





## PUBLIC INFORMATION MEETING

# Madrid Stormwater and Erosion Control Project

Thursday, January 25<sup>th</sup>, 2024 Madrid Firehouse – Madrid, NM



# **Public Information Meeting - Purpose**





Gob pile above Madrid, NM – Photo courtesy of AML

- Introduce Team Members from Agencies
   and Contractors
- Provide Overview of Madrid Stormwater and Erosion Control Project
- Public Involvement: Comment session & Question/Answers with project representatives

# **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)** – co-federal 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**– prepared Environmental Assessment (EA); public outreach; natural resources surveys; prepared Biological Evaluation; water quality studies; and Preconstruction Notice for USACE; sub-contracted cultural resource studies



**WESTON SOLUTIONS**– designed stormwater features for the east hillside and Firehouse Lane



**RIVERBEND ENGINEERING**– designed arroyo improvements and other stormwater features on Cave Road

TIERRA WEST, LLC

5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858—3100 www.tierrawestllc.com **TIERRA WEST, LLC**– designed water tank and pipeline boring locations



# Team Members



AML Team Members:

- Leeland Murray: AML Project Manager
- Lloyd Moiola: AML Environmental Manager
- Andrew Zink: AML Cultural Resource Manager
- James Hollen: AML NEPA Coordinator
- Mike Tompson: AML Program Manager, P.E.

#### Santa Fe County:

- Curt Temple: Public Works Projects Section Manager
- Adeline Murthy: Open Space and Trails Planning Team Leader
- Monica Harmon: Open Space Resource Management Specialist

#### Grouse Mountain Environmental Consultants:

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

#### Weston Solutions:

> Rob Ederer, P.E.

#### Riverbend Engineering: → Chris Phillips, P.E.



# Project Area: Madrid, NM

- Coal mining community from 1890s
- Developed as a company town
- Last active mine closed in 1962
- Late 1970s town sold as individual private properties
- Present day tourist destination

Madrid Overview - Photo Courtesy of Grouse Mountain



Madrid Overview – Photo Courtesy of AML

# **AML History in Madrid**

#### 1980s through Today

- Adit closures
- Asbestos removal
- Water tank abatement
- Drainage repairs and reclamation
- Structure demolition
- Maintenance

## **Project Development**



AML Program Public Involvement

- Gob piles, modified drainages, deteriorated drainage structures causing severe sedimentation and flooding
- Address stormwater concerns
- Maintain the historic integrity- no complete gob pile reclamation
- Update fire suppression system
- Project engineers and AML developed
   30/60/90% plans with community input at each step

Recently reopened mine adit feature a safety concern

Gob piles – Photo Courtesy of WCRM



## Madrid Stormwater and Erosion Control Project Area

### **125-acre Area of Potential Effect (APE)**

- Private Land: 84 acres (67%)
- Santa Fe County: 27 acres (22%)
- New Mexico Department of Transportation (NMDOT): 7 acres (6%)
- Madrid Landowners Association: 4 acres (3%)
- > Madrid Water Cooperative: 3 acres (2%)

## **RESOURCE SURVEYS**

### Wildlife

Hydrology

### **Water Quality**

**Cultural Resources** 

**Historical Resources** 



Arroyo
– Photo Courtesy of Grouse Mountain



## **Natural Resources Surveys**

Desktop analysis

### Surveys 2019

- No threatened or endangered species habitat or presence
- No rare plants located
- 1 active Cooper's hawk nest
- No wetlands
- All drainages ephemeral

**Biological Evaluation** 



Plant Survey – Photo Courtesy of Grouse Mountain



# Water Quality

### Sampling in 2019

- 2 sites below gob piles
- 2 sites at discharge points
- 1 site away from mining effects (reference site)

### New Mexico Water Quality Standards

Properties, quality, pollutants

### Results

- Total Dissolved Solids, dissolved manganese, dissolved aluminum above threshold
- Reference site and sample site below Zuni bowls all below thresholds



