

Public Meeting Summary- August 15th, 2024

MADRID STORMWATER AND EROSION CONTROL PROJECT

Santa Fe County, New Mexico

Coal Problem Area: Madrid Coal Breaker - NM935060



Prepared For:

ABANDONED MINE LAND PROGRAM

Mining and Minerals Division

New Mexico Energy, Minerals, and Natural Resources Department

8801 Horizon Blvd. NE, Suite 260

Albuquerque, NM 87113

Prepared By:

GROUSE MOUNTAIN ENVIRONMENTAL CONSULTANTS, LLC

3600 Cerrillos Road, Suite 407

Santa Fe, New Mexico 87507

August 2024

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1 Introduction

The New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) Abandoned Mine Land (AML) Program, in partnership with the United States Department of Interior (DOI) Office of Surface Mining Reclamation and Enforcement (OSMRE), are proposing to establish stormwater conveyances, erosion control measures, and fire prevention improvements within the town of Madrid, New Mexico, located in Santa Fe County, approximately 22 miles southwest of Santa Fe (Figure 1). These measures are proposed on 125 acres comprised of private, state and county owned land.

The Proposed Action (PA) is designed to help address on-going coal mining legacy hazards including stormwater flooding in and around Madrid, erosion on existing gob piles and roadways, improving the town's fire suppression capabilities, and closing a re-opened adit feature. Madrid's identity is rooted in its coal mining history and its economy relies heavily on tourism. It is important for the New Mexico AML Program to preserve the historical integrity of the town while safeguarding against environmental hazards.

1.1 Purpose and Need for the Project

The need for the PA is to address human health and safety concerns from hazards associated with the remnants of mining activities, including excessive erosion, flooding, and open mine features, as well as address fire suppression insufficiencies in Madrid. The purpose of the PA is to safeguard the public from these hazards while preserving the historical mining landscape.

2. Project Overview

2.1 Project Background

The town of Madrid was developed as a mining community in the 1890s. As a company town, the area grew to include housing, churches, a school, and local businesses which continued to expand through the 1930s to support miners and their families. Mining activities slowed after World War II with the last active mine in Madrid closing in 1962. During the 1960s and early 1970s, the town was mostly empty and efforts to sell it as a whole unit failed. In the late 1970s, the town was sold as individual properties and purchased in large by eclectic individuals seeking personal freedoms. Today, Madrid is a tourist destination known for its artists who wish to preserve and embrace the rich mining history of the town (WCRM 2021).

The AML Program's work in Madrid began in the 1980s and has included adit closures, asbestos removal, water tank abatement, drainage repairs and reclamation, structure demolition, and various maintenance activities. These projects have been met with varying levels of success and public approval. Recent water quality monitoring results indicate past reclamation efforts performed by the AML Program have made a positive impact on stormwater quality (GMEC 2019a). A detailed description of past projects and results can be found in the Madrid Compendium (NM AML 2009).

In 2011, Madrid Mining Landscape community outreach identified two main reclamation projects in the town of Madrid: The East Slope Catchment project and the Arroyo Restoration project (Dekker/Perich/Sabatini 2011). Since abandonment of the mines, existing coal waste piles, known

as gob piles, have remained relatively unstable and poorly vegetated. This, combined with modified natural drainages and deteriorated manmade drainage structures, has resulted in the movement of large quantities of sediment downslope and downstream flooding, especially during high precipitation events. The sediment movement has had significant negative impacts on the town of Madrid, located immediately downslope and adjacent to multiple coal gob piles. Over time, sediment has accumulated within the area, clogging drainage paths, and leading to episodic flooding throughout the town (WCRM 2021). Recently, fugitive stormwater and resulting erosion has exposed and reopened a mine adit feature that was previously backfilled by AML in 2011.

In recent years, the AML Program has increased public involvement throughout the planning process. The AML Program met numerous times with the local community and landowners. One of the main issues repeated during these communications was to determine a way to address these severe stormwater concerns without complete reclamation of the gob piles that celebrate the historical mining of the town. Community members expressed concerns to update the town's fire suppression system as the current water storage tank is outdated, undersized, and has severely eroded (NM AML 2009). Following a January 2024 public meeting, revisions were made to address additional concerns regarding plans in Madrid Arroyo. The AML Program strongly considered these public concerns during development of the PA. For a collection of documents regarding the history and development of this project, please see the NM AML Program's website: <https://www.emnrd.nm.gov/mmd/abandoned-mine-land-program/projects/award-winning-work/madrid-stormwater-erosion-control-project/madrid-stormwater-erosion-control-project-documents/>.

2.2 Project Location

The Area of Potential Effect (APE), containing the town of Madrid, is approximately 22 miles southwest of Santa Fe in Santa Fe County, NM. The APE is located within section 35 of Township 14 North, Range 7 East (T14N-R7E), as depicted in United States Geological Survey (USGS) New Mexico Principal Meridian (NMPM), and on unplatted land in the Mesita de Juana Lopez and Ortiz Mine Grants, as depicted in United States Geological Survey (USGS) New Mexico Principal Meridian (NMPM) Madrid 7.5' topographic quadrangles (Figure 2).

The APE is a combination of private, state and county-owned land that makes up approximately 125 acres (Figure 2). The percentage of surface ownership within the APE includes: 84 acres (67%) private, 27 acres (22%) Santa Fe County, 7 acres (6%) New Mexico Department of Transportation (NMDOT), 3 acres (2%) Madrid Water Cooperative, and 4 acres (3%) Madrid Landowners Association.

