

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

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Jerry Schoeppner PG, Director
Mining and Minerals Division



ELECTRONIC SUBMITTAL

November 16, 2020

Mr. Skyler Wildenstein
Trustee for Southwest Resources Inc.
4011 Mesa Verde Rd. NE
Albuquerque, NM 87110

Pete Domenici Jr.
Domenici Law Firm
320 Gold Ave. SW Suite # 1000
Albuquerque, NM 87102

Conditional Approval for Final Reclamation Plan, Southwest Resources Inc., Section 12 Mine, McKinley Co., NM, Permit Tracking No. MK046RE, dated July 2020

Greetings:

The New Mexico Mining and Minerals Division (“MMD”) and the New Mexico Environment Dept (“NMED”) have reviewed the Final Reclamation Plan (“FRP”), Southwest Resources Inc. (“SRI”), Section 12 Mine, McKinley Co., NM, Permit Tracking No. MK046RE, date July 2020 and response submitted by email on October 5, 2020. MMD and NMED approves the FRP with the following conditions.

Conditions

1. Signed and sealed engineering designs, drawings, and specifications indicated on Page 3 of Appendix G. will be provided to MMD for review 90 days prior to commencing reclamation earthwork on the site.
2. An inventory of all radiological contaminated building components with manner of clean up and/or disposal will be provided to MMD in the Reclamation Summary Report.
3. 30 days prior to reclamation of the main shaft SRI shall submit a design for MMD approval including at a minimum:
 - A clay layer incorporated in the mounded cap to help minimize infiltration of water into the backfilled shaft.
 - Discussion of how the compacting of material will occur during the backfilling process.
 - A drawing showing vertical and horizontal extent of the cap.

- A list of non-earthen materials that are put into the shaft.

After backfilling has occurred on the main shaft MMD will require:

- SRI to monitor that specific area for subsidence, caving, or piping in the main shaft footprint for a period of 5 years to ensure stability. SRI shall correct any subsidence, caving, or piping in the main shaft footprint found during this monitoring period to include revegetation.
4. Above ground steel casing associated with west vent shaft shall be removed, the west vent shaft shall be capped or backfilled, and the west vent shaft area shall be reclaimed to blend in with the current surrounding ground surface including revegetation.
 5. Above ground steel casing associated with east vent shaft shall be removed and a bat cupula design shall be submitted to MMD for approval 60 days prior to installation.
 6. Regarding the proposed Borrow Area “B” on Figure 6. SRI shall not disturb within 100 ft. of the current highwater mark of Ambrosia Lake for borrow of cover material.
 7. Include in the seed mix Firewheel (*Gaillardia pulchella*) at a rate of 5 lbs to the acre.
 8. Vegetative Success Criteria shall be as follows:
 - a. Revegetation Success shall represent a self-sustaining ecosystem through the comparison of ground cover, productivity, and diversity and shall be made on the basis of the approved reference area.
 - b. Foliage or basal cover and productivity of living perennial plants of the revegetated area shall be established equal to 75% of the reference area to within a 90-percent statistical confidence.
 - c. Diversity of plant life forms (woody plants, grasses, forbs) shall consider what is reasonable based on the physical environment of the reclaimed area.
 - d. Vegetation success will be evaluated after a minimum period of 5 years.
 9. Provide MMD with the decided removal option for the headframe by 1st Quarter 2021.
 10. The reclaimed site will be evaluated for stability to evaluate success. Criteria for stability will include subsidence, erosion, and revegetation. Site stability success will be determined after a minimum period of 5 years.
 11. The waste rock repository shall be located above the 100-year base flood elevation as indicated by the Federal Emergency Management Agency’s Map Number 35031C2100E.
 12. The waste rock repository must be designed to prevent the release of contaminants to Ambrosia Lake should the repository become inundated.

