Score⁷											2.45

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤ 6m (20 feet) and >25% total stratum cover; 3. Herbaceous (graminoids and forbs) > 10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

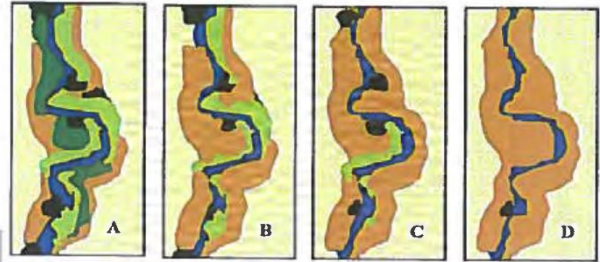
SA CODE : SF2MI [3]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [3]

Surveyor Initials : DCS

Rating	CT Final Weighted Score	
<input type="radio"/> 4	≥ 3.75	<10% non-native
<input type="radio"/> 3	≥ 3.25 and <3.75	10% ≤ 20% non-native
<input checked="" type="radio"/> 2	> 2.0 and <3.25	20% ≤ 50% non-native
<input type="radio"/> 1	≤ 2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Table B2. Rating for Vegetation Horizontal Patch Structure

Rating	Description
<input checked="" type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula $VST(\text{type}) = \text{Sum}(\%SA \text{ for CTs with same VST}) \times 100$. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA	50			50			

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input checked="" type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
<input type="radio"/> 2	5	6W	
	6S		
	6H		
<input type="radio"/> 1	7		

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

B4 - Native Riparian Tree Regeneration

Table B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input checked="" type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method

Invasive cover (%)

Table B5. Ratings for Invasive Exotic Plant Species Cover

Rating	Invasive Species Cover %
<input type="radio"/> 4	0%
<input checked="" type="radio"/> 3	>0% - <1%
<input type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10%

Additional CTs and Biotic Metric Comments:

This area is very much a High Structure forest with some short shrub land around the stream. visible gnats and new plants growing around water.

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variiegated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

Moderate chosen because only looked at middle segment

Table A2. Rating for Physical Patch Complexity

Rating	Description
<input type="radio"/> 4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
<input checked="" type="radio"/> 3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
<input type="radio"/> 2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
<input type="radio"/> 1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [3]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [3]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input checked="" type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE : SF2MI [3]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [3]

Surveyor Initials : DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unknown". Rank Major Stressors in Dominant Stressor column (Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

Additional Comments *Less water being sent to this area*

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet

SA Code SF2MI [4]	SA Name : Two Mile Pond Reservoir	Project : Riparian Assesment			
A Code Tsc [4]	AU Name : Transect [4]	WOI : Two Mile Pond Reservoir			
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299	(m) 2224.7	Ecoregion 6.0 NWFM	

SA General Location and Boundary (Rationale, comments)
 A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.

Driving Directions
 Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.

Ownership The Nature Conservative and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland?	No
--------------------------------------------------------------------	---------------------------	-------------------------	---------------------------	----

Surveyor Role	Surveyor Name				Surveyor Initials
Landscape	Dustin				DS
Biotic	Annie				AM
Abiotic	Dustin				DS
Stressors	Both				DS
Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	Start Time	End Time			
3/7/24	10:59	11:32			

SA Description

SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)

An abandoned pond, the wet land sits in a valley and recently got its water from the river shut off.

SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)

This location is mostly cat tails and there sounds like a large population of various birds in the cat tails. Loud crowd like birds.

SA Abiotic Condition (hydrological alterations [e.g., dams, walls etc.]; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)

This area sits in the steepest slope of the canyon. The wetland here is almost entirely covered in cat tails.

Assessment Summary (Overall site condition summary and comments after the field data is collected.)

This area is the most densely vegetated area in the wet land in terms of SA coverage. almost entire transect is cat tails and willows.

Provisional Field Score <u>3.32</u> Rank <u>A</u> Surveyor(s) <u>DS</u>	Final Score <u>3.32</u> Rank <u>A</u> Initials <u>DCS</u> Date <u>3/7/24</u>
-------------------------------------------------------------------------	------------------------------------------------------------------------------

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

Metric Description				Rating	Wt	Final Score	
Landscape Context					Σ	1.0	3.25
L1. Buffer Integrity Index				3	0.25	0.75	
L2. Riparian Corridor Connectivity				4	0.25	1.0	
L3. Relative Wetland Size				4	0.25	1.0	
L4. Surrounding Land Use				2	0.25	0.5	
Biotic					Σ		
B1. Relative Native Plant Community Composition				4	0.2	.8	
B2. Vegetation Horizontal Patch Structure				3	0.2	.6	
B3. Vegetation Vertical Structure				3	0.2	.6	
B4. Native Riparian Tree Regeneration				3	0.2	.6	
B5. Invasive Exotic Plant Species Cover				3	0.2	.6	
Abiotic					Σ		
A1. Floodplain Hydrologic Connectivity				1	0.25	0.25	
A2. Physical Patch Diversity				2	0.25	.5	
A3. Channel Equilibrium				4	0.25	1	
A4. Stream Bank Stability and Cover				4	0.25	1	
A5. Soil Surface Condition				4	0.25	1	

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	3.2	0.35	1.12
Abiotic	3.5	0.35	1.225
SA WETLAND CONDITION SCORE Σ			3.32
SA WETLAND RANK =			3.32 A

SA Wetland Rank		
Rank	Score	Description
A	$\geq 3.25 - 4.0$	Excellent Condition
B	$\geq 2.5 - < 3.25$	Good Condition
C	$\geq 1.75 - < 2.5$	Fair Condition
D	$1.0 - < 1.75$	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	1 Trails 2 Water Stoppage 3 cat tails

Stressor Comments (Evaluation of risk)

Not Many stressors here besides the lack of water that could happen this year

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other _____	<input type="checkbox"/>	<input type="checkbox"/>	Other _____

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)			486.58 (ft)

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c on the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
Banks	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA1				
2	IA2				
3	IIA1				
4	IIIB1	90%	U	N	Willows + cat tails lots of birds in cat tails
5	IIIC1	70%	10% of vegetation	Mustard/Mullein	Some Junipers, more mullein, salt bush, blue stem
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tall Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3						CT Score 4	
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	E N	Raw4	% SA5	Wt Score6		
A	5			Salt bush N	Chimiseas N	Blue Stem N	Muller's E		2.5	10%	6.25		
B	4			Willow N	Cattail N	Cattail N			4.0	90%	3.6		
C													
D													
E													
F													
G													
H													
I													
J													
K													
L													
M													
N													
O													
Final Weighted Score7												3.85	

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤6m (20 feet) and >25% total stratum cover; 3. Herbaceous (graminoids and forbs) >10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

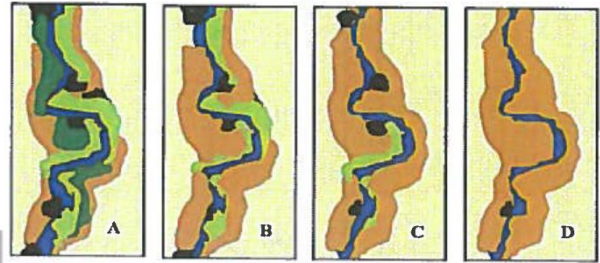
SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

Rating	CT Final Weighted Score	
<input checked="" type="radio"/> 4	≥ 3.75	<10% non-native
<input type="radio"/> 3	≥ 3.25 and <3.75	10% ≤ 20% non-native
<input type="radio"/> 2	> 2.0 and <3.25	20% ≤ 50% non-native
<input type="radio"/> 1	≤ 2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Rating	Description
<input type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input checked="" type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula $VST(\text{type}) = \text{Sum}(\%SA \text{ for CTs with same VST}) \times 100$. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA			50		50		

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input checked="" type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
	5	6W	
<input type="radio"/> 2	2 or 1 and 2		
	5		
	6W		
<input type="radio"/> 1	6S		
	6H		
	7		

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

B4 Native Riparian Tree Regeneration

Table B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input checked="" type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method

Invasive cover (%)

Table B5. Ratings for Invasive Exotic Plant Species Cover

Rating	Invasive Species Cover %
<input type="radio"/> 4	0%
<input checked="" type="radio"/> 3	>0% - <1%
<input type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10%

Additional CTs and Biotic Metric Comments:

Lots of birds and life can be heard in the willows and cat tails but none identified. Still recovering from winter

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variagated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

All cat tail in wetland
Chose limited since only wetland and Middle Seg

Table A2. Rating for Physical Patch Complexity

Rating	Description
<input type="radio"/> 4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
<input type="radio"/> 3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
<input checked="" type="radio"/> 2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
<input type="radio"/> 1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.	

SA CODE : SF2MI [4]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [4]

Surveyor Initials : DCS

Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [4]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [4]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input checked="" type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE : SF2MI [4]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [4]

Surveyor Initials : DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unknown". Rank Major Stressors in Dominant Stressor column(Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

Additional Comments

Less water being sent here than before

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet

SA Code SF2MI [5]	SA Name : Two Mile Pond Reservoir	Project : Riparian Assesement
A Code Tsct [5]	AU Name : Transect [5]	WOI : Two Mile Pond Reservoir
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299 (m) 2224.7 Ecoregion 6.0 NWFM

SA General Location and Boundary (Rationale, comments)
 A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.

Driving Directions
 Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.

Ownership The Nature Conservative and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland?	Yes
--------------------------------------------------------------------	---------------------------	-------------------------	---------------------------	-----

Surveyor Role	Surveyor Name	Surveyor Initials
Landscape	Dustin	DS
Biotic	Annie	AM
Abiotic	Dustin	DS
Stressors	Both	DS

Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	3/7/24	Start Time	10:16	End Time	10:59

SA Description

SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)
 Marsh land within the valley of an abandoned pond.
 A popular hiking spot.

SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)
 Mostly Marsh land. Does transition to High desert on edges of valley

SA Abiotic Condition (hydrological alterations {e.g., dams, walls etc.}; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)
 Sits within a valley some sand bars and lots of cat tails filling the wet land.

Assessment Summary (Overall site condition summary and comments after the field data is collected.)
 Very dry this time of year not many "alive" plants birds heard Northeast.

Provisional Field Score 3.26 Rank A Surveyor(s) DCS	Final Score 3.26 Rank A Initials DCS Date 3/7/24
-----------------------------------------------------	--------------------------------------------------

SA CODE : SF2MI [5]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [5]

Surveyor Initials : DCS

NMRAM - SA Rank Summary Worksheet: Montane Riverine Wetlands 2.5

Metric Description	Rating	Wt	Final Score
Landscape Context		Σ 1.0	3.25
L1. Buffer Integrity Index	3	0.25	0.75
L2. Riparian Corridor Connectivity	4	0.25	1.0
L3. Relative Wetland Size	4	0.25	1.0
L4. Surrounding Land Use	2	0.25	0.5
Biotic		Σ	
B1. Relative Native Plant Community Composition	3	0.2	.6
B2. Vegetation Horizontal Patch Structure	3	0.2	.6
B3. Vegetation Vertical Structure	3	0.2	.6
B4. Native Riparian Tree Regeneration	3	0.2	.6
B5. Invasive Exotic Plant Species Cover	2	0.2	.4
Abiotic		Σ	
A1. Floodplain Hydrologic Connectivity	—	0.25	—
A2. Physical Patch Diversity	3	0.25	.75
A3. Channel Equilibrium	4	0.25	1
A4. Stream Bank Stability and Cover	4	0.25	1
A5. Soil Surface Condition	4	0.25	1

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	2.8	0.35	0.98
Abiotic	3.75	0.35	1.31
SA WETLAND CONDITION SCORE Σ			3.26
SA WETLAND RANK =			3.26 A

SA Wetland Rank		
Rank	Score	Description
A	≥3.25 - 4.0	Excellent Condition
B	≥2.5 - <3.25	Good Condition
C	≥1.75 - <2.5	Fair Condition
D	1.0 - <1.75	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	

Stressor Comments (Evaluation of risk)

Water has stopped to marsh and popular trail spot is by here.

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other _____	<input type="checkbox"/>	<input type="checkbox"/>	Other _____

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)			486.58 (ft)

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c on the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Plant Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA1				
2	IA2				
3	IIA1				
4	IIIB1	80%	Mullain	Mullain some mustard	Willow then cat tail at water line
5	IIIC1				
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tail Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3		CT Score 4			
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	Raw ⁴	% SA ⁵	Wt Score ⁶	
A	4			Willow N	Cat tail N	Mullein E	Tridens Grass N	3.5	96%	3.15	
B											
C											
D											
E											
F											
G											
H											
I											
J											
K											
L											
M											
N											
O											
Final Weighted Score⁷											3.15

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤6m (20 feet) and >25% total stratum cover; 3. Herbaceous (graminoids and forbs) > 10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

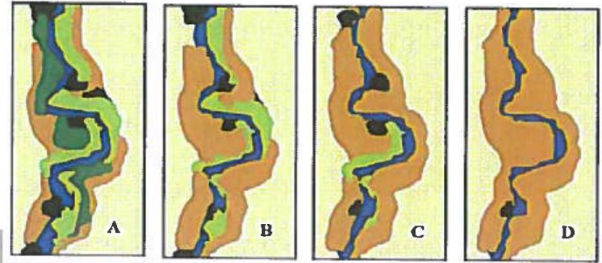
SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

Rating	CT Final Weighted Score	
<input type="radio"/> 4	≥ 3.75	<10% non-native
<input checked="" type="radio"/> 3	≥ 3.25 and <3.75	10% ≤ 20% non-native
<input type="radio"/> 2	> 2.0 and <3.25	20% ≤ 50% non-native
<input type="radio"/> 1	≤ 2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Rating	Description
<input type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input checked="" type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula VST(type) = Sum (%SA for CTs with same VST) x 100. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA			80%			20%	

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input checked="" type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
	5	6W	
<input type="radio"/> 2	2 or 1 and 2		
	5		
<input type="radio"/> 1	6S		
	6H		
	7		

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

B4 - Native Riparian Tree Regeneration

B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input checked="" type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method Invasive cover (%)

Table B5. Ratings for Invasive Exotic Plant Species Cover

Rating	Invasive Species Cover %
<input type="radio"/> 4	0%
<input type="radio"/> 3	>0% - <1%
<input checked="" type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10

Additional CTs and Biotic Metric Comments:

Trails of deer seen and gold fish seen in pond. Quick transition from High desert to wetland.

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variiegated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

Calling Moderate since only analyzing middle segment

Table A2. Rating for Physical Patch Complexity

Rating	Description
<input type="radio"/> 4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
<input checked="" type="radio"/> 3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
<input type="radio"/> 2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
<input type="radio"/> 1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.

SA CODE : SF2MI [5]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [5]

Surveyor Initials : DCS

Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [5]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [5]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input checked="" type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE : SF2MI [5]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [5]

Surveyor Initials : DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unkno". Rank Major Stressors in Dominant Stressor column(Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

Additional Comments *less water being sent here*

NMRAM Montane Riverine Wetlands Version 2.5

SA Cover Worksheet

SA Code SF2MI [6]	SA Name : Two Mile Pond Reservoir	Project : Riparian Assesement
A Code Tsct [6]	AU Name : Transect [6]	WOI : Two Mile Pond Reservoir
County Santa Fe	HUC 12 Headwaters Santa Fe River	Elevation (ft) 7299 (m) 2224.7 Ecoregion 6.0 NWFM

SA General Location and Boundary (Rationale, comments)

A riparian system that leads into a pond located on the east side of Santa Fe bordering the Santa Fe National Forest. This reservoir was decommissioned due to safety concerns regarding the reservoir and a water diversion to the area was recently shut down due to lack of water rights.

Driving Directions

Driving to Santa Fe from Albuquerque you head north on Old Pecos Trail. Then head east on Camino Del Monte Sol and right on Canyon Road until you reach the reservoir located to the North.

Ownership The Nature Conservative and The Santa Fe National Forest	Data Sharing Restrictions	Results to client only.	Fish Observed in Wetland?	YES
--------------------------------------------------------------------	---------------------------	-------------------------	---------------------------	-----

Surveyor Role	Surveyor Name				Surveyor Initials
Landscape	Dustin				DS
Biotic	Annie				DCS
Abiotic	Dustin				DS
Stressors	Both				DCS AM
Easting (m)	Northing (m)	Zone	Datum	Latitude (DD ft)	Longitude (DD ft)
-105° 53' 24" W	35° 41' 23" N	13	NAD- 83 UTM	35.689722	-105.89
Survey Date	Start Time	End Time			
3/7/24	09:04	10:16			

SA Description

SA Landscape Context (summarize the wetland and surrounding landscape; include condition and impacts)

An abandoned pond that has been acting as a nature preserve. Water recently turned off

SA Biotic Condition (vegetation patterns, composition and structure, exotics and invasives, disturbance evidence, fire and herbivory)

Dry end of winter vegetation. Not much green/new life.

SA Abiotic Condition (hydrological alterations {e.g., dams, walls etc.}; flooding characteristics and evidence of overbank flooding; soil disturbance and other site impacts; explain the hydrologic breaks or other factors that define the SA limits)

Sits in a valley and has drain pipe that limits height of water

Assessment Summary (Overall site condition summary and comments after the field data is collected.)

Very dry vegetation with little to no wild life present. High desert transitions to willows and cat tails.

Provisional Field Score	3.125 Rank	B	Surveyor(s)	DCS	Final Score	3.125 Rank	B	Initials	DCS	Date	3/7/24
-------------------------	------------	---	-------------	-----	-------------	------------	---	----------	-----	------	--------

SA CODE : SF2MI [6]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [6]

Surveyor Initials : DCS

NMRRAM - SA Rank Summary Worksheet: Montane Riverine Wetlands 2.5

Metric Description	Rating	Wt	Final Score
Landscape Context		Σ 1.0	3.25
L1. Buffer Integrity Index	3	0.25	0.75
L2. Riparian Corridor Connectivity	4	0.25	1.0
L3. Relative Wetland Size	4	0.25	1.0
L4. Surrounding Land Use	2	0.25	0.5
Biotic		Σ	
B1. Relative Native Plant Community Composition	2	0.2	.4
B2. Vegetation Horizontal Patch Structure	3	0.2	.6
B3. Vegetation Vertical Structure	2	0.2	.4
B4. Native Riparian Tree Regeneration	3	0.2	.6
B5. Invasive Exotic Plant Species Cover	2	0.2	.4
Abiotic		Σ	
A1. Floodplain Hydrologic Connectivity	—	0.25	—
A2. Physical Patch Diversity	3	0.25	.75
A3. Channel Equilibrium	4	0.25	1
A4. Stream Bank Stability and Cover	4	0.25	1
A5. Soil Surface Condition	4	0.125	0.5

SA Condition Scoring Summary			
Major Attribute	Score	Wt.	Wt. Score
Landscape Context	3.25	0.3	0.975
Biotic	2.40	0.35	0.84
Abiotic	3.75	0.35	1.31
SA WETLAND CONDITION SCORE Σ			3.125
SA WETLAND RANK =			B

SA Wetland Rank		
Rank	Score	Description
A	≥3.25 - 4.0	Excellent Condition
B	≥2.5 - <3.25	Good Condition
C	≥1.75 - <2.5	Fair Condition
D	1.0 - <1.75	Poor Condition

Stressor Summary	Major	Minor	Top Three
	0	0	1 trails
			2 cat tails
			3 mustard

Stressor Comments (Evaluation of risk)

Small trails that run by trail.
 Cat tails taking over edge of pond.
 Some patches of Mustard.