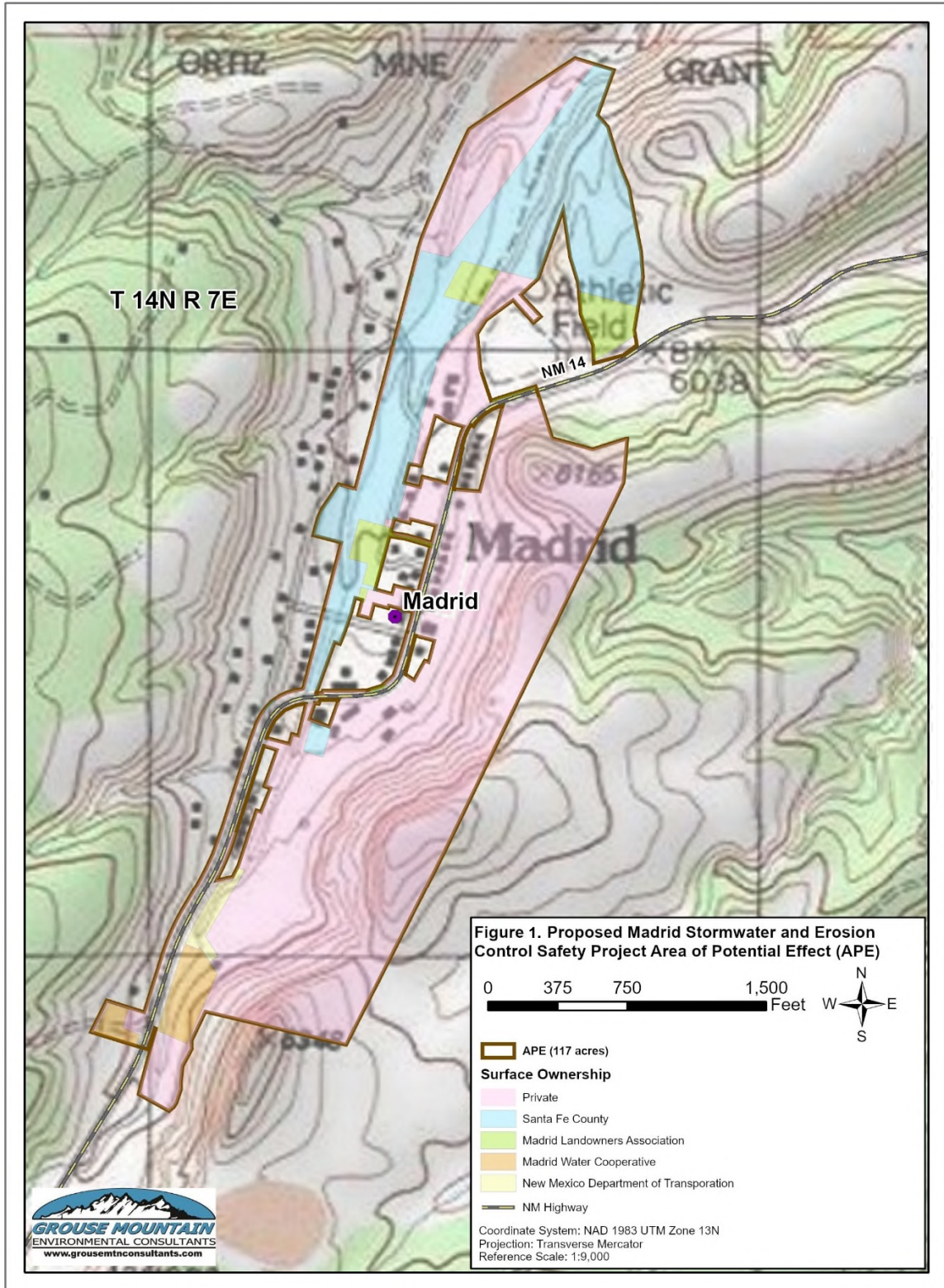


Figure 1. Proposed Madrid Stormwater and Erosion Control Safety Project Area of Potential Effect (APE)

3. Alternatives

For further details regarding each Alternative described below, please see the full description within the Environmental Assessment.

3.1 Alternative A: Proposed Action Alternative

The PA as described below was designed to address issues related to legacy mining operations, including stormwater control, erosion, and open mine features, as well as improve fire suppression capabilities, while being visually unobtrusive in the historical setting of Madrid. The stormwater improvements proposed would provide a medium level of service and would require periodic maintenance to repair gravel roads, channels, and rolling dips, and to remove sediment and debris, especially after large precipitation events. Reclamation and revegetation work would be completed in Madrid Arroyo (details provided in final Engineering Designs and Revegetation Plan).

3.2 Alternative B

Alternative B is a selection of actions similar to the PA with alterations for each project area as described below. In general, Alternative B includes more intensive stormwater management actions that would also be more visually obtrusive in Madrid's historical setting. The stormwater improvements proposed would provide a high level of service and would require less maintenance than the PA. Alternative B would include the same mine adit closure as discussed in the PA.

3.3 Alternative C: No Action Alternative

The NAA would take no measures to reduce hazards associated with past mining activity. This alternative provides the lowest level of service, as no stormwater or erosion structures would be constructed in the discussed project areas and fire suppression capabilities would remain at the current level. The NAA does not satisfy the purpose and need of the PA based on AML Program reclamation priorities (PL 95-87, 30 USC 1240[a] 2006).

4. Public Meeting

A legal notice was prepared in both English and Spanish to describe the project background, meeting time, and location (Appendix A). The notice was advertised in the *Santa Fe New Mexican* and *Albuquerque Journal* on August 1, 2024. Copies of the public notices were posted on the public information boards at the Mercantile Store, Java Junction, The Mineshaft and Village Grocer. Notices were also mailed to approximately 329 local residential and business addresses on the week of August 5, 2024, using the U.S Postal Office Every Door Direct Mail service. Due to extensive previous public input, there was no comment period following the meeting.

5. Public Meeting Summary

An in-person public meeting was held at the at the Madrid Fire Station, 5 Firehouse Lane, Madrid, New Mexico on August 15th, 2024, from 6pm to 7:15pm. The purpose of this meeting was to provide an overview of the proposed project and provide an opportunity for the public, area neighbors, and businesses to ask questions regarding the revised engineering designs and revegetation plan. A PowerPoint presentation was prepared and presented at the meeting along with

visual aids of the revised engineering designs and revegetation plan (Appendix B). AML representatives and associated contractors were available for questions. There were approximately 26 people in attendance for the meeting (In Person Sign in Sheet, Appendix C).

6. Public Meeting Questions

Questions and comments were received during the meeting question and answer session and are outlined below.

The main topics brought up in the question and answer session were:

- Concern over the number and species of trees being cut down
- The revegetation plan and how it will be maintained and monitored
- The effectiveness of the foam plugs for the mine closure
- The ability of the plan to successfully protect the town from floods, like the one in 2013

The full question and answer session was recording and is included in Appendix D.

APPENDIX A. PUBLIC OUTREACH DOCUMENTATION

Newspaper Notice

Affidavit of Publication

STATE OF NEW MEXICO } SS
COUNTY OF BERNALILLO }


Ad Cost: \$512.19
Ad Number: 79440
Account Number: 1110947
Classification: NON-GOVERNMENT LEGALS

I, Bernadette Gonzales, the undersigned, Legal Representative of the Albuquerque Journal, on oath, state that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, chapter 167, Session Laws of 1937, and payment of fees has been made of assessed and a copy of which is hereto attached, was published in said publication in the daily edition, 1 times(s) on the following date(s):

August 1, 2024

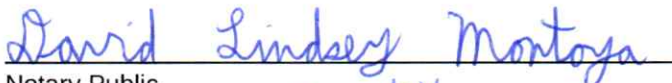
That said newspaper was regularly issued and circulated on those dates.

SIGNED:



Legal Representative

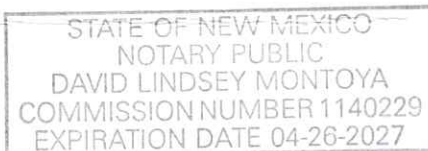
Subscribed to and sworn to me this 1st day of August 2024.