Per the *Director’s Order of Abatement on Consent Section 12 Mine, McKinley County, New Mexico*, signed January 14, 2020 (“D.O.”), SRI shall align all future submittals with the timelines specified in Sections 30 – 36 of the D.O

Should you have any questions, comments, or require additional information concerning this letter, please contact me at (505) 467-9589, or via email at: clinton.chisler@state.nm.us.

Sincerely,



Clint Chisler – Permit Lead, MK046RE
Mining Act Reclamation Program (“MARF”)

New Mexico Mining and Minerals Division

Cc: Holland Shepherd, Program Manager, MARP/MMD
Dana David, Assistant General Counsel
Anne Maurer, Mining Act Team Leader, NMED
Kurt Vollbrecht, MECS Program Manager, NMED
Mine File (MK046RE)

Attachment: Federal Emergency Management Agency's Map Number 35031C2100E



Michelle Lujan Grisham
Governor

Howie C. Morales
Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

1190 Saint Francis Drive / PO Box 5469
Santa Fe, NM 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965

www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

Date: November 16, 2020

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program (MARF)

From: Kurt Vollbrecht, Manager, Mining Environmental Compliance Section (MECS)

Subject: **New Mexico Environment Department (NMED) Comments, Southwest Resources, Inc., Section 12 Mine, McKinley County, New Mexico, Mining Act Permit No. MK046RE**

Section 12 Mine Description

Southwest Resources, Inc. (Permittee), Section 12 Mine, is a regular existing mine which covers an area of approximately 10 surface acres. A mine building, hoist house, a main shaft, and two subsidiary vent shafts without headframes, piles of waste rock that contain low-grade uranium mineralization, piles of rock mineralized with uranium that were intended for milling, and soils contaminated by uranium mineralization exist on the mine property. The mine property also contains roads, drainage ditches, and miscellaneous mining equipment. The Section 12 Mine is assigned New Mexico Mining Act (NMMA) Permit No. MK046RE.

The Section 12 Mine is located in the SW $\frac{1}{4}$ of Section 12, T14N, R10W and the NE $\frac{1}{4}$ of Section 11, T14N, R10W, in McKinley County.

Background

This underground uranium mine was operated intermittently between 1959 and 1962 and again from 1974 to 1982. The years of mine operation pre-dated the NMMA, so the mine did not have a permit during operations. The Permittee submitted a minimal impact mine permit to the Energy, Minerals and Natural Resources Department, Mining and Minerals Division (MMD) on January 14, 2014. That application was denied under the NMMA. The mine has been classified as a regular existing mine subject to the requirements in Part 5 of the NMMA. Subsequently, the

Permittee performed an economic analysis of the mine and determined that, considering the current uranium market and the limited remaining uranium resources, the mine would not be operating in the future. The permittee is not seeking a permit to mine.

MMD issued a Director's Order of Abatement on Consent with Findings of Fact and Conclusions of Law (Order) to the permittee on December 16, 2019. The Order required the Permittee to submit for approval a Final Draft Reclamation Plan (Draft Plan) to MMD. The Permittee submitted the Draft Plan on February 19, 2020. MMD requested NMED comments under the NMMA on the Draft Plan on March 3, 2020. The Mining Act Team Leader provided the combined NMED comments on the Draft Plan from MECS, SWQB, and the AQB in a memo dated May 6, 2020. The permittee submitted the Final Reclamation Plan (Final Plan) to MMD on July 13, 2020. Comments on the Final Plan are included in this memo below.

Air Quality Bureau

The AQB has determined that the Final Plan will achieve compliance with applicable air quality standards if implemented as described and in accordance with applicable state and federal regulations.

Surface Water Quality Bureau

The SWQB has the following requirements that need to be addressed as part of MMD's approval of the Final Plan:

1. The waste rock repository shall be located above the 100-year base flood elevation as indicated by the Federal Emergency Management Agency's Map Number 35031C2100E.
2. The waste rock repository must be designed to prevent the release of contaminants to Ambrosia Lake should the repository become inundated.

The SWQB has determined that the Final Plan will achieve compliance with applicable surface water quality standards if implemented with the requirements above, as described in the Final Plan, and in accordance with applicable state and federal regulations.