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

Landscape Context

L1 - Buffer Integrity Index

Worksheet 1a. Buffer and RCC Checklist. Check off land cover elements within the buffer area or RCC corridors that are either allowed, or are excluded and considered non-buffer elements that disrupt ecosystem connectivity. Indicate the imagery type and date (season and year of imagery).

Imagery	Google Earth KMZ. file		Image Date	6/23	
Allowed buffer/RCC land cover elements			Excluded non-buffer/RCC land cover elements		
Buffer	RCC		Buffer	RCC	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Natural or semi-natural vegetation patches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial/residential developments, parking lots, dams, bridges, revetments, and other structures
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Small irrigation ditches without levees	<input type="checkbox"/>	<input type="checkbox"/>	Lawns, parks, golf courses, sports fields
<input type="checkbox"/>	<input type="checkbox"/>	Old fields, unmaintained	<input type="checkbox"/>	<input type="checkbox"/>	Railroads
<input type="checkbox"/>	<input type="checkbox"/>	Open range land	<input type="checkbox"/>	<input type="checkbox"/>	Maintained levees, sediment piles, construction materials, staging areas
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Foot trails, horse trails, unpaved bike trails (low intensity)	<input type="checkbox"/>	<input type="checkbox"/>	Intensive livestock areas, horse paddocks, feedlots
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-channel open water	<input type="checkbox"/>	<input type="checkbox"/>	Intensive agriculture: maintained pastures, hay fields, row crops, orchards, and vineyards
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Non-functioning abandoned vegetated levees, or naturally occurring levees	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Paved roads or developed second-order unpaved but graded roads
<input type="checkbox"/>	<input type="checkbox"/>	unpaved two tracks roads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open water bounded by a levee or other manmade structure
<input type="checkbox"/>	<input type="checkbox"/>	Other	<input type="checkbox"/>	<input type="checkbox"/>	Other

Worksheet 1b. Buffer Percent Sub-metric. Measure or estimate the percentage of the SA perimeter composed of allowed buffer elements and enter into the Buffer Percent Box below. Rate the sub-metric using Table L1a and enter the rating on the Buffer Integrity Summary Worksheet 1d.

Buffer Percent (%)=	85%
---------------------	-----

Rating	Buffer Percent
<input type="radio"/> 4	100%
<input checked="" type="radio"/> 3	≥80% - <100%
<input type="radio"/> 2	≥50% - <80%
<input type="radio"/> 1	<50%

Worksheet 1c. Buffer Width Sub-metric. Measure the length of each buffer line in meters in the GIS or on the map. Average the line lengths and rate using Table L1b. Enter the rating on the Buffer Integrity Summary Worksheet 1d.

Line	Buffer Width (m)	Buffer Width (ft)	Line	Buffer Width (m)	Buffer Width (ft)
A	164.26	538.91	E	161.93	531.26
B	125.25	410.92	F	231.48	759.44
C	115.39	378.57	G	121.25	397.80
D	111.07	364.40	H	155.87	511.38
Average		148.31 (m)			486.58 (ft)

Rating	Average buffer width
<input type="radio"/> 4	≥190m
<input checked="" type="radio"/> 3	≥130 - <190m
<input type="radio"/> 2	≥65 - <130m
<input type="radio"/> 1	<65m

Worksheet 1d. Buffer Integrity Summary. Enter the sub-metric Ratings from Tables L1a and L1b above to calculate the Buffer Integrity Index Score using the formula in the box below. Using the Buffer Integrity Index Score, enter rating for Buffer Integrity in Table L1c on the SA Summary Worksheet.

Buffer % Rating	+	Buffer Width Rating	/2 =	Buffer Integrity Index Score
3	+	3	/2 =	3

Rating	Score
<input type="radio"/> 4	>3.5
<input checked="" type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	≤1.5

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

L2 - Riparian Corridor Connectivity (RCC)

Worksheet 2. RCC excluded non-buffer elements calculation. Refer to worksheet 1a for excluded non-buffer RCC land cover elements. Following the steps in the Field Guide, enter the summed values in meters for excluded element lengths for each bank within each segment upstream and downstream of the SA. Sum the values for each segment and calculate % Segment Disruption for the upstream side and the downstream side. Add the total disruption for upstream and downstream segments and then calculate the % Total Disruptions for the riparian corridor. Rate Riparian Corridor Connectivity using Table L2 and the data from this worksheet. Enter rating on the SA Summary Worksheet.

Segments	Upstream Segment		Downstream Segment	
Banks	Left Bank	Right Bank	Left Bank	Right Bank
A) Total Bank Disruption (m)	0	0	0	0
B) Total Disruption by Segment (m)	0		0	
C) % Segment Disruption = (B/1000)*100	0		0	
D) Total Disruption both segments	0			
E) % Total Disruptions = (D/2000)*100	Zero disruption noticeable along the banks.			

Rating	Description
<input checked="" type="radio"/> 4	0% total disruption on both segments combined.
<input type="radio"/> 3	<15% total disruption on both segments combined.
<input type="radio"/> 2	≥15% - <40% total disruption on both segments combined.
<input type="radio"/> 1	≥40% total disruption on both segments combined.

L3 - Relative Wetland Size

Worksheet 3a. Calculate the Relative Size Ratio (RSR) between the current WOI size and the historic WOI size. b. Calculate the Relative Wetland Size Score (RWSI (%)) as (1-RSR)*100. Rate Relative Wetland Size Index using Table L3 and enter rating on the SA Summary Worksheet.

RSR					RWSI						
Current Size	/	Historic Size	=	RSR	1	-	RSR	X	100	=	RWSI (%)
9	/	10	=	0.9	1	-	0.1	X	100	=	10

Table L3. Relative Wetland Size Rating

Rating	RWSI Score	Description
<input checked="" type="radio"/> 4	≤10%	Wetland is at or only minimally reduced from its full natural extent
<input type="radio"/> 3	>10% - ≤40%	Wetland remains equal to or more than 60% of its natural size
<input type="radio"/> 2	>40% - ≤70%	Wetland has been reduced by more than 40% its natural size
<input type="radio"/> 1	>70%	Wetland has been reduced by more than 70% its natural size

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

L4 - Surrounding Land Use

Worksheet 4. Surrounding Land Use. Enter the percent area occupied by a given Land Use Element in the Land Use Zone (LUZ) surrounding the SA. Calculate the Land Use Index (LUI) Score by element as the product of the element coefficient times the percent of the LUZ Area occupied. (The %LUZ Area must total 100%.) Sum the LUI scores for each element to create the final LUI Score. Rate using Table L4 and enter the rating in the SA Rank Summary Worksheet.

Land Use Element	Coef	% LUZ Area	LUI Score
Paved roads, parking lots, domestic or commercially developed buildings, mining (gravel pit, quarry, open pit, strip mining), railroads	0	0	0
Unpaved roads (e.g., driveway, tractor trail, unpaved parking lots), paddock, dirt lot	0.1	0	0
Dredging, borrow pits, abandoned mines, water-filled artificial impoundments (ponds and reservoirs)	0.1	0	0
Filling or dumping of sediment or soils	0.1	0	0
Intense recreation (all-terrain vehicle use, camping, popular fishing spot, etc.)	0.3	0	0
Rip-rapped channel (highly modified channel with severely limited vegetation zone that is altered by human activities but not a completely concrete channel [that goes under paved roads]), junkyards, trash dumps, disturbed ground (not including roads)	0.3	0	0
Ski area	0.4	0	0
Dam sites and flood-disturbed shorelines around water storage reservoirs	0.5	0	0
Abandoned artificial impoundments (ponds and reservoirs) and associated disturbed flood zones	0.5	10	5
Artificial/Constructed wetlands, irrigation ditches	0.7	20	14
Developed/Managed trail system (high use trail)	0.8	5	4
Agriculture - active tilled crop production	0.2	0	0
Agriculture - permanent crop (vineyards, orchards, nurseries, berry production)	0.3	0	0
Manicured lawns, sport fields, and golf courses; urban manicured parks	0.3	0	0
Old fields and other disturbed fallow lands dominated by ruderal and/or exotic species (e.g., kochia, Russian thistle, mustards, annual vegetation)	0.5	0	0
Mature old fields and other fallow lands with natural composition, introduced hay field and pastures (e.g., perennial vegetation cover)	0.7	0	0
Restoration areas in process to natural conditions (re-conversion in process)	0.8	65	52
Haying of native grassland (e.g., no tillage, haying and baling only)	0.9	0	0
Heavy logging or tree removal with >50% of large trees (e.g., >30 cm diameter at breast height) removed, woodland/shrub vegetation conversion (chaining, cabling, rotochopping)	0.3	0	0
Commercial tree plantation, Christmas tree farms	0.6	0	0
Selective logging or tree removal with <50% of large trees (e.g., >30 cm diameter at breast height) removed	0.8	0	0
Mature restoration areas returned to natural conditions (re-converted)	0.9	0	0
Natural area, land managed for native vegetation - No agriculture, logging, development	1	0	0
LUI Score= Coefficient * % LUZ Area		100	75

Rating	LUI Score
<input type="radio"/> 4	≥95 - 100
<input type="radio"/> 3	≥80 - <95
<input checked="" type="radio"/> 2	≥40 - <80
<input type="radio"/> 1	<40

Biotic Metrics

Worksheet 5. Vegetation Community Patch Polygon Data for Biotic Metrics B3, B4, and B5 for Polygons from SA Biotic Map. Enter data for each polygon under a unique number assigned from the SA Biotic Map. Each polygon is evaluated with respect to Vegetation Vertical Structure (B3), Native Tree Regeneration (B4), and Invasive Exotic Plant Species Cover (B5) metrics. Enter the Vertical Structure Type (VST) for B3, tree regeneration % cover within the polygon for B4 and the % cover of invasive exotic species for B5. Use the Tables in Appendix B and the Field Guide for metric instructions. Enter the species codes for the invasive exotic species found in the polygon (from NM Noxious Weed List - Appendix D). Use the comments box for documenting and describing vegetation community patch features.