Notary Public

County Bernalillo

ID#: 1140229
My commission expires: 04-26-2027



Grouse Mountain Environmental Consultant
3600 Cerillos Road
Suite 407
Santa Fe, NM 87507

PUBLIC INFORMATION MEETING

Madrid Stormwater and Erosion Control Project in Madrid, NM

Public Meeting:
August 15, 2024, 6:00pm-8:00pm
at Madrid Firehouse
5 Firehouse Ln, Madrid, NM
Presentation and Discussion

Updated Engineering Designs and Revegetation Plan will be available August 8th online at:
<https://www.emnrd.nm.gov/mmd/public-notice/>

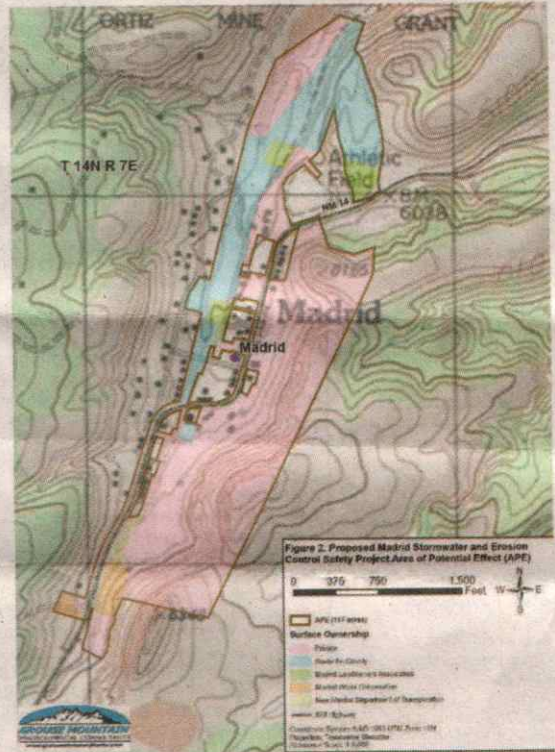
Hard copies available by request by contacting
Leeland Murray (AML Project Manager) at:
Leeland.Murray@emnrd.nm.gov or 505-629-9677

Final Environmental Assessment (EA) is in progress.
Notice of availability will be provided at a later date.

Invitation on behalf of: The New Mexico Energy, Minerals, and Natural Resources Department, Abandoned Mine Land Program (AML), in partnership with the U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSMRE).

Meeting Purpose: (1) To provide an overview of the updated engineering designs for the proposed project; (2) to provide an overview of the revegetation plan; (3) question and answer session between the public and AML Program and contractors.

ADA: To request Americans with Disabilities Act (ADA)-related accommodations for this meeting, or should you require an interpreter, contact Hillary Robbie with Grouse Mountain Environmental Consultants at 505-930-5166 or Madrid_EA_Comments@gmecnm.com by August 9, 2024.



REUNIÓN DE INFORMACIÓN PÚBLICA

Proyecto de Control de Aguas Pluviales y Erosión en Madrid, NM

Reunión Pública:

El 15 de agosto del 2024, 6:00pm-8:00pm

en la Madrid Estación de Bomberos
5 Firehouse Ln, Madrid, NM
Presentación y discusión

Diseños de ingeniería actualizados disponible en
el siguiente enlace:

<https://www.emnrd.nm.gov/mmd/public-notices/>

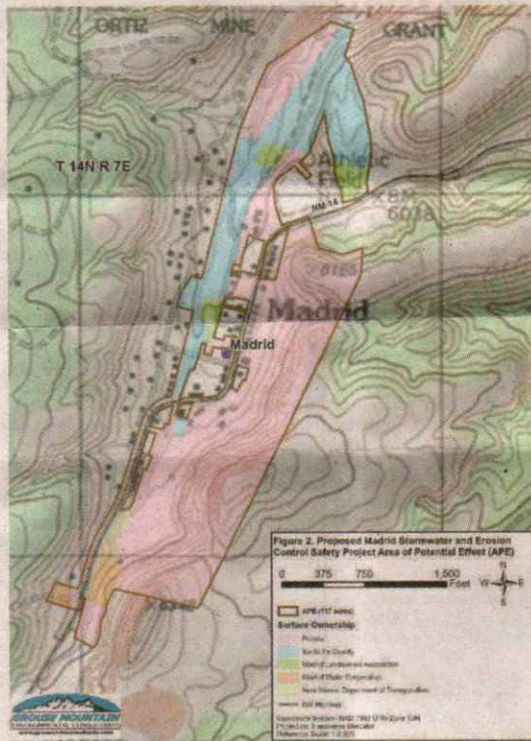
Copias impresas disponibles por solicitud con
Leeland Murray (AML gerente de proyecto) a:
Leeland.Murray@emnrd.nm.gov o (505)629-
9677.

La evaluación ambiental está en progreso. Noticia
de disponibilidad se proporcionará en una fecha
posterior.

Invitación en nombre de: El Programa de Minas Abandonadas del El Departamento de Energía, Minerales y Recursos Naturales de Nuevo México (AML, por sus siglas en inglés), en alianza con la Oficina de Recuperación y Ejecución de Minería a Superficie (OSMRE, por sus siglas en inglés).

Propósito de la Reunión: (1) Presentar una descripción general de los diseños de ingeniería actualizados del proyecto; (2) presentar una descripción del plan de revegetación; y (3) tener una sesión de preguntas y respuestas entre el público y los representantes del programa AML y contratistas.

Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés): Para pedir asistencia por el ADA para esta reunión, o si requiere un traductor, por favor llamar a Cristina Marciales con Grouse Mountain Environmental Consultants: 505-930-5166 ext. 202, o enviar correo electrónico: Madrid_EA_Comments@gmecnm.com antes del 9 de agosto del 2024.



SANTA FE NEW MEXICAN

Founded 1849

GROUSE MOUNTAIN ENVIRONMENTAL
CONSULTANT
3600 Cerrillos Rd Ste 407
Santa Fe, NM 87507-2653

ACCOUNT:	S31584	
AD NUMBER:	77780	
LEGAL NO	92885	P.O.#:
1 TIME(S)	\$171.36	
AFFIDAVIT	0.00	
TAX	14.03	
TOTAL	185.39	

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, Veronica Gonzalez, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe, Rio Arriba, San Miguel, and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the Legal No 92885 a copy of which is hereto attached was published in said newspaper 1 day(s) between 08/01/2024 and 08/01/2024 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 01st day of August, 2024 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

ISI

LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 1st day of August, 2024

Notary

Commission Expires: March 14, 2027

.....
NATHANIEL CRISTOFER MARTINEZ
Notary Public - State of New Mexico
Commission # 1139927
My Comm. Expires Mar 14, 2027
.....

SANTA FE NEW MEXICAN

Founded 1849

GROUSE MOUNTAIN ENVIRONMENTAL
CONSULTANT
3600 Cerrillos Rd Ste 407
Santa Fe, NM 87507-2653