Water Quality Analysis – Photo Courtesy of Grouse Mountain

# **Cultural Resources**

- National Historic Preservation Act, National Cultural Properties Act, New Mexico Prehistoric and Historic Sites Preservation Act, and New Mexico Cultural Properties Act
- Madrid Historic District (downtown, ballpark, mining museum, railroad segments, etc.)
- Western Cultural Resource Management, Inc. conducted surveys 2019-2020
  - > 164-acre inventory
  - > 15 historic archaeological sites
  - > 1 isolated occurrence
  - > 2 historical structures
  - > 109 historic buildings

## **ENVIRONMENTAL ASSESSMENT (EA)**

#### **National Environmental Policy Act (NEPA)**

#### **Requires public involvement**

#### **Addresses a Purpose and Need**

- Need: 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.
- > Purpose: To safeguard the public from these hazards while preserving the historic mining landscape.

# Requires assessing environmental impacts from a range of alternatives that meet the Purpose and Need and a No Action Alternative:

- > No Action Alternative- no work would be done, acts as a baseline
- Proposed Action Alternative- AML Program and public preferred alternative
- > Alternative B- similar but more intensive stormwater management actions

## **PROPOSED ACTION**

- Close mine adit feature
- Water tank and fire suppression system
- Stormwater improvements



Proposed Action Overview - Photo Courtesy of Weston

## **Proposed Action- Mine Closure**

Stormwater and erosion have opened a previously backfilled feature. Proposed Action would close by:

Manual or mechanical filling with soil and rock, waste material, and/or polyurethane foam

Structural barrier



Open Mine Feature – Photo Courtesy of AML

## **Proposed Action- Mine Closure**

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Manual or mechanical filling with soil and rock, waste material, and/or polyurethane foam

Structural barrier



Polyurethane foam closure with drainage cap — Photo Courtesy of AML

# **Proposed Action- Fire Suppression System**

- Purpose: to meet Santa Fe County code requirements for fire suppression water volume and pressure
- New 125,000 gallon water tank
- Transmission pipeline- crosses south of Madrid and connects to existing pipeline near fire house
- Less disruptive
- Less potential for underground utility interference



Current Water Tank – Photo Courtesy of AML

## **Proposed Action- Fire Suppression System**



Water Tank Project Area – Image from Tierra West plans

### ICE HOUSE ROAD

### Bethlehem Hill Road

 earthen rolling dips, cobble rock rundowns, cobble swales directing into a stormwater conveyance channel

### Bethlehem Hill Arroyo

• Zuni bowls, plunge pools, one-rock dams decrease erosion

### ICE HOUSE ROAD

### Ice House Road

- Re-graded with crowned gravel cross-section
- Sediment pond for stormwater
- Three channel intercepts with rock-lined channel to capture and directs stormwater away from private property (hidden from village view)

### Soil Disposal Area

- Regrade gob piles, cover with excess material from Arroyo improvements, revegetate
- Add drainage and gob toe treatment









### MADRID ARROYO AND CAVE ROAD

Cave Road

- re-grade with rock-lined swale and gravel roadway
- two bifurcated roadways (east and west) for local access and Arroyo crossing
- Excess fill from Arroyo added to old railroad grade between Cave Rd and Arroyo to prevent flooding
- Two channels with box culverts installed at Arroyo crossing

Bridge Street

- re-graded with additional base coarse material
- install center valley gutter and drainage inlet drop structure into Madrid Arroyo

### Madrid Arroyo

- main channel would be re-graded, with rock and soil deflectors installed within channel
- native seed mix and plantings to stabilize soils



## Proposed Action- Stormwater Controls MADRID ARROYO AND CAVE ROAD





Channel with box culverts



**Rock Deflector** 

**Rock-lined Swale** 

### **FIREHOUSE LANE**

Firehouse Lane

- Rock-lined gravel roadway channels water into Arroyo and existing drop inlet structure
- Add drainage structure midway
- North of drainage structure, re-grade to inverted crown gravel roadway

### East Gob Piles

- Zuni bowls, plunge pools, one rock dams, and rock rundowns in higher elevations
- Trapezoidal channels at toes

### Red Dog Road

- Re-graded with more base coarse material
- Rock-lined ditch above road to channel stormwater into existing culvert under Firehouse Ln