Polygon No	B3 Vertical Structure Type	B4 Tree Regeneration % Cover	B5 Invasive Exotic Species % Cover	Invasive Exotic Species (List Code(s))	Comments
1	IA1				
2	IA2				
3	IIA1				
4	IIIB1	80%	< 5%	Mullein	Broad leaf cat tail + Willow Possible Switch grass Common Mullein
5	IIIC1	6-10% 160 cover	25% of veg	Mustard	Saltbush and Colorado blue stem very dry
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

B1 - Relative Native Plant Community Composition

Worksheet 6. CT Plant Species and Polygon Assignments. Starting with CT A, enter the number of the first polygon from Worksheet 5. Enter the species codes for the two top dominant species in each stratum that appears in the polygon. See footnotes for special instructions. If a species appears in more than one strata, assign the species to the stratum in which it is more abundant. Each polygon is either assigned to the same CT if it has the same composition or a new CT if it has the same composition or a new CT is created for the polygon.

CT	Polygon Nos.	Tail Woody Stratum 1		Short Woody Stratum 2		Herbaceous/Sparse Stratum 3		CT Score 4			
		Species 1 E N	Species 2 E N	Species 3 E N	Species 4 E N	Species 5 E N	Species 6 E N	Raw ⁴	% SA ⁵	Wt Score ⁶	
A	5			Salt bush N	Chimisa N	Mustard E	Blue stem N	2.0	60%	1.2	
B	4			Willow N	Cattail N	Mullein E	Switch grass N	4.0	40%	1.6	
C											
D											
E											
F											
G											
H											
I											
J											
K											
L											
M											
N											
O											
Final Weighted Score⁷											2.8

1. Trees and shrubs > 6 m (20 feet) and > 25% total stratum cover; 2. Trees and shrubs ≤6m (20 feet) and >25% total stratum cover; 3. Herbaceous (graminoids and forbs) > 10% total stratum cover. 4Raw Score is from Table B1a (Appendix B); 5%SA is the percentage of the SA area covered by the CT and expressed as a decimal number; the total area %SA must equal 1; 6Wt. Score is the product of the Raw Score * % SA; 7The Final Weighted Score is the sum of the Wt. Scores. Rate the CT Final Weighted Score on Table B1 and enter the Rating for Relative Native Plant Community Composition on the SA Rank Summary Worksheet.

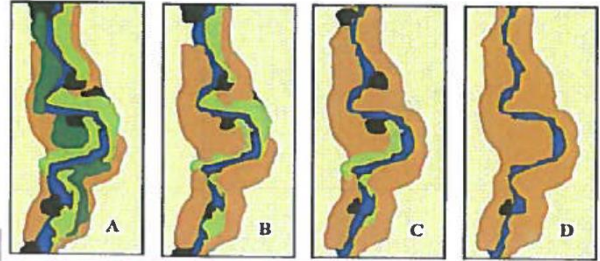
SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

Table B1. Relative Native Plant Community Composition Rating		
Rating	CT Final Weighted Score	
<input type="radio"/> 4	≥ 3.75	<10% non-native
<input type="radio"/> 3	≥ 3.25 and <3.75	10% ≤ 20% non-native
<input checked="" type="radio"/> 2	> 2.0 and <3.25	20% ≤ 50% non-native
<input type="radio"/> 1	≤ 2.0	>50% non-native



B2 - Vegetation Horizontal Patch Structure

Worksheet 7. Using Tables B2a and B2c (Appendix B), choose the schematic pattern that best matches the mapped vegetation patch pattern for the SA. Rate using Table B2 and enter rating on the SA Rank Summary Worksheet.

Horizontal Patch Structure pattern A,B,C, or D:

Table B2. Rating for Vegetation Horizontal Patch Structure	
Rating	Description
<input type="radio"/> 4	Most closely matches Pattern A. SA has a diverse patch structure (≥4 patch types) and complexity. A dominant patch type would be difficult to determine.
<input checked="" type="radio"/> 3	Pattern B. SA has a moderate degree of patch diversity (3 patch types present) and complexity. A single, dominant patch type may be present, although the other patch types would be well represented and have more than one occurrence in the SA.
<input type="radio"/> 2	Pattern C. SA has a low degree of patch diversity and complexity. Two or three patch types may be present; however, a single, dominant patch type exists with the others occupying a small portion of the SA.
<input type="radio"/> 1	Pattern D. SA has essentially little to no patch diversity or complexity. The SA is dominated by a single patch type. Other patch types, if present, occur infrequently and occupy a small portion of the SA.

B3 - Vegetation Vertical Structure

Worksheet 8. Percentage of SA by vertical structure type (VST). Using the Structure Type from Worksheet 5 and the %SA from Worksheet 6 calculate the total area of the SA occupied by each VST using the formula VST(type) = Sum (%SA for CTs with same VST) x 100. Enter the total %SA for each VST below.

	VST 1 High Structure Forest	VST 2 Low Structure Forest	VST 5 Tall Shrubland	VST 6S Short Shrubland	VST 6W Herbaceous Wetland	VST 6H Herbaceous Vegetation	VST 7 Sparse Vegetation
Total % of SA			40		60		

Table B3. Rating for Vegetation Vertical Structure. Using the data from Worksheet 8 rate the SA based on the criteria in Table B3. Pick the row that best fits the distribution of VSTs in the SA. Each row specifies the required dominant structure type plus co- and sub-dominants. Percentage cover required per co- or sub-dominant is a minimum. The types listed in the columns must be the most common VSTs in the SA for the rating to be applicable (Worksheet 8). VSTs 1 and 2 can be inverted in dominance and the rating is still applicable. Work from the top of the table down. As long as the requirements for one row are met, any other types may or may not co-occur without changing the rating. Enter the rating on the SA Rank Summary Worksheet.

Rating	Dominant VST	Co- or Sub-dominant VST ≥15%	Sub-dominant VST ≥5%
<input type="radio"/> 4	1	5	6W and/or 6H
	1	6W	
	2 or 1 and 2	5	6W and/or 6H
<input type="radio"/> 3	1		
	2 or 1 and 2	5	
	2 or 1 and 2	6W	
	5	6W	
<input checked="" type="radio"/> 2	2 or 1 and 2		
	5		
	6W		
<input type="radio"/> 1	6S		
	6H		
	7		

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

B4 - Native Riparian Tree Regeneration

Table B4. Native Riparian Tree Regeneration rating. Using the polygon percent cover of native tree seedlings, saplings and poles from Worksheet 5, rate the SA based on polygon percent cover and patch density. Enter the rating on the SA Rank Summary Worksheet.

Rating	Description
<input type="radio"/> 4	Native poles, sapling, and seedlings trees well represented, obvious regeneration, many patches or polygons with >5% cover, typically multiple size (age) classes.
<input checked="" type="radio"/> 3	Native poles, saplings and/or seedlings common, scattered patches or polygons with 1% -5% cover, size classes few.
<input type="radio"/> 2	Native poles, saplings and/or seedlings present but uncommon, restricted to one or two patches or polygons with typically <1% cover, little size class differentiation.
<input type="radio"/> 1	Native poles, saplings, and/or seedlings absent (0% cover).

B5 - Invasive Exotic Plant Species Cover

Worksheet 9. Based on Worksheets 5 and 6, calculate or estimate the percentage cover of invasive exotic species for the SA and enter below. Rate using Table B5 and enter the rating on the SA Rank Summary Worksheet.

Rating Method

Invasive cover (%)

Table B5. Ratings for Invasive Exotic Plant Species Cover

Rating	Invasive Species Cover %
<input type="radio"/> 4	0%
<input type="radio"/> 3	>0% - <1%
<input checked="" type="radio"/> 2	≥1% - <10%
<input type="radio"/> 1	≥10

Additional CTs and Biotic Metric Comments:

New plants sprouting but most of area is recovering from winter.

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

A2 - Physical Patch Complexity

Worksheet 11. Physical Patch Complexity checklist. Check off existing physical patch types for the upper, middle and lower segments of the SA; count the number of unique patch types and rate using Table A2 in combination with the narrative description. Enter the rating on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active side channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abandoned channels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backwater/eddy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riffles or rapids
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shoals, sparsely-vegetated bars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel boulders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oxbow lakes/ponds on floodplains
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated island and side bars
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Terraces
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel pools
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Beaver ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swales, depressional features on floodplains
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Debris jams in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Woody wrack piles on the floodplain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain micro-topography (mounds, pits)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downed logs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural levees
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing snags
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variiegated, convoluted, or crenulated foreshore
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Undercut banks in channels
			No. of unique Patch Types

Calling Moderate since only looking at middle channel

Table A2. Rating for Physical Patch Complexity

Rating	Description
<input type="radio"/> 4	High degree of physical patch complexity across the floodplain. There are many floodplain micro-habitats present (mounds and pits, woody wrack piles, etc.), many fluvial geomorphic surfaces (swales, side channels, terraces, side bars, etc.), and there is high in-channel complexity (pools and riffles, large woody debris, undercut banks, etc.). As a guide, 12 or more unique indicators are present and well distributed throughout the SA (most indicators are found on multiple segments).
<input checked="" type="radio"/> 3	Moderate physical patch complexity scattered across the floodplain. There are several floodplain micro-habitats present, several fluvial geomorphic surfaces, and there is moderate in-channel complexity. As a guide, 9 - 11 indicators are scattered throughout the SA (some on multiple segments).
<input type="radio"/> 2	Limited physical patch complexity scattered across the floodplain. There are some floodplain micro-habitats present, some fluvial geomorphic surfaces, and there is limited in-channel complexity. As a guide, on average there are 6 - 8 unique indicators present in the SA (only a few on multiple segments).
<input type="radio"/> 1	Little or no physical patch complexity on the floodplain. There are few or no floodplain micro-habitats present, few different fluvial geomorphic surfaces, and there is little or no in-channel complexity. As a guide, ≤ 5 unique indicators are present in the SA.