ACCOUNT:	S31584	
AD NUMBER:	77782	
LEGAL NO	92886	P.O.#:
1 TIME(S)	\$191.10	
AFFIDAVIT	0.00	
TAX	15.65	
TOTAL	206.75	

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Public Meeting Notice Flyer

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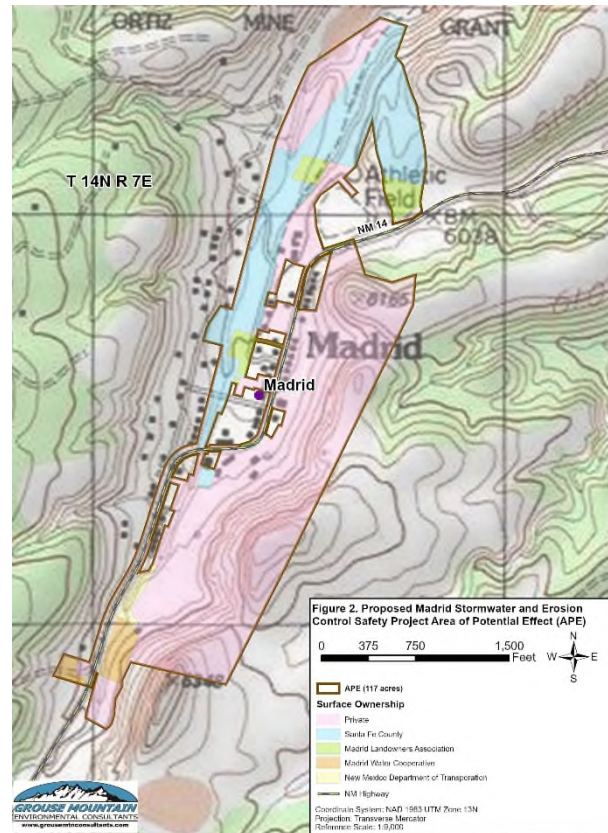
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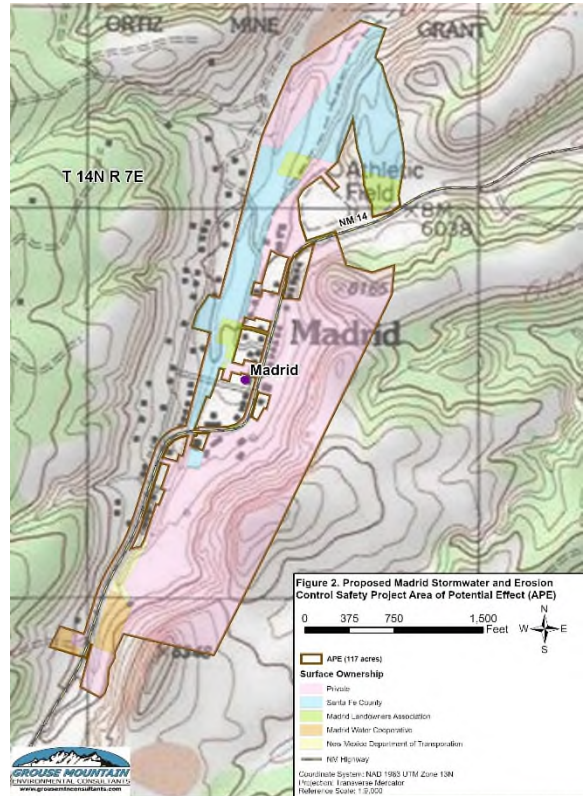
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APPENDIX B. PUBLIC MEETING PRESENTATION



PUBLIC INFORMATION MEETING

Madrid Stormwater and Erosion Control Project

Thursday, August 15th, 2024
Madrid Firehouse – Madrid, NM



Public Information Meeting - Purpose



- Reintroduce team members from agencies and contractors
- Provide project update and what has happened since the last meeting
- Discuss the updated engineering designs and revegetation plans, with a Q&A session

Gob pile above Madrid, NM
– Photo courtesy of AML

Project Team & Responsibilities



NEW MEXICO ABANDONED MINE LAND (AML) PROGRAM – Project Lead; project development, coordination, management, & construction oversight



OFFICE of SURFACE MINING RECLAMATION & ENFORCEMENT (OSMRE) – project funding source



SANTA FE COUNTY- water tank engineering design, assistance with permit acquisition on county property, landowner

Project Team & Responsibilities



GROUSE MOUNTAIN ENVIRONMENTAL CONSULTANTS– National Environmental Policy Act (NEPA) compliance; public outreach facilitation



WESTON SOLUTIONS– oversight of Madrid stormwater designs for the project; lead engineering



RIVERBEND ENGINEERING– oversight of Madrid Arroyo engineering designs



DANIEL B. STEVENS AND ASSOCIATES– prepared revegetation plan for Madrid Arroyo



Team Members



Abandoned Mine Lands Program (AML):

Oversight of Entire Madrid Stormwater Project & Funding Source

- Leeland Murray: AML Project Manager
- Andrew Zink: AML Cultural Resource Manager
- James Hollen: AML NEPA Coordinator

Grouse Mountain Environmental Consultants:

Public Meeting Facilitation and Environmental Compliance

- Hillary Robbie: NEPA Coordinator
- Cristina Marciales: Project Assistant

Weston Solutions:

Oversight of all Madrid Stormwater Designs

- Rob Ederer, P.E.: Lead Engineer

Riverbend Engineering:

Oversight of Madrid Arroyo Engineering Designs

- Chris Philips, P.E.

Daniel B. Stevens and Associates:

Prepared Revegetation Plan for Madrid Arroyo

- Julie Kutz: Biologist

Previous Public Meeting (Jan 25) Results

Comment Period: Jan 8 – Feb 7

- Limited comments regarding water tank and mine feature safeguarding
- Plans for stormwater control generally accepted
- Substantial concern over plans in the Madrid Arroyo

Response:

- Engineering designs have been updated to provide more detail
- Some arroyo work has been modified in response to comments
- Revegetation Plan created to describe the planting, species, and monitoring efforts
- Environmental Assessment [IN PROGRESS] to incorporate the updated engineering designs, revegetation plans, and other comments

Madrid Stormwater and Erosion Control Project Schedule

August 15:	Public Meeting
August/September:	Finalize Environmental Assessment
September:	Submit EA to OSMRE
October-November:	OSMRE provides NM AML with Authorization to Proceed (ATP)
Begin Work – January/February 2025:	Water Tank Installation Hillside And Arroyo Work Following Bid Procurement



Q&A Session

For electronic copies of the Revegetation Plan, updated Engineering Designs, and future posting of the Environmental Assessment, please visit:

www.emnrd.nm.gov/mmd/public-notices/

Thank you for participating!

Bridge Example

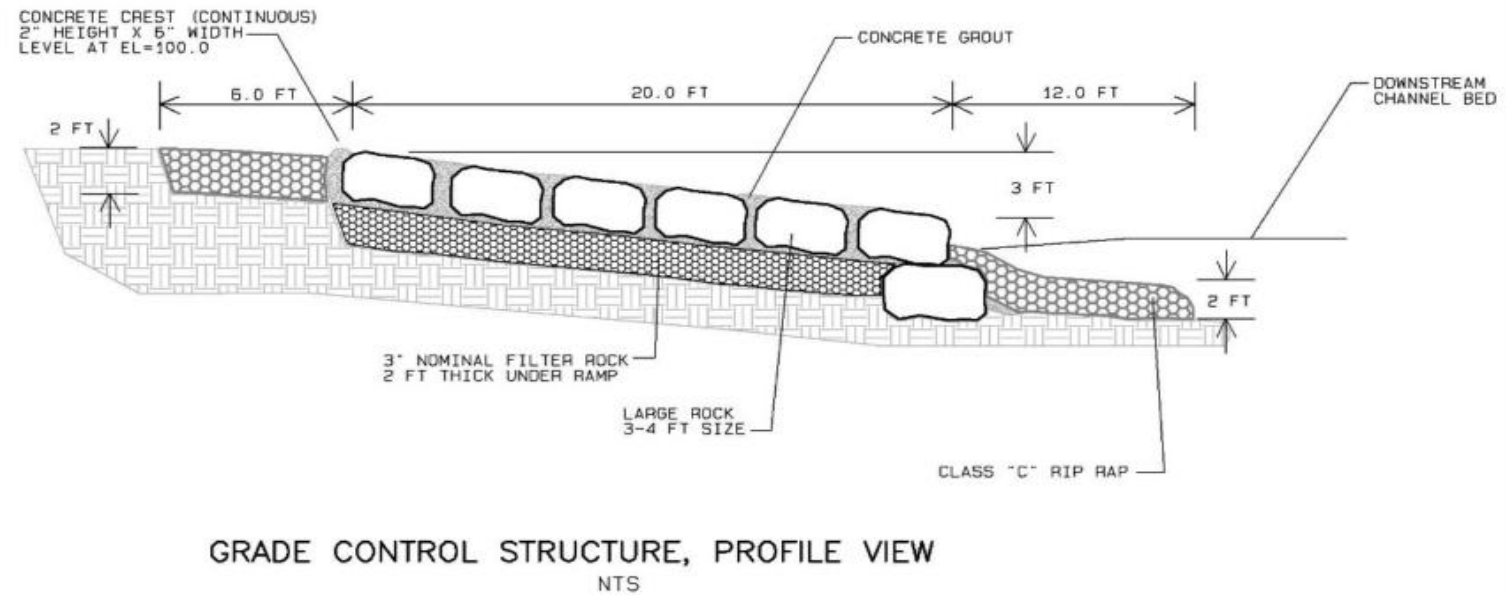


Mesh and
Pedestrian Bridge
Installation



MADRID ARROYO RESTORATION:

