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Environmental Assessment of the Proposed Mount Moriah Cemetery Direct Land Sale

File Number: N-90179



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1. Introduction

Through Resolution Number 2011-97 Nye County, Nevada formally requested a direct land sale of public lands within and around the Mt. Moriah Cemetery located 0.5 mile west of the Town of Manhattan, Nevada. The total proposed conveyance area consists of approximately 7.5 acres, of which approximately 2.3 acres has been used as a cemetery since the early 1900's.

The proposal for the direct sale is in accordance with the requirements of Title 43 of the Code of Federal Regulations (CFR), part 2711.3-3 that allows for the direct sale of public lands, and meets criteria provided for in Section 203(a)(3) of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 United States Code [USC] 1701, 1713 and 1719).

The approval of a direct land sale is a federal action subject to analysis under the National Environmental Policy Act (NEPA) of 1969 (Public Law [PL] 1-91-190, as amended [42 United States Code (USC) 4321 *et seq.*]). In order to evaluate the environmental consequences of the proposal, the Bureau of Land Management (BLM), Tonopah Field Office (TFO) has determined that an Environmental Assessment (EA) is required prior to the potential approval of the land sale. The EA will analyze the direct, indirect, and the cumulative impacts of the proposal to determine if significant impacts would occur that would require the development of an environmental impact statement (EIS).

1.1 Purpose and Need for Action

The purpose of the action is to dispose of 7.5 acres of public lands inclusive of the Mount Moriah Cemetery to Nye County through a direct land sale, under the authority of, and in accordance with, Sections 203 and 209 of the FLPMA (90 Stat. 2750, 43 USC 1701, 1713 and 1719). The need for action is established by the obligation to respond to Resolution Number 2011-97 which formally requested the sale.

1.2 Land Use Plan Conformance

The acreage proposed for the direct sale has been designated as suitable for disposal in the Tonopah Resource Management Plan (RMP) and the Record of Decision (ROD) approved on October 2, 1997 (refer to the Record of Decision, Lands and Rights-of-Way page 18, and page A-46, Appendix 14 of the RMP). The RMP contains no constraints that conflict with the proposed sale.

1.3 Relationship to Statutes, Regulations, Policies, Plans, or other EAs

The Federal Land Policy and Management Act of 1976 (FLPMA) 90 Stat. 2750, 43 U.S.C. 1701, 1713, and 1719, was passed to authorize BLM's management of public lands. The applicant requested that the parcel be sold under the authority of FLPMA.

- FLPMA Section 102(a)(1) gives the Bureau of Land Management the authority to sell public lands under certain criteria and requires that: "the public lands be retained in

Federal ownership, unless as a result of the land use planning procedure... it is determined that disposal of a particular parcel will serve the national interest.”

- FLPMA Section 203(a)(1) and 43 CFR 2710.0-3(a)(3) allow for the sale of public lands if the subject tract is difficult and uneconomic to manage because of its location or other characteristics – such as the subject’s history of use, current level of development, and presence of mining claims, or is not suitable for management by another Federal department or agency. 43 CFR 2710.03(a)(2) is for the disposal of land that serve important public objectives, including, but not limited to, expansion of communities and economic development which cannot be achieved prudently or feasibly on lands other than public lands and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintain such tract in Federal ownership.
- FLPMA Section 203(a)(3) allows disposal (selling) of public land if it will serve a public benefit. Disposal (sale) of the parcel would serve the public benefit by making additional lands available for community expansion and private economic development, increase the potential for economic diversity, and add to the municipal tax base, thereby adding revenue to the community for services such as schools and roads.
- FLPMA 203(d) and 43 CFR 2710.0-6(c)(iii)(5) requires that public lands be sold at no less than fair market value. This parcel of land would be appraised by a Federal appraiser to determine the fair market value.
- FLPMA 203(f) describes the allowable methods of sale. The public lands would be sold under the direct sale method as described (or required) by Federal regulations at 43 CFR 2711.3-3(a)(1) and 43 CFR 2711.3-3(a)(2).
- FLPMA 209(b)(1) and 43 CFR 2720 describes the allowance and means to convey mineral interests owned by the United States to the prospective surface owner when a parcel leaves Federal ownership if it is proven there are no known mineral values in the land, or if the reservation of mineral rights in the name of the United States would interfere with or preclude appropriate non mineral development of the land and that such development is a more beneficial use of the land than mineral development.
- Title 43 CFR 2710.0-6(c)(3)(iii) allows for a direct sale as provided in 43 CFR 2711.3-3 to be used where necessary to protect existing equities in the land or where the lands are needed by State or local governments. The authority for disposal is found at 43 CFR 2710.0-3.