A3- Channel Equilibrium

Worksheet 12. Channel Equilibrium Checklist. Check all field indicators that apply to the upper, middle and lower segment of the SA observed at the channel edge of the traverse. Rate using the Table A3 descriptions and based on a preponderance of evidence from this checklist. Enter the rating on the SA Rank Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators(check all existing conditions)
Indicators of Channel Equilibrium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel has a well-defined bankfull contour that clearly demarcates the point of incipient flooding where moderate frequent flow events spread flow across the floodplain.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perennial riparian vegetation is abundant and well established along the bankfull contour, but not below it.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is leaf litter, thatch, or wrack in most pools.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The channel contains embedded woody debris of the size and amount consistent with what is naturally available in the riparian area.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is little or no active undercutting or burial of riparian vegetation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no bars that are densely vegetated with perennial vegetation (neither mid-channel bars or point bars).
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel and point-bars consist of well-sorted bed material.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is not planar and without an abundance of fine materials filling the interstitial spaces between larger stream substrate.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are channel pools at meander bends and some deep pools within the reach.
Indicators of Active Degradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel is characterized by deeply undercut banks with exposed living roots of trees or shrubs.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are abundant bank slides or slumps, or the lower banks are uniformly scoured and not vegetated.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank vegetation is declining in stature or vigor, or many riparian trees and shrubs along the banks are leaning or falling into the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Channel bed is scoured to large cobbles or boulders and entrained bank material is filling the cobble interstices and pools.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are active headcuts within the channel.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An obvious historical floodplain has recently been abandoned, as indicated by the age structure of its riparian vegetation.
Indicators of Active Aggradation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is abundant fresh splays of coarse sediment covering the floodplain above the natural point bar elevation.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried living tree trunks or shrubs along the banks.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The channel bed is planar overall. The stream lacks well-defined channel pools at meander bends, or pools are filled with sediment.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are partially buried or sediment-choked culverts.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are avulsion channels on the floodplain or adjacent valley floor.

SA CODE : SF2MI [6]

Date : 3/7/24

SA Name : Two Mile Pond Reservoir Transect [6]

Surveyor Initials : DCS

Rating	Description
<input checked="" type="radio"/> 4	Most of the channel throughout the SA is in equilibrium condition with little evidence of excessive aggradation or degradation based on the field indicators listed in Worksheet 12.
<input type="radio"/> 3	There is some evidence of excessive aggradation or degradation; the channel throughout the SA seems to approach an equilibrium condition. Circle primary process: aggradation or degradation.
<input type="radio"/> 2	There is evidence of severe aggradation or degradation throughout most of the channel through the SA. Circle primary process: aggradation or degradation.
<input type="radio"/> 1	The channel is artificially hardened, channelized, or is concrete throughout most of the SA.

A4- Stream Bank Stability and Cover

Worksheet 13. Bank Soil Stability and Streambank Erosion Potential Checklist. Check the indicator that best describes the condition looking a minimum of 25 m upstream and downstream at the channel edge of the upper, middle and lower segment of the SA. Average the six scores for both Bank Soil Stability and Streambank Erosion Potential. Rate using the Table A4 and enter the rating on the SA Summary Worksheet.

Condition	Upper Segment	Middle Segment	Lower Segment	Field Indicators
Indicators of Bank Soil Stability	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	Infrequent raw banks, less than 10% of steam bank under stress from trampling, slumping, vegetation removal or active erosion, etc.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Raw banks and loose soil intermittently and 10%-25% of stream bank under stress from trampling, trail crossing, hoof punching, vegetation removal, erosion etc.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	Significant raw banks and loose soil, 25%-50% of stream bank under stress, trampled, slumping or eroding etc.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Raw banks almost continuous with greater than 50% of stream bank under stress, loose soil, slumping, trampled or eroding; or channel appear to lack banks due to trampling; or channel that is artificially hardened or concrete along most of its length.
Indicators of Stream Bank Erosion Potential	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 4	≥ 80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by boulders, large cobbles and/or large woody debris that prevent bank erosion.
	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	≥50% - <80% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation are protected to allow only minor erosion.
	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	≥25% - <50% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those area not covered by vegetation or stabilized by roots, are covered by materials or vegetation that give limited protection.
	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	Less than 25% of the stream bank surfaces are covered by vegetation in vigorous condition with dense root mass or by cobble or larger material. Those areas not covered by vegetation provide little or no control over erosion and excess shear stress, and the banks are susceptible to erosion by high water flows.

Average Indicator Score

Rating	Description
<input checked="" type="radio"/> 4	>3.5 - 4.0
<input type="radio"/> 3	>2.5 - ≤3.5
<input type="radio"/> 2	>1.5 - ≤2.5
<input type="radio"/> 1	1.0 - ≤1.5

SA CODE: SF2MI [6]

Date: 3/7/24

SA Name: Two Mile Pond Reservoir Transect [6]

Surveyor Initials: DCS

A5 - Soil Surface Condition

Worksheet 14. Soil Surface Condition. Check all that apply in the upper, middle and lower SA segments during the field reconnaissance. The absence of these indicators would signify that disturbances are naturally occurring (e.g., flood deposition or low-density wildlife trails). Estimate the percent soil disturbance by segment area and referring to the SA abiotic map. Rate using Table A5 and enter on the SA Rank Summary Worksheet.

Upper Segment	Middle Segment	Lower Segment	Field Indicators (Check all existing conditions)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active erosion features due to anthropogenic disturbance (eg. rills, gullies, plant pedestals).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Multiple livestock and other (fishing, hiking) trails,
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle tracks including off-road and construction, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious compacted surfaces or pavement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading or plowing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fill
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gravel pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anthropogenic levees and berms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Irrigation-driven salinity and mineral crusts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire pits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: <input type="text"/>
			Estimate % soil disturbance by segment area

Average % Soil Disturbance:

Table A5. Soil Surface Condition Rating

Rating	Description
<input checked="" type="radio"/> 4	Bare soil areas due to anthropogenic disturbance absent or very limited. No human-caused impervious surfaces or gravel pits are found within the SA. Total disturbance, including erosion, impervious surfaces, fill, or other anthropogenic degradation to the soil surface is less than 1% of the SA.
<input type="radio"/> 3	Some amount of bare soil from human causes is present but the extent is limited. Area of impervious surfaces are minimal in extent. Total disturbance, including erosion, impervious surfaces, fill, gravel pits, vehicle tracks or other anthropogenic degradation to the soil surface is between 1% and 5% of the sampling area.
<input type="radio"/> 2	Bare soils from human causes are common. These may include dense livestock trails, vehicle tracks, trails, construction staging areas, mechanical rutting, or irrigation-driven salinity. Soil disturbance, while apparent, is limited to specific areas and not found across the majority of the SA. Total disturbance, including erosion, impervious surfaces, fill, gravel mining, or other anthropogenic degradation to the soil surface is greater than 5% or less than 10% of the SA.
<input type="radio"/> 1	Bare soil areas degrade portions of the site because of altered hydrology or other long-lasting impacts. Deep ruts from off-road vehicles or machinery are present. Livestock disturbance or trails are widespread and several inches deep. Water is channeled into rills or ponded. Additional human-caused impervious surfaces or soil compaction are present. Total disturbance, including erosion, impervious surfaces, fill, gravel mining or other anthropogenic degradation to the soil surface is equal to or greater than 10% of the SA.

SA CODE : SF2MI [6]

Date: 3/7/24

3/7/24

SA Name : Two Mile Pond Reservoir Transect [6]

Surveyor Initials : DCS

Worksheet 15. Stressor Checklist. Check off stressors by intensity category that may be affecting wetland ecological condition of the SA and WOI. Assign categories using direct evidence where available or your best professional judgement otherwise. If the presence of the stressor is uncertain, mark as "Unkno". Rank Major Stressors in Dominant Stressor column(Pick up to 3)

Rank	Affect				Stressor Group/Stressor	Comments
	Major	Minor	Absent	Unknown		
Adverse water management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended low flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timing of flow releases not concordant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extended high flow dam releases	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture/Urban flow diversion upstream	
Adverse sediment management						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Adverse sediment retention by dams	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment loss by dredging	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Adverse sediment input (roads/development)	
Artificial water additions						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sewer treatment effluent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Point source urban runoff	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Factory, feedlot outfall	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agricultural irrigation ditch returns	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mining waste	
Ground water pumping						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urban depletions	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fracking	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agriculture irrigation wells	
Watershed alteration						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent fires in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive recent timber harvest	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extensive open pit mining in watershed	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Livestock/wildlife overgrazing	
Local biodiversity impacts						
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evidence of excessive grazing (local)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Excessive noise affecting wildlife	
	0	0		0	Counts by Intensity	