Examples of proposed
restoration elements



Grouted boulder grade control
structure, Type 1

Grouted Boulder
Grade Control
Structure, Type 2





Stacked boulder deflectors, control lateral channel migration and erosion.



Stacked boulder wall, or rock and soil deflector.



Arroyo and floodplain grading: meandering low-flow channel with adjacent floodplain, infrequent stacked boulder deflectors to manage channel migration and grouted boulder grade control structures to control channel bed elevations.



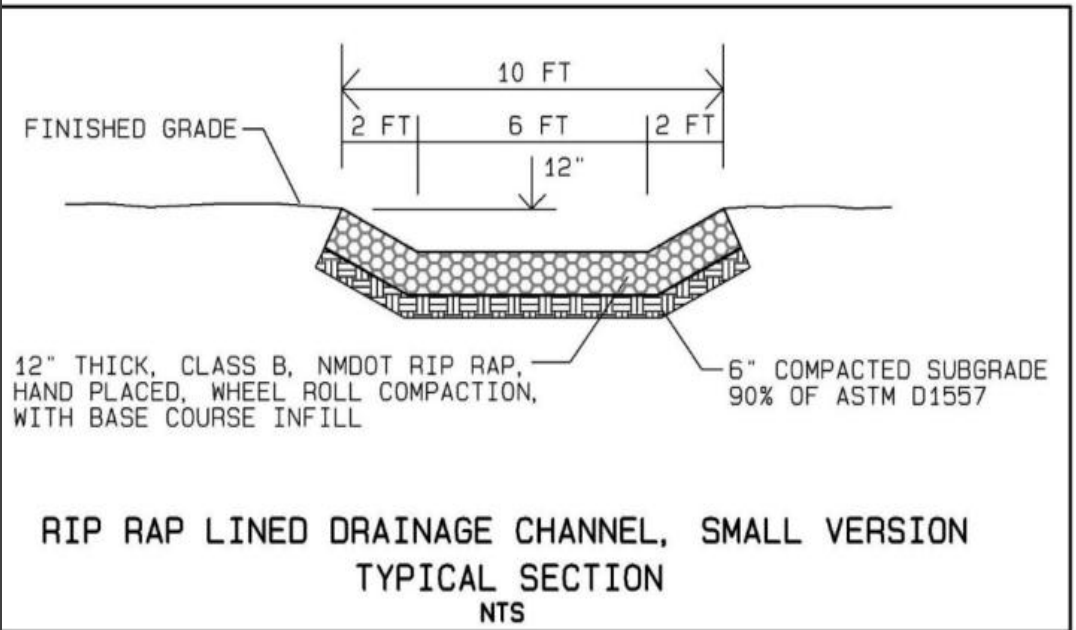
Arroyo and floodplain grading: meandering low-flow channel with adjacent floodplain, emergent willows at bankfull elevation.



Arroyo morphology is laterally managed with rock structures and riparian vegetation.



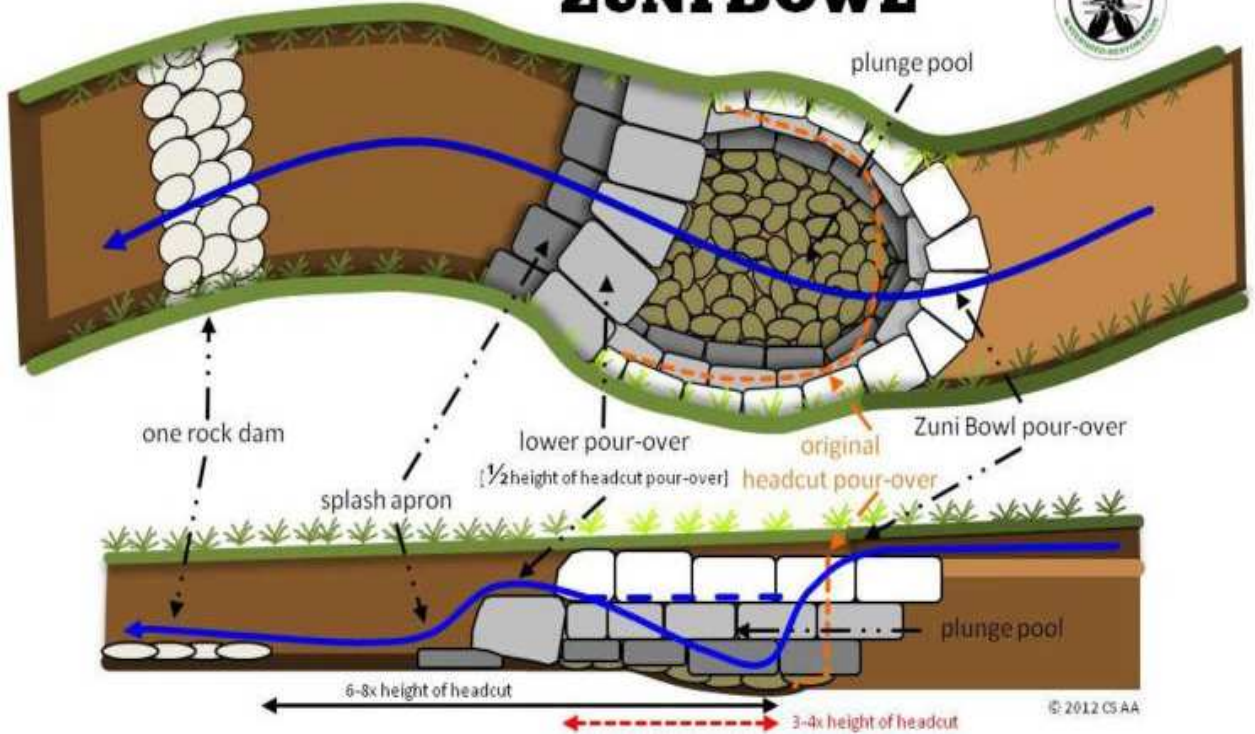
Sideslope grading at 3:1 or 4:1 allows for grasses/forbs/weeds to establish. Plant palette for Madrid will lean towards more drought tolerant species including chamisa shrubs and bunch grasses.



Rock lined drainage channel.



ZUNI BOWL



Zuni bowl grade control structure.