Mining Environmental Compliance Section

The MECS has determined that the Final Plan will achieve compliance with applicable groundwater standards if implemented as described and in accordance with applicable state and federal regulations.

Holland Shepherd, Program Manager

November 16, 2020

Page 3 of 3

NMED Summary Comment

Pursuant to the Order, NMED is providing this written determination that the activities proposed or authorized in the Final Plan are expected to achieve compliance with all applicable air, water quality, and other environmental standards if carried out as described in the Final Plan and the requirements above.

If you have any questions, please contact Anne Maurer at (505) 660-8878.

Sincerely,

Kurt Vollbrecht

Mining Environmental Compliance Section Manager

cc: Shelly Lemon, Bureau Chief, SWQB
Liz Bisbey-Kuehn, Bureau Chief, AQB
Clinton Chisler, Lead Staff, EMNRD-MMD
Anne Maurer, Mining Act Team Leader, MECS

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was New Mexico State Plane, West zone (FIPS Zone 3003). The **horizontal datum** was NAD 83, GRS 80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS 12
National Geodetic Survey SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit their website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from New Mexico Resource Geographic Information System Program at a scale of 1:12,000 from photography dated 2005 or later.

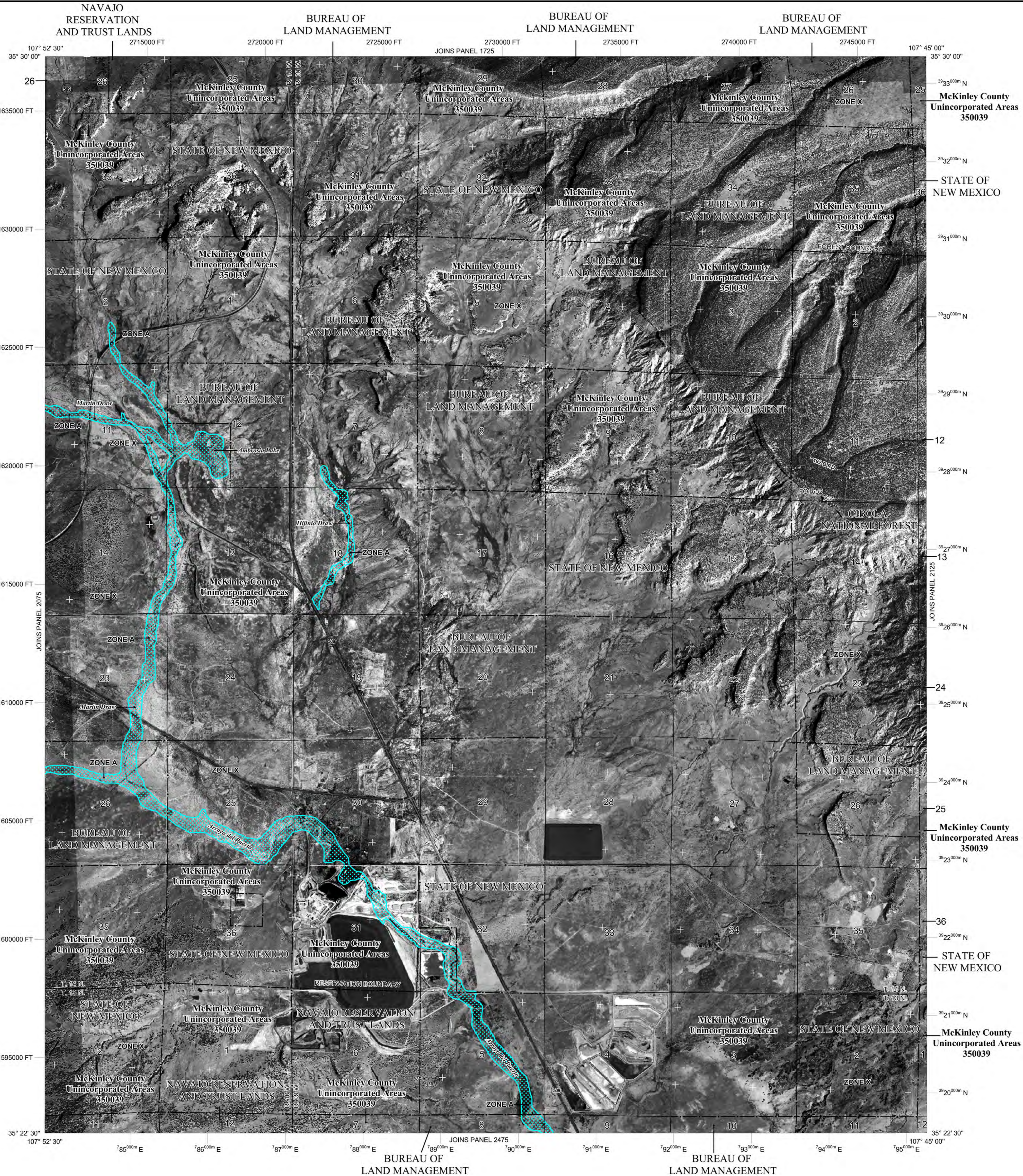
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