## **Alternative B**

- Close mine adit feature
  - No difference from Proposed Action
- > Water tank and fire suppression system
  - Same 125,000-gallon water tank
  - Pipeline along west side of highway and crosses under at bend
- > Stormwater improvements
  - Intensive level of service needing less maintenance
  - More visually obtrusive in Madrid's historical setting

## **Alternative B- Stormwater Controls**

### **ICE HOUSE ROAD**

- Paved standard and inverted crown road improvements
- Storm drain pipes
- Large detention pond
- Rock-lined stormwater diversions
- > Soil Disposal area
  - Reclaim/ cover gob piles
  - Revegetate
  - Add drainage and gob toe treatment

## **Alternative B- Stormwater Controls**

### MADRID ARROYO AND CAVE ROAD

Cave Road

- Re-grade with rock-lined swale and gravel roadway
- Excess fill from Arroyo added to old railroad grade between Cave Rd and Arroyo to prevent flooding
- Two channels with box culverts installed at Arroyo crossing

Bridge Street

- Paved
- Install center valley gutter and drainage inlet drop structure into Madrid Arroyo

### Madrid Arroyo

- Main channel would be re-graded with rock and soil deflectors installed within channel
- Native seed mix and plantings to stabilize soils

## **Alternative B- Stormwater Controls**

### FIREHOUSE LANE

- Paved standard roads
- Storm drain pipes
- Rock-lined stormwater diversions
- Sediment basins

### Red Dog Road

- Paved
- Rock-lined ditch above road to channel stormwater into existing culvert under Firehouse Ln

### **Madrid Stormwater and Erosion Control Alternative Comparisons**

#### **PROPOSED ACTION**

- Close mine adit feature
- Water tank and fire suppression system
- Stormwater improvements: medium level of service needing periodic maintenance

#### **ALTERNATIVE B**

- Close mine adit feature (same as PA)
- Water tank and fire suppression system (different pipeline route)
- Stormwater improvements: intensive level of service needing less maintenance

#### **NO ACTION ALTERNATIVE**

- > Leave mine adit feature open
- No new water tank and fire suppression system improvements
- > No stormwater improvements

## **Effects Comparisons- Cultural Resources**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

> Historical features protected from stormwater, erosion, and fire

#### **Adverse Effects**

May disturb sites physically and/or visually

Memorandum of Agreement (MOA)- Describes in detail effects from proposed action activities and data recovery and alternative mitigations

Mitigation measures may include monitoring, 50 feet avoidance buffer, barrier fencing, color blending, reducing visuals

#### **ALTERNATIVE B**

#### **Beneficial Effects**

 > Historical features better protected from stormwater and erosion (same fire benefit)

#### **Adverse Effects**

Greater adverse impact- more disturbance, more visual impact

≻Similar mitigation measures

#### NO ACTION ALTERNATIVE

#### **Beneficial Effects**

No change from the current historical setting (except continual damage from stormwater/erosion)

#### Adverse Effects

 No increased protection from stormwater, erosion, or fire improvements

## **Effects Comparisons- Visual Resources**

#### **PROPOSED ACTION**

Beneficial EffectsDecrease deterioration

#### **ALTERNATIVE B**

Beneficial EffectsDecrease deterioration

#### **NO ACTION ALTERNATIVE**

**Beneficial Effects** 

No change from the current historical setting

#### Adverse Effects

Construction visuals
 Stormwater features visible though natural looking

Adverse Effects
Greater construction visuals

Stormwater features more visible

**Adverse Effects** 

Stormwater/erosion issue continue to degrade area

## **Effects Comparisons- Water Resources**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

- Redirect arroyo to historic channel
- Reduced runoff and sedimentation
- >Improved water quality

#### **ALTERNATIVE B**

**Beneficial Effects** 

- Redirect arroyo to historic channel
- Greater reduced runoff and sedimentation
- > Greater improved water quality

#### NO ACTION ALTERNATIVE

**Beneficial Effects** 

≻none

Adverse Effects > Short-term construction

Adverse Effects
Greater short-term construction

Adverse Effects

>No channel improvements

>No runoff/sedimentation prevention

>No improved water quality

## **Effects Comparisons- Wildlife**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

- Remove entrapment hazard (mine)
- Reduced habitat degradation from stormwater/erosion