Table 1. Seed Quantities

Plant Name	Scientific name	Live Planting - Each	Seeding (Pure Live Seed) recommended lbs/acre**	Total Area (A, B, C) in acres	Total Quantity (pounds)
WOODY PLANTS - seed mix					
Four-winged saltbush	<i>Atriplex canescens</i>		1.20	5.83	6.996
HERBACEOUS PLANTS - wildflower seed mix					
Scarlet globemallow	<i>Sphaeralcea coccinea</i>		0.90	5.83	5.247
Evening primrose	<i>Oenothera pallida</i>		0.30	5.83	1.749
Winterfat	<i>Krascheninnikovia lanata</i>		0.60	5.83	3.498
Butterfly-weed (showy milkweed)	<i>Asclepias speciosa</i>		2.10	8.88	18.648
Palmer's Penstemon	<i>Penstemon palmeri</i>		0.60	8.88	5.328
Scarlet penstemon	<i>Penstemon barbatus ssp. torreyi</i>		0.60	9.31	5.586
Scarlet gilia	<i>Ipomopsis aggregata</i>		0.60	9.31	5.586
Desert marigold	<i>Baileya multiradiata</i>		0.30	8.88	2.664
Sand verbena	<i>Abronia villosa</i>		0.30	8.88	2.664
Common hoptree	<i>Ptelea trifoliata</i>		1.00	0.32	0.32
Utah juneberry	<i>Amelanchier utahensis</i>		0.50	1.12	0.56
Datura	<i>Datura wrightii</i>		0.50	3.37	1.685
Desert four o'clock	<i>Mirabilis multiflora</i>		0.60	0.32	0.192
GRASSES PLANTS					
Alkali sacaton grass	<i>Sporobolus airoides</i>		0.70	8.88	6.216
Sideoats grama	<i>Bouteloua curtipendula</i>		1.75	8.88	15.54
Blue grama	<i>Bouteloua gracilis</i>		1.75	8.88	15.54
Western wheatgrass	<i>Agropyron smithii</i>		3.75	9.31	34.9125
sand dropseed	<i>Sporobolus cryptandrus</i>		0.28	8.88	2.4864
James galleta	<i>Pleuraphis jamesii</i>		3.50	9.31	32.585
WOODY					
Chamisa	<i>Ericameria nauseosa</i>		0.20	3.37	0.674
Apache plume	<i>Fallugia paradoxa</i>		0.20	3.37	0.674
New Mexico locust	<i>Robinia neomexicana</i>		1.00	0.36	0.36
Mahonia/desert holly	<i>Mahonia haematocarpa</i>		0.75	1.12	0.84
HERBACEOUS PLANTS					
Broadleaf milkweed	<i>Asclepias latifoliav</i>		1.50	1.12	1.68
Antelope horns milkweed	<i>Asclepias asperula</i>		1.50	8.88	13.32

Revegetation Plan – Species to be Hydroseeded & Live Planted

Plant Name	Scientific name	Live Planting - Each	Seeding (Pure Live Seed) recommended lbs/acre**	Total Area (A, B, C) in acres	Total Quantity (pounds)
Sweet sand verbena	<i>Abronia fragrans</i>		0.25	3.37	0.8425
Total pounds of all pure live seed/acre			27.23		186.39
No Supplemental Water Required					
Live plantings (plugs)					
Native grasses (see above species)		400			
Shrubs (Chamisa, Apache Plume)		200			
TOTAL		600			
Supplemental Water Required					
Live plantings (10-gallon containers)					
Two-needle pinyon	<i>Pinus edulis</i>	5			
NM Locust	<i>Robinia neomexicana</i>	9			
Three-leaf sumac	<i>Rhus trilobata</i>	11			
Scrub oak - gambel or wavyleaf	<i>Quercus sp.</i>	22			
TOTAL		47			

*NOTE: Quantities based on NMDOT revegetation quantities and USDA

**DBS&A recommended quantities were increased to ensure seedling establishment and bring closer to quantities provided by Plants of the Southwest (2022).

Areas and Calculations

Species Formulas:

Areas in Acres

A - 5.83, B - 1.12, C - 0.32, A/B - 1.93, B/C - 0.11

Formulas for Seed Ratio

A/B = .6 x A + .4 x B, B/C = .6 x B + .4 x C

Suitable for A or B

Then total Area = A, B, A/B, So A + B + A/B, 5.83 + 1.12 + 1.93 = **8.88 Acres**

Suitable for B or C

Then total Area = B, C, B/C, So B + C + B/C, 1.12 + 0.32 + 0.11 = **3.37 Acres**

Suitable for A, B, or C

Then total Area = A, B, C, A/B, B/C, So A + B + C + A/B + B/C, 5.83 + 1.12 + 0.32 + 1.93 + 0.11 = **9.31 Acres**

Revegetation Plan Continued

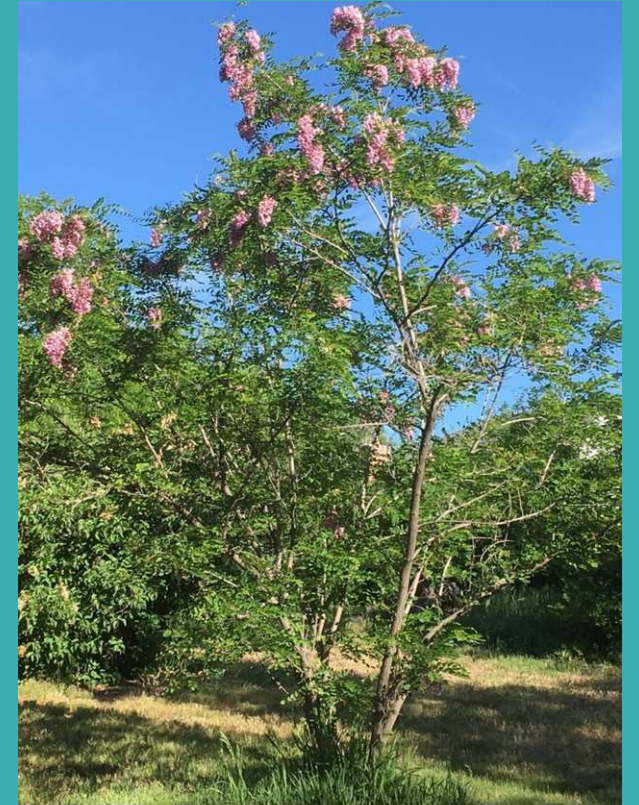
Photos of live planted species to be given supplemental water:



Threeleaf Sumac
Rhus trilobata



Two-needle pinyon
Pinus edulis



New Mexico Locust
Robinia newmexicana

Revegetation Plan Continued

[These species will also be live planted and given supplemental water.]



Wavyleaf oak
Quercus undulata



Scrub oak
Quercus sp.



Gambel oak
Quercus gambelii

- Also, a 3,000 gallon water tank will be implemented.

This plan incorporates input and collaboration with Madrid representative Amanda Bramble, as well as Santa Fe County staff.