The Proposed Action is also in conformance with the Nye County Comprehensive Master Plan objective to, “Ensure public lands continue to be made available for state and local government purposes such as, but not limited to, schools, parks, public facilities, roads and trails. Land identified for public purposes should receive preference over disposal for private purposes (Nye County 2011:9).”

Any water used on the described lands should be provided by an established utility or under a permit issued by the Division of Water Resources, State Engineer's Office. All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes.

1.4 Scoping and Public Involvement

The Nye County Commission addressed the proposed sale on August 3, 2010, May 3, 2011, August 16, 2011, and October 15, 2012. During the second of these meetings, Nye County Resolution No., 2011-97, which requested the direct sale of the subject lands, was approved.

On March 12, 2013, letters were sent to the Timbisha Shoshone Tribe, the Yomba Shoshone Tribe, the Duckwater Shoshone Tribe and the Big Smokey Western Shoshone Descendants (BSWSD) inviting them to express any comments or concerns that they might have with the proposal. On March 29, 2013, a field visit was held with a BLM, Tonopah Field Office Interdisciplinary Team, a Nye County Commissioner, one interested party, and a representative of the BSWSD in attendance. Support for the proposal has been expressed by AU Mines, Round Mountain Gold Corporation (RMGC), BSWSD, and the Timbisha Shoshone Tribe.

In August 2013, a follow-up letter offering another site visit was extended to Maurice Frank-Churchill of the Duckwater Shoshone Tribe. An onsite visit was conducted with Mr. Frank-Churchill and a staff member of the Tonopah Field Office on September 24, 2013. Mr. Frank-Churchill provided comments and support in a letter dated September 26, 2013 recommending a fence be constructed around the expansion area while maintaining the historic cemetery fence. He also suggested that the parcel be excluded from mineral entry.

A Notice of Realty Action (NORA) for the proposed sale, as required by regulations found at 43 CFR 2711.1-2, would be published and sent to interested parties. It would be published in the Federal Register, and once a week for three weeks in the local newspaper. The NORA would be sent to the Nevada Congressional Delegation and the Office of the Governor of the State of Nevada.

2. The Proposed Action and No Action Alternatives

2.1 The Proposed Action

The BLM proposes to sell via direct sale 7.5 acres of BLM-administered surface estate to Nye County, Nevada. The sale would include 2.3 acres which constitutes the existing Mt. Moriah cemetery and 5.2 acres which comprises the expansion area. Nye County requested the land sale to be able to accommodate future internments under the direction of cemetery sextons. Nye County has indicated that, if approved, improvements to the parcel would be limited to fencing the sale parcel. The county has also indicated that no additional internments would occur on the relatively undisturbed western half of the existing cemetery.

The direct sale to Nye County would clear and transfer all surface rights and responsibilities to Nye County. The mineral estate would remain the property of the United States. The 7.5 acre parcel is located on public lands in Big Smoky Valley, 0.5 mile west of the Town of Manhattan. The location which is shown in Figure 1 is described as follows:

Mount Diablo Meridian, Nevada

T. 8 N., R. 43 E.,

Section 24, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$.

The Nevada State Office Cadastral Survey Chief approved the aliquot legal land description as written on September 20, 2011.

Regulations found at 43 CFR 2807.15 provides that the BLM will notify ROW holders of the potential for transfer of the public land encumbered by their ROW (Table 1). Holders are given the opportunity to maintain their current ROW or convert the term of the ROW in perpetuity.

The holders would have 60 days to respond with their decision on which option they select. Issuance of perpetual right-of-ways or easements only occurs at the time of conveyance of the affected sale parcel.