#### **Adverse Effects**

Limited habitat disturbance

Short-term avoidance/entrapment potential

#### **ALTERNATIVE B**

#### **Beneficial Effects**

- Remove entrapment hazard (mine)
- Greater reduced habitat degradation from stormwater/erosion

#### NO ACTION ALTERNATIVE

**Beneficial Effects** 

≻None

#### Adverse Effects

>Mine entrapment hazard remains

Habitat degradation continues

### Adverse Effects

Limited habitat disturbance

Greater short-term avoidance/entrapment potential

## **Effects Comparisons- Vegetation & Soils**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

- Soil disposal reclamation area; the revegetation will improve drainage and erosion control
- Native seeding/plantings within Madrid Arroyo
- ➢ Reduced erosion

Adverse Effects

Limited construction impacts
Potential for weeds

#### **ALTERNATIVE B**

**Beneficial Effects** 

- More native seeding/plantings within Madrid Arroyo
- More reduced erosion

#### **Adverse Effects**

- Limited construction impacts
- ➢Potential for weeds

#### NO ACTION ALTERNATIVE

**Beneficial Effects** 

≻None

#### **Adverse Effects**

≻Continued erosion

## **Effects Comparisons- Human Health and Safety**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

- Reduce flooding conditions
- Improved traffic, residence, and business safety
- ➢ Remove mine hazard

### Adverse Effects ≻None

#### **ALTERNATIVE B**

#### **Beneficial Effects**

- Greater reduced flooding conditions
- Greater improved traffic, residence, and business safety
- ➢ Remove mine hazard

Adverse Effects >None

#### **NO ACTION ALTERNATIVE**

**Beneficial Effects** 

≻None

**Adverse Effects** 

Continued flooding and erosion threats

Continued fire suppression inadequacy

Mine hazard remains

### **Effects Comparisons- Socioeconomic Conditions & Environmental Justice**

#### **PROPOSED ACTION**

#### **Beneficial Effects**

- Reduced risk of property damage
- Decreased insurance rates
- In line with Madrid community input

#### **ALTERNATIVE B**

#### **Beneficial Effects**

- Greater reduced risk of property > None damage
- Decreased insurance rates

#### **Adverse Effects**

>Temporary construction impacts

#### **Adverse Effects**

 Temporary construction impacts
 Potential economic impact from more visual improvements
 Less favorable alternative from Madrid community input

#### NO ACTION ALTERNATIVE

**Beneficial Effects** 

#### **Adverse Effects**

Continued risk of property damage

Not favorable to Madrid community

## **Effects Comparisons- Transportation & Recreation**

#### **PROPOSED ACTION**

**Beneficial Effects** 

Improved road conditions

Improved recreation conditions

#### **ALTERNATIVE B**

**Beneficial Effects** 

Greater improved road and recreation conditions with less maintenance

#### **NO ACTION ALTERNATIVE**

**Beneficial Effects** 

≻None

### Adverse Effects

Temporary closures/limited access

#### **Adverse Effects**

>Longer temporary
closures/limited access

#### **Adverse Effects**

Continued road and recreation area degradation

# Madrid Stormwater and Erosion Control Project Schedule

January 8 - February 7:	Open Comment Period On Environmental Assessment
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February:Analyze Comments Received

February:Conduct Additional Cultural Survey On Added APE

March - April: Finalize Environmental Assessment

April - May:Post Final EA, Finding Of No Significant Impact, And Decision RecordFollowed By 30-day Objection Period

Begin Work –Late Summer:Water Tank InstallationWinter 2024/2025:Hillside And Arroyo Work Following Bid Procurement







# Question/Answer & Comment Session

### PLEASE SUBMIT ADDITIONAL COMMENTS OR QUESTIONS BY FEBRUARY 7, 2024 TO:

Hillary Robbie Grouse Mountain Environmental Consultants 3600 Cerrillos Road, Suite 407 Santa Fe, NM 87507 Phone – 505.930.5166 Email – Madrid\_EA\_Comments@gmecnm.com

# Thank you for participating!