Chamisa
Ericameria nauseosa



Apache Plume
Fallugia paradoxa

200 plugs of these two species will be planted



Alkali Sacaton Grass
Sporobolus airoides



Sideoats Grama
Bouteloua curtipendula



Blue Grama
Bouteloua gracilis

400 plugs of the 6 native grasses on this slide and the following slide will be planted



Western Wheatgrass
Agropyron smithii



Sand Dropseed
Sporobolus cryptandrus



James' Galleta
Pleuraphis jamesii

The other 3 of the 6 native grass species that will be planted as grass plugs (400)



Mahonia/ Desert Holly
Mahonia haematocarpa

0.84 total pounds of seed mix



Four-wing Saltbush
Atriplex canescens

6.996 total pounds of seed mix

APPENDIX C. PUBLIC MEETING SIGN-IN SHEET



Public Information Meeting Madrid Stormwater and Erosion Control Project

Santa Fe County, New Mexico
Madrid Firehouse
5 Firehouse Lane, Madrid, NM 87010
Thursday, August 15th, 2024



PLEASE SIGN IN & PRINT LEGIBLY

NAME	AFFILIATION	ADDRESS	PHONE	EMAIL
Carl Hausen	MADRID water MVED		470- 0770	
James Hollen	MMO AML	SANTA FE	505 231 8332	James. hollen demard, nm, gov.
JULIE KUTZ	DBSVA	LRSD.	505-715 -9140	jkutz@geo-logic.com
Jethro Bowden	Madrid Water	-	475-7160	-
Clinton Anderson	Madrid Landowners' Association	PO Box 872 Madrid, NM 87010	505-424- 4411	Clint. Anderson. 10622 @gmail.com
Loward Murray	NMAML		505-629- 9677	Loward.murray@emard.nm. gov.
Hillary Robbie	Grouse Mtn		307 684 2112	hrobbie@ gmeclwy.com
Bob Chappell			949-545 8384	
Rob Ederer	western	Sagull St., Alamo NM	505-8376598	rob.ederer@ westernsolutions.com
ELLEN DIETRICH				

NAME	AFFILIATION	ADDRESS	PHONE	EMAIL
Andrew Zink	ANL - CRM			andrew.zink@ emerald.mn.gov
L. Philip	Riverview Eng	on file		
STELLA LINDER BYRNE				
Kay Q Moidley	EMERD			
KASHI HEITKAMP FOR COLE ROBERTS	RESIDENT			KASHI.HEITKAMP @gmail.com
Miera Quian	Resident/Business			Rieraqui@gmail.com
John W. Weter	Resident			
Nancy Blasio	Resident			
R. NAFFEY	MAD WATER			
Ron Thomas Janet Brook		83 Waldo Mesa		brookj1p@gmail.com
Andrew Bramble	resident	36 White Hill Cornillas		
Richard Thomas	RESIDENT	69 WALDO MESA ROAD		dickthomas2012@ icloud.com
Chuck Dentino	EMERD			
Monica Harmon	Santa Fe County	100 Catron St Santa Fe, NM	505-992 9825	mharmon@santafe countynm.gov
ROSE MASTERS	SANTA FE COUNTY	100 CATRON ST., SANTA FE, NM	505 992 9897	rmasters@santafa countynm.gov

APPENDIX D. QUESTION & ANSWER SESSION SUMMARY

Question & Answer Session Summary

August 15, 2024

Start time for Q&A session: 6:21pm

Q1. How sure is the funding for this project?

A1. Funding is secure for this project. We had a budget meeting last week and though costs have risen, we have the money for it.

Q2. The area where the arroyo is being redirected is very green. Is that the area that is going to be taken over by this or is that staying the same?

A2. Showed arroyo plans on overhead screen. Some trees at the Cave Road crossing will be removed but further in they will remain. Significant (in size and/or native) trees will remain. The trees will be receiving much more water after our work is completed.

Q3. Where the arroyo goes to the left at the school house and where there is a glade, are those trees going to be removed?

A3. Some of those trees will be going but some will stay.

Q4. We are not going to be putting elms in their place?

A4. No, we will not be planting any Siberian elms.

Q5. Can you speak to the headcut that is north of the Cave Road crossing?

A5. Where the relic arroyo is joining the mining company bypass channel, there's a 6-8 foot grade change, a grade control structure that will hold the arroyo. This hardened transition will move the water to a lower transitional elevation change in one place. Structures of about a foot grade change encourage additional saturation upstream of them. We however want to hold that water as close to the surface as we can.

Q6. I think there was mention of using a watering truck? What is the mechanism for triggering that?

A6. It has been written into the plan that if the monsoon season does not hit hard enough that year, the watering truck will be brought out. This allows the trucks to assist the seeds and plugs if there isn't enough rain.

Q6 follow-up. What sort of monitoring frequency would be happening? Would there be people coming out at some frequency or will it be dependent on relying on weather reports?

A6 follow-up. AML personnel from Santa Fe will drive through the town to see how the vegetation is doing. Rainfall can vary on weather apps, so there will be more reliance based on first hand accounts. These AML visits will be approximately every 2-3 weeks, depending on how hot it is. The visits can also be anywhere from every week to a month, depending on climatic conditions.

Q6 follow-up. If we (Madrid residents) notice that plants need water who would we contact?

A6 follow-up. If residents notice dryness and that a water truck is needed, contact Leeland Murray. There will be an area where there will be live plantings, pinyon pine, and NM locust. These will be supplementally watered through irrigation lines for up to two years to get them established. These plantings will be placed in area with projected wetter soils, and hopefully they will take off. They should be a hardy enough species. We are optimistic of their success. These are to replace the trees that are being removed. The water truck will be focused on the seeds, hydro mulched areas, and not the live planted species.

Q7. The smaller storm water structures and the larger ones will need maintenance so will the county be taking care of that?

A7. We have a maintenance agreement with MLA. We have to check if those structures are on Santa Fe County Open Space or MLA. If it's on county land then the responsible party for maintenance is questionable. A representative from SF County Open Space was asked if they can help with this, and the rep said they would like to work with AML on this, but resources are limited.

Q8. Madrid resident with a statement from Andrew Wice (See Attached)

A8. I (Leeland Murray, AML Project Manager) talked to Amanda Bramble and she said that she was impressed by the revegetation plan and appreciates the consideration that AML is putting into the project.

Julie Kutz, Contracted Biologist: a lot of the species that are in the plan are ones that are native and have been there before. We are trying to at least revive some of the original vegetation, as well as put drought tolerant, flowering species. I appreciate Andrew Wice's comment.

Q9. It seems like people are really concerned about the trees coming down. How many trees are going to come down in this plan?

A9. We don't know the exact number of trees but this can be counted on the engineering designs. There is only one large tree coming down, right at the crossing of Cave

Rd. All the trees that are coming down are of small diameter, and many of them are Siberian elms. We tried to work with the community to save as many trees as possible and also work with the land owners that do get flooded, to protect their homes from flooding. We are trying to maximize the amount of flood control we can while also retaining as many trees as possible. We found that we do not have to remove as many trees as initially thought, we are finding that compromise while helping this arroyo function properly.

Q10. Is the larger plan going to address the silt coming down the road? There are parts of the road that are below the grade so is the plan going to address those issues?

A10. The plan is to capture water from east side of Ice House Road, funnel it through conveyance channels and capture it in retention ponds, and the water is then distributed throughout the area. We heard from town feedback that they did not want us to mess with the gob piles at all. The NM 14 culvert is in the wrong place, and we have been trying to think about the larger scale and how we can move water across the area. So we are going to cut into NM 14 in the lowest spot, construct a new channel east, send the water through different property landowners and into the arroyo.

Q11. My building gets flooded from the water coming down from behind The Mineshaft and the west side.

A11. On the south side of town, there will be a conveyance channel that will take water from that hillside to this hillside and bring it to the southern end of red dog road and underneath firehouse lane and dump into the arroyo.

Q12. The last big flood we got flooded out my street and the water was coming down from the highway and its outside of anything you are addressing in these plans.