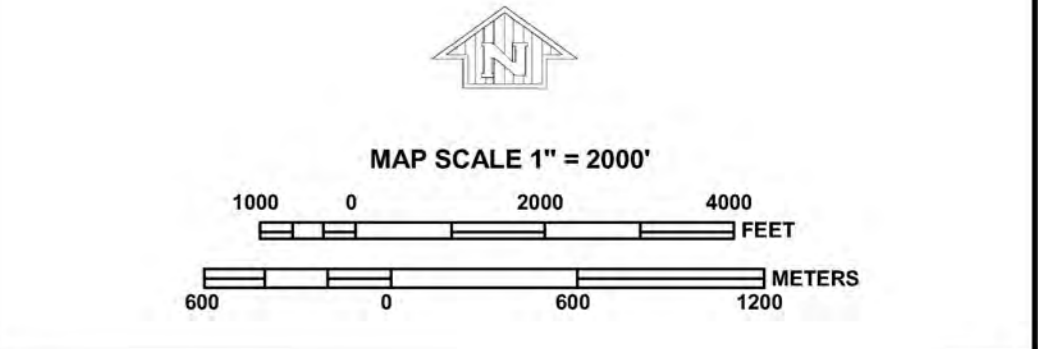
Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at <http://www.msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
 - ZONE AE** Base Flood Elevations determined.
 - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
 - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
 - ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
 - ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
 - ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
 - ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
 - ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- OTHERWISE PROTECTED AREAS (OPAs)**
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
 - 0.2% annual chance floodplain boundary
 - Floodway boundary
 - Zone D Boundary
 - CBRS and OPA Boundary
 - Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
 - 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
 - 513 (EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*
- *Referenced to the North American Vertical Datum of 1988
- A-A Cross section line
 - 23-23 Transsect line
 - 97° 07' 30", 32° 22' 30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
 - 4760000 E 1000-meter Universal Transverse Mercator grid values, zone 12
 - 600000 FT 5000-foot grid ticks: New Mexico State Plane coordinate system, West Zone (FIPSZONE 3003), Transverse Mercator projection
 - DX5510x Bench mark (see explanation in Notes to Users section of this FIRM panel)
 - M1.5 River Mile
- MAP REPOSITORIES**
- Refer to Map Repositories list on Map Index.
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**
February 17, 2010
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**
- For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2100E

FIRM
FLOOD INSURANCE RATE MAP
MCKINLEY COUNTY, NEW MEXICO
AND INCORPORATED AREAS

PANEL 2100 OF 3025
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--|--------|-------|--------|
| MCKINLEY COUNTY, UNINCORPORATED AREAS 350039 | 2100 | 2100 | E |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
35031C2100E

EFFECTIVE DATE
FEBRUARY 17, 2010

Federal Emergency Management Agency