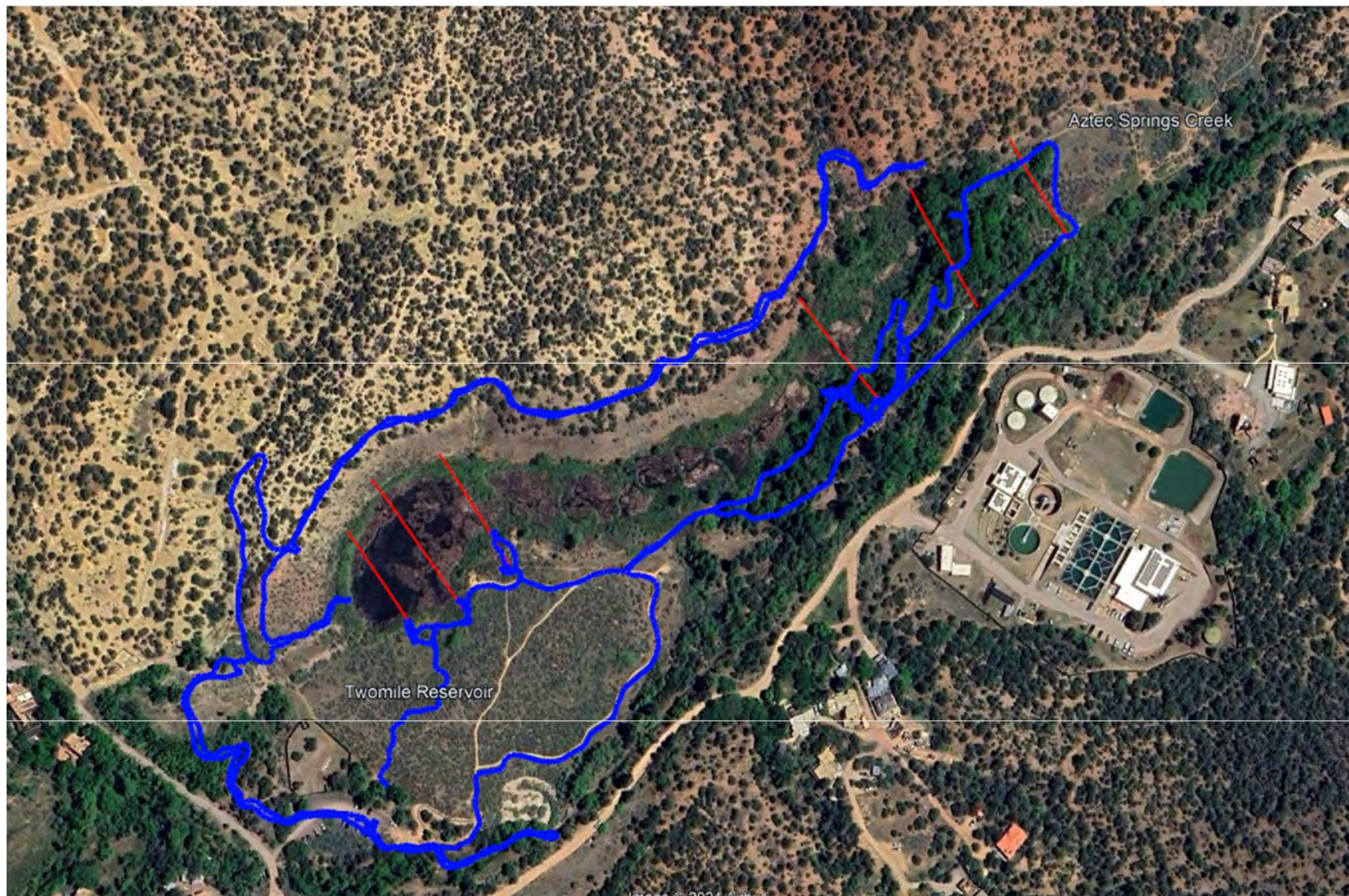
Additional Comments

Water has stopped being sent to this Area.

Appendix E.

Field Photos

APPENDIX E.
PHOTOGRAPHS OF MARCH 7, 2024 FIELD RECONNAISSANCE OF TWO-MILE POND



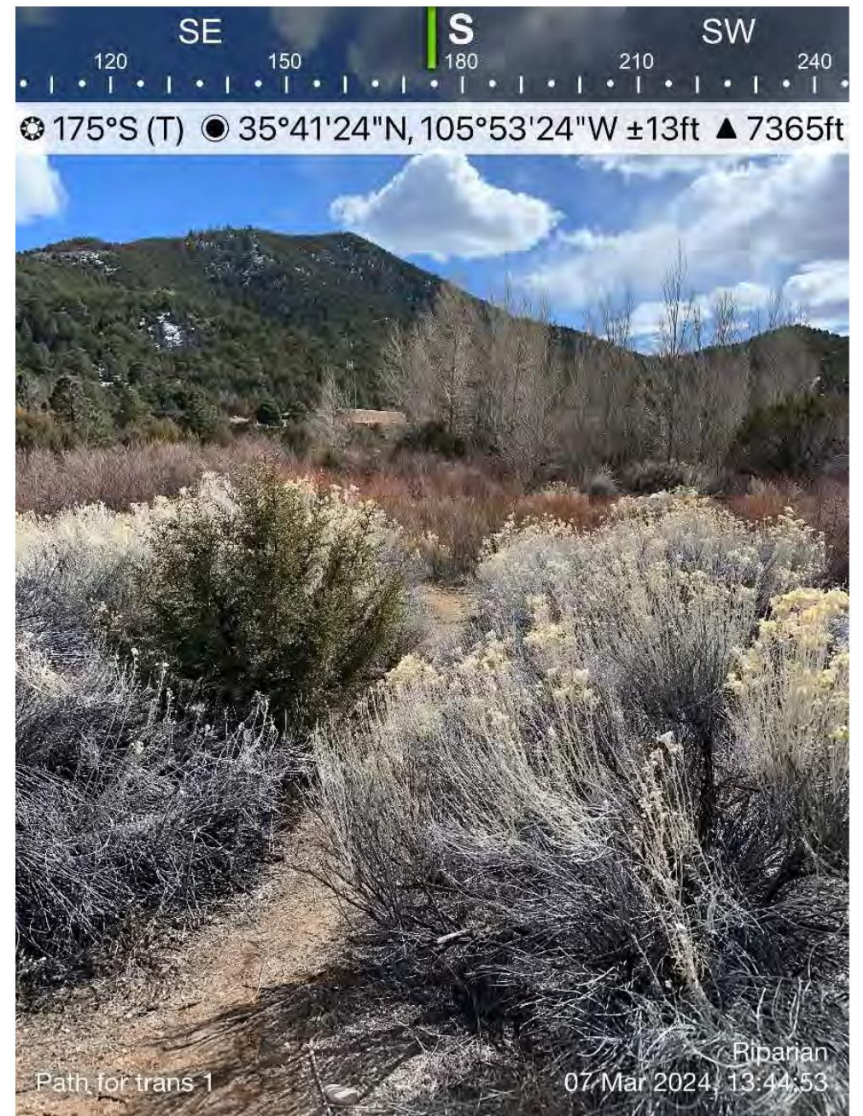
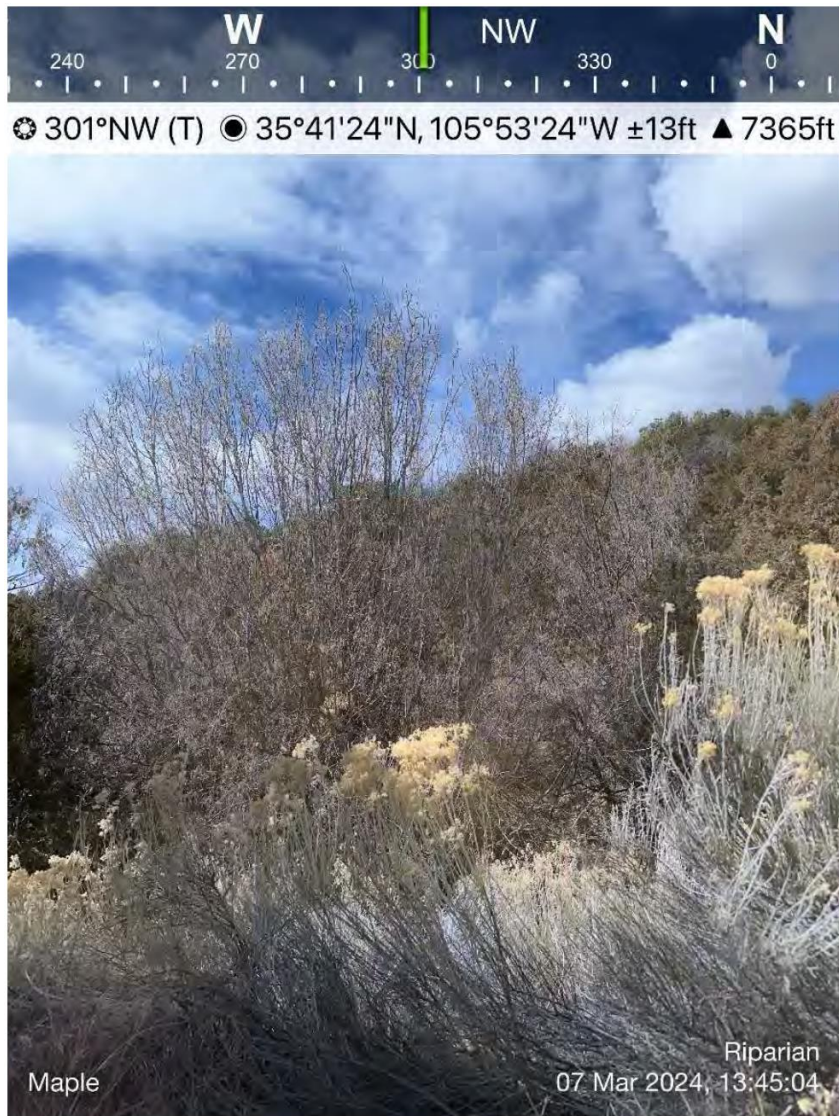


Figure E1. Photos from Transect 1 taken on 3/7/24. This area was the driest area in the entire investigation and begins at the start of the transition into a high desert-like landscape.