A12. We don't have anything being done about that west side, as we haven't been given permission to work there.

Q13. I heard you say you're going to bring more water from the southside into the arroyo?

A13. There will be channeling on the south side of Firehouse Rd that will push water into the arroyo instead of the NM 14 culvert. We did have plans of detention ponds along Red Dog Rd but landowners did not want it.

Q13 follow-up. Something needs to be done about flooding around the five or six mining cabins that are out there behind Firehouse Rd. If we could redirect that water to the arroyo it would help but the access road is being eroded every time it rains. All the property owners on that road would work with you.

A13 follow-up. Leeland Murray, AML Program Manager, is planning to meet in person with the concerned to go over this area.

Q14. There was a comment about using foam fill to close up the mines. Would it be possible to use the debris from the baseball fields that is being removed to fill the mine?

A14. The adit that is being filled is a mine that was closed in the 80s, was refilled in the 90s and it has reopened again. Using organic materials causes it to just sink in and erode away with rains and other water, causing it to reopen. Can also use a rock bulkhead, but if the opening is unstable, it's a lot safer to use the foam.

Q15 follow-up. When I think of using that foam at my house or outdoors it degrades, chunks off, and mice eat it. How is that different from using it in the mine? What does it do with the pieces that chunk off and how is the environment affected?

A15 follow-up. The foam wouldn't be exposed to UV so it wouldn't degrade. There is also 2 feet of fill on the top, before the foam, so it won't be exposed to that UV. As long as the foam is not exposed to any UV, the foam will last hundreds of years.

Q15 follow-up. So if you put the dirt on top but you don't want to fill it with dirt because it will erode away so what will happen to the dirt on top? It wont erode away?

A15 follow-up. The foam puff plug will be 6 feet thick under the 4 feet of debris, that puff plug will stabilize the dirt fill.

Q15 follow-up. How old is the oldest one you have already done the puff plugs with?

A15 follow-up. We have been doing these foam fills for 30 years. We've done this in the Ortiz Mountains. The mine opening was as big as this fire station, so it was a 20-foot-thick puff plug filled with astoria and we put drainage pipes in it so water can drain through or the puff plug push up. There have been no issues with the puff plugs so far. You have to pour it slow and let it cure slow.

Q16. You said that you wanted to put in detention ponds but that some land owners did not want them. Can you explain about what they would do?

A16. They are intended to take the water and hold it for some time, and then release or disperse it slowly.

Q16 follow-up. Could the ponds go in other places where you may have people that do want them?

A16 follow-up. Most people in town do not want them, it's rare to find landowners that are okay with sacrificing a part of their land for the benefit of others. There is a smaller confluence pond that a landowner has been helpful to allow us to use

that space, but it wasn't deep enough to function as a detention pond by request of the landowner.

Q17. Part of the issue that we see is that the water comes through really fast. Have terracing and other options of slowing water down been discussed?

A17. We have discussed other features in some areas especially in areas that are difficult to access, such as using zuni bowls. These have been effective behind the tavern. These also work well at Bethlehem Hill because of how steep that hill is.

Q18. Part of the problem also is that our aquifer is filling less and less so having rains be able to infiltrate down would be beneficial also

A18 (provided by local Madrid Water Cooperative member). Aquifer injection – you can capture water on a hillside and inject it through sand or other material where water will seep. The Madrid Water Association is considering these injections and may incorporate it in the future. 9 acre feet was the amount of water used last year, and the last rain event was 7 acre feet, so there really could be a solution here with the aquifer injection.

A18 (AML). As steep as the hillsides are its very difficult to create a catchment of adequate size to make an impact for the community. You need a LOT of space to intercept and infiltrate water. It would be difficult. Grouted boulder grade control structures would prevent head cutting, and it helps retain more of the water when it does show up. Rock lined with concrete in between helps to pass that water effectively without having erosion or head cutting.

Q19. What kind of runoff or rainfall projections are you using? Is that current data? And is that incorporating climate change data?

A19. We are using historical NOAA data, two different agencies are trying to update that data but no it does not take climate change into account.

Q20. Are these the final plans or is there more comment? Or what happens now?

A20. These are the final plans. We have heard from the town to just build it already! These are the final plans, and we have incorporated feedback while still accomplishing our goal of improving stormwater management.

Q21. Do you happen to know if it was a 100yr flood in 2013? That's the one that everyone remembers and that's the one that changed the arroyo dramatically. I heard it was a 500 or 700 year flood.

A21. I have no idea what the exact number was, but I do know that the structures that are a part of this plan would have been able to handle the 2013 flood.

Q22. What is the max CFS that this plan could handle?

A22. 2200 CFS. It's important to note that we are required to design to a theoretical storm event but we also recognize that climate change is happening so we try to, as designers, plan for huge events. Plus at some point you don't want a concrete channel through the town either right? It's a balancing act. We know we need to prevent the east side of Cave Rd from getting flooded.

Q23. Amanda Bramble is going to be leading a hike through the arroyo on August 27th at 6pm for anyone who wants to join. There are flyers on the table.

End time: 7:14

Statement from Andrew Wice:

I have lived in Madrid for over twenty years, and walk through the arroyo daily. As town residents witnessed, the heavy rains earlier this summer flooded down from the east side of the valley. Fixing drainage on Icehouse Road and replacing the culvert at the arroyo crossing on Cave Road are vital infrastructure improvements which clearly have widespread support.

Just as clearly, destroying the adult trees in the arroyo would have no impact on flooding anywhere in town. During every storm, the arroyo has functioned properly, largely thanks to its adult trees which anchored the soil. Many of these trees not only survived the 2013 flood but the 1920 flood as well. Destroying these trees in the name of flood control would be a terrible and irreparable mistake. If destroyed, there will be zero trees in the middle of the valley and they won't grow back in our lifetime. They won't grow back in the lifetime of any child now living in the valley.

Efforts to change the arroyo must take the trees into account. Just because it's easier to demolish everything does not mean it's in the best interest of the ecosystem, the community, or the goal of flood control itself. The rehabilitation plan must work **around** the trees, just as the flowing water does.

The good news is that it really does seem that Leeland and his team at AML have heard the widespread concerns of the community. I appreciate the time they have taken, with me and many others, to listen. We are lucky that there is an agency willing to help out with the important infrastructure rehabilitation that we really do need, and they have my appreciation for their patience and professionalism.

If there was an assumption that the arroyo doesn't matter to anyone, the public outcry of 250+ public comments should have sternly corrected that misapprehension. The trees in the arroyo benefit everybody and every living thing in town. I urge the AML to remember their promise to spare as many trees as possible in our arroyo.

Regarding the **photos**, it must be said that none of the individuals involved in

the upcoming work have anything to do with these ugly failures. But these photos illustrate what I fear with the stated plans for the arroyo: half-baked infrastructure "improvements" with corners cut and zero follow-through. The gabions in the Galisteo River at the Cerrillos bridge fell apart in just a couple years, and are now a dangerous hazard as they continue to collapse. This is unacceptable. The so-called revegetation plan behind the Mineshaft Tavern is even worse. The photos illustrate just how badly this can go. This would be a disastrous result for the Madrid arroyo, taking a functional natural ecosystem and turning it into stunted saplings and deteriorating plastic junk, with no flood control benefit whatsoever.

Thank you everyone for your time, thank you Andy Bramble for conveying my words, as I am out of town temporarily.