Case File No.	Holder	Issuance Date Expiration Date	Purpose	Length/Width Acreage
N-49546	Echo Bay Minerals Co.	11/01/1988 10/31/2018	4-inch PVC underground water pipeline-Manhattan Mill Site	10' x 7,392' 1.7 acres
N-49749	Sierra Pacific Power Co. dba NV Energy	11/10/1988 11/09/2018	12.5 kV distribution line to N-49546-Manhattan Mill Site	25' x 4,091.7' 2.35 acres
N-54823	Nye County	12/31/1991 12/30/2021	Waterline for Town of Manhattan	25' x 11,100' 6.37 acres

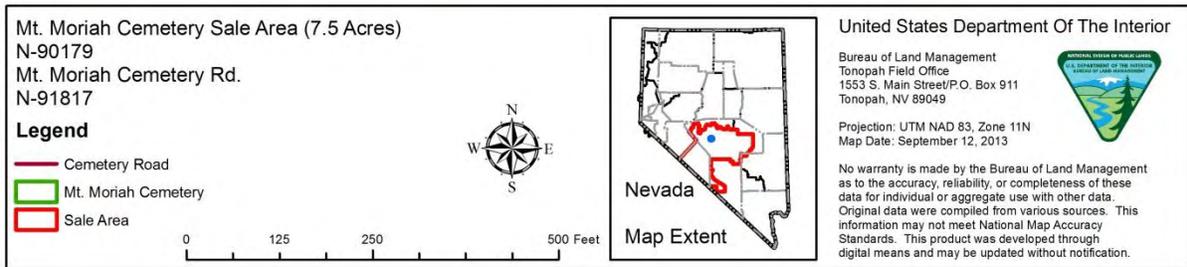
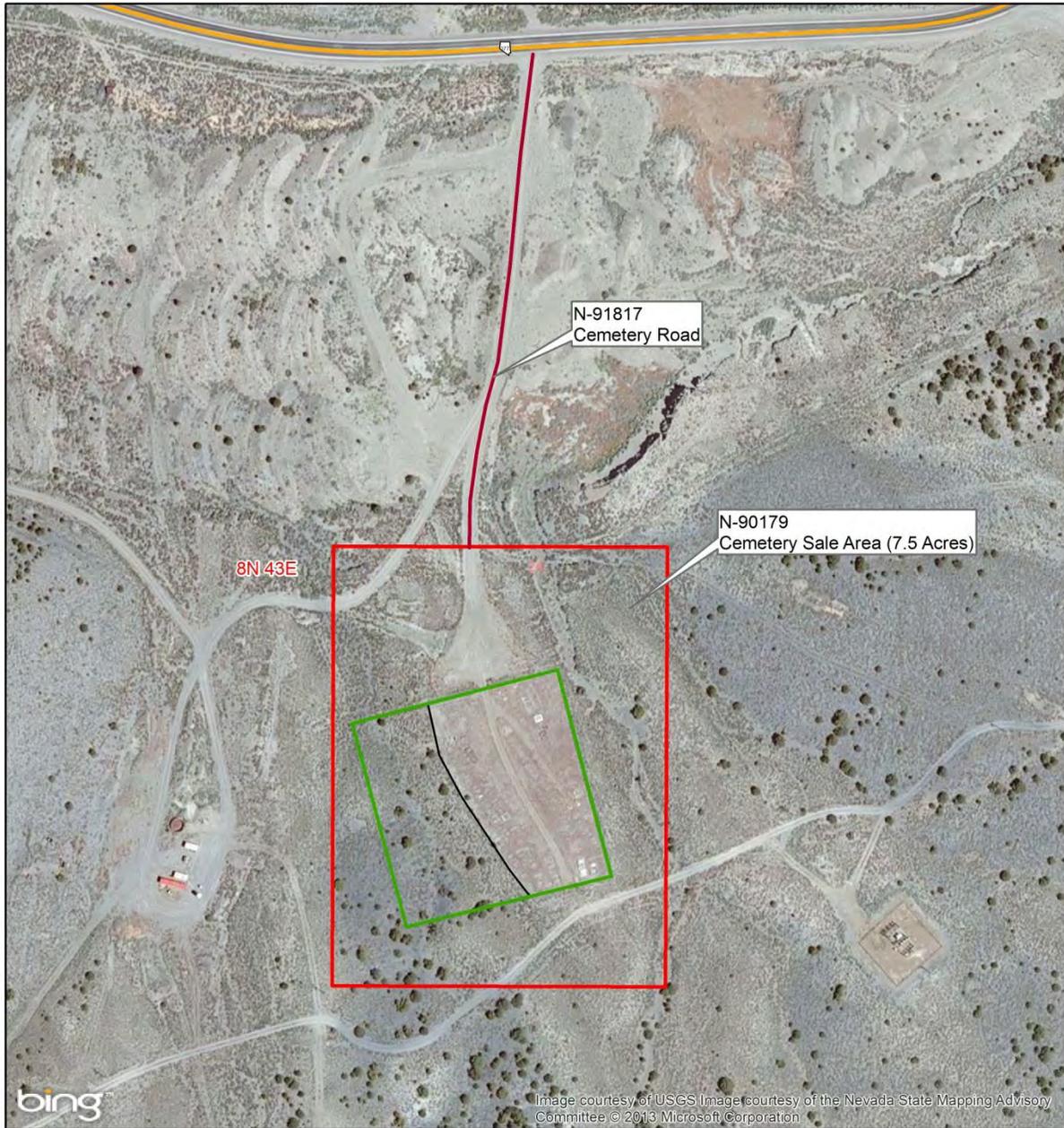