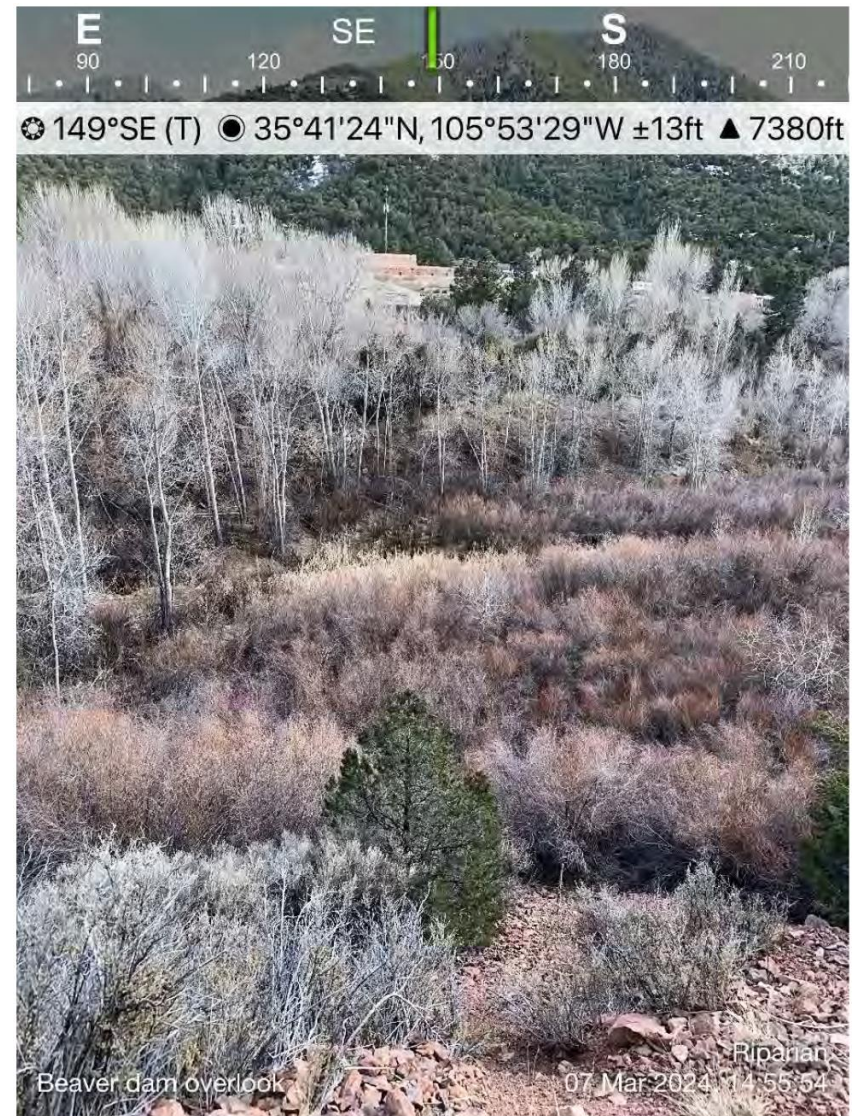


Figure E2. Photos taken of Transect 2 on 3/7/24. This area is located above the dam. The second photo also overlooks some of Transect 3 on the south and Transect 2 on the east.

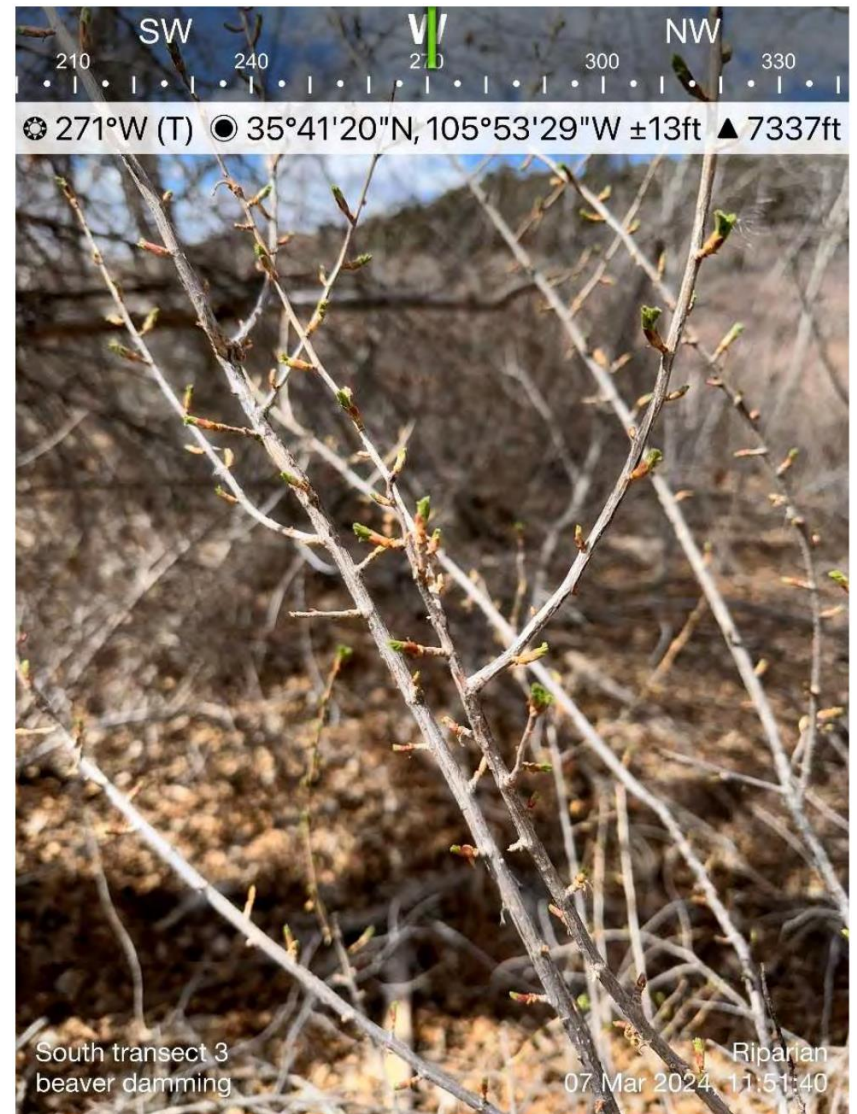
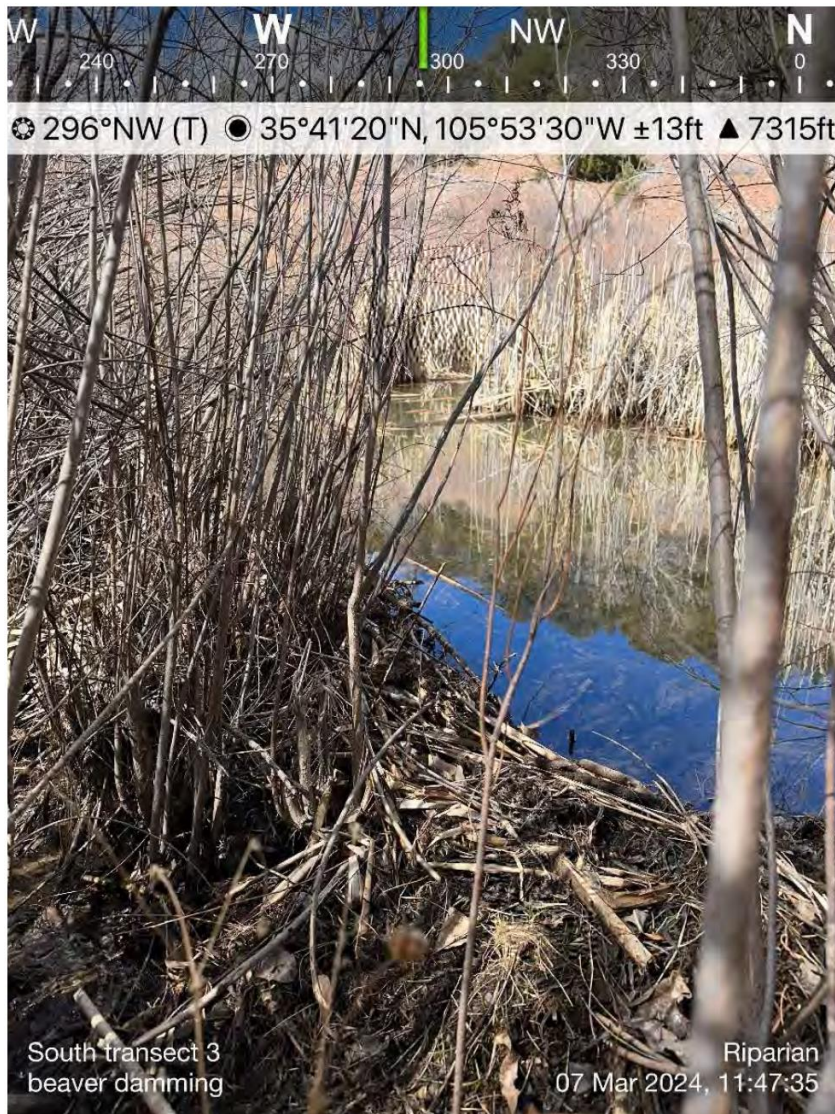


Figure E3. Photos taken along Transect 3 on 3/7/24. The photo on the left shows the storm flood formed dam and the photo on the right represents new growth on a younger tree.



Figure E4. Photos taken of Transect 4 on 3/7/24. The photo on the left shows a possible seep that comes out on the hill approximately 15 ft above the pond. The photo on the right shows the entirety of Transect 4 across.

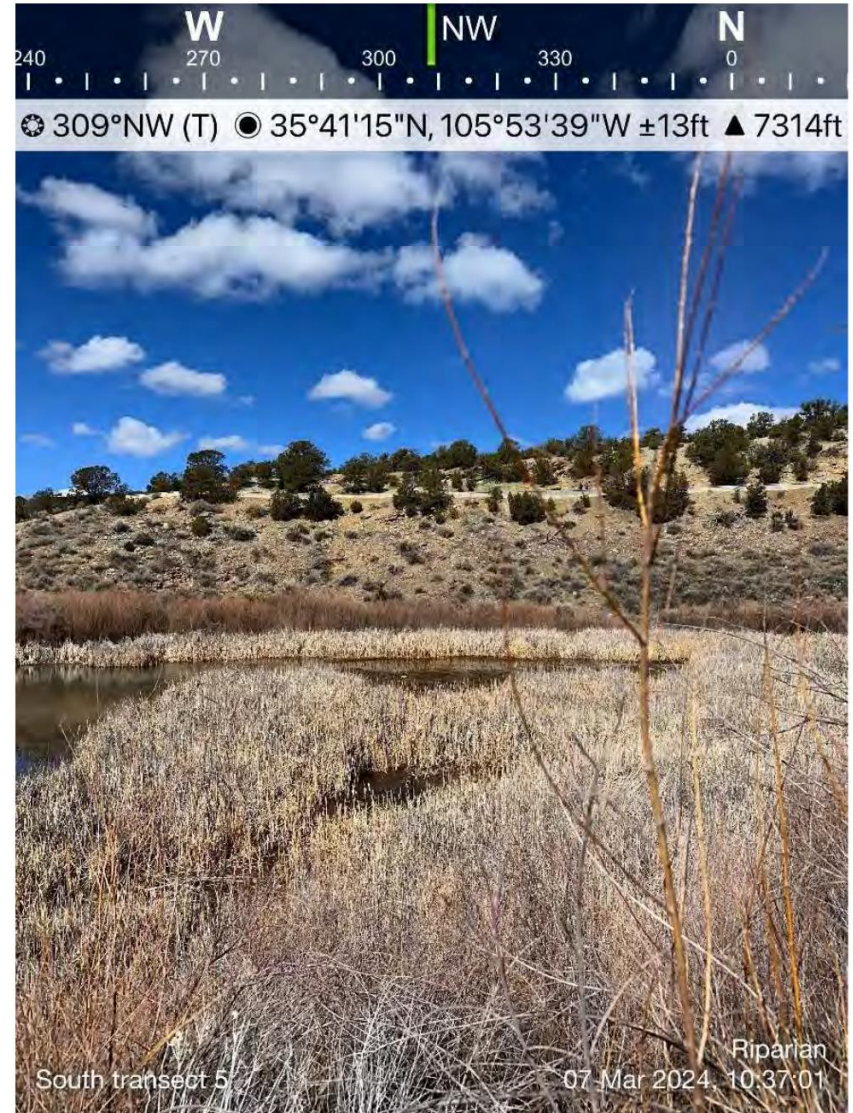
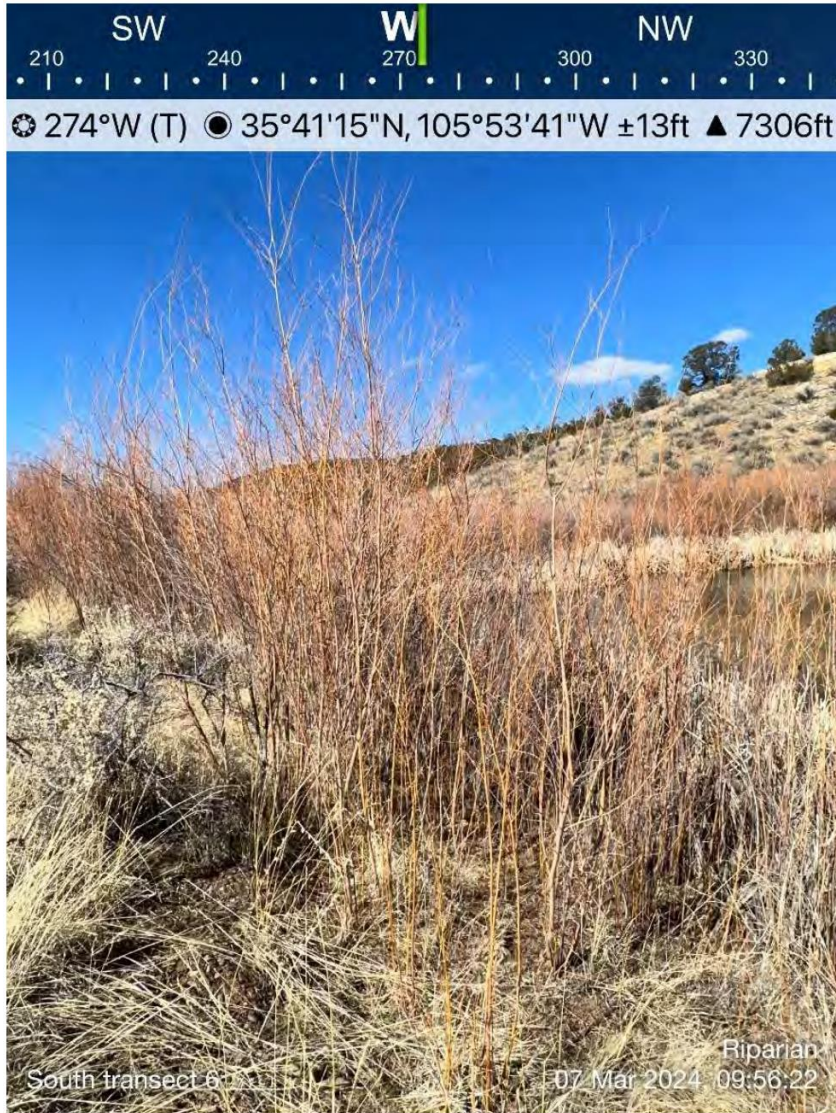


Figure E5. Photos taken along Transect 5 on 3/7/24. The left photo is of the willows that surround the pond and the right photo is of the cattails that fill the pond.

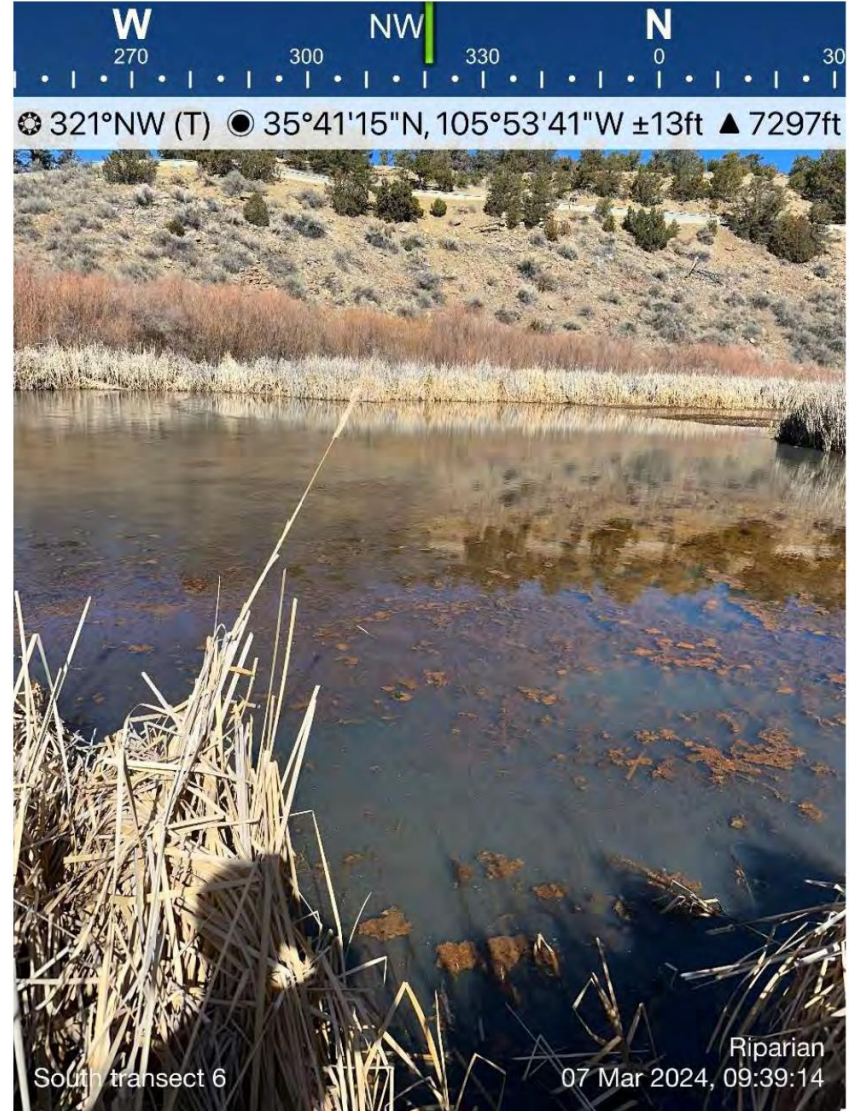


Figure E6. Photos taken along Transect 6 on 3/7/24. The left photo is an overview of the entire transect and the right photo is of the pond and growth within it.