Figure 1. The Proposed Sale Parcel.

The BLM's proposed sale would release the BLM from future responsibility for decisions that impact the Mt. Moriah cemetery and any future potential liability or other issues that could arise from actions taken on behalf of Nye County to continue development and operation of the cemetery.

2.1.1 The Direct Sale Procedure

The direct sale would be conducted in accordance with the requirements of 43 CFR 2711.3-3, inclusive. The lands would be purchased for their fair market value (FMV), as determined by the BLM during a formal real estate appraisal process that would be completed prior to publishing the NORA in the Federal Register.

The BLM would offer the subject lands to the Nye County Board of Commissioners at FMV as determined by the U.S. Department of the Interior's Office of Valuation Service's certified appraiser. Upon acceptance of the offer, the County would be required to submit 20% of the purchase price. Final payment would be due within 180 days of receipt of the 20% deposit.

A Mineral Potential Report (BLM 2013) evaluated the mineral potential of the lands identified for the direct sale. Through this evaluation, the BLM determined that the mineral estate associated with the sale parcel would be reserved by the United States.

The Mineral Potential Report also revealed that portions of three mining claims of record were located on the sale parcel. Round Mountain Gold Corporation, the majority holder of two of the claims, and AU Mines, exclusive holder of the third claim, have sent "Letters of Intent to Modify" those portions of the mining claims to allow for the sale of the public land to Nye County.

An Environmental Preliminary Site Assessment of the sale parcel was conducted in March 2013 by the Battle Mountain Hazardous Materials Specialist and Tonopah Field Office Assistant Environmental Professional to determine if any recognized environmental conditions exist that may preclude the proposed disposal of the parcel. The assessment conformed to the BLM Manual Handbook H-2000-02, *Environmental Site Assessments for Disposal of Real Property*. No evidence of any hazardous substance releases, past environmental contamination, or existing solid waste dumping were identified on the subject parcel. No further inquiry was needed. Therefore, the lands were found suitable for disposal at the appraised fair market value.

2.2 No Action Alternative

Under the No Action alternative, the direct land sale would be denied and the parcel would remain in Federal ownership and would be subject to all applicable Federal land laws and regulations.

3. Affected Environment and Environmental Consequences

The purpose of this section of the EA is to describe the existing environment of the proposed land sale area. Supplemental Authorities that are subject to requirements specified by statute or Executive Order (EO) must be considered in all BLM environmental documents. The elements associated with the supplemental authorities listed in Appendix 1 of the NEPA Handbook (BLM 2008) and in Nevada Instruction Memorandum (IM) 2009-030, Change 1, are listed in Table 2. The table lists the elements and provides a determination of whether the element is present in the land sale area and if it would be affected by the Proposed Action.

3.1 Supplemental Authorities

Supplemental Authorities that may be affected by the Proposed Action are analyzed beginning in Section 3.3. Those elements listed under the supplemental authorities that do not occur in the subject parcel and would not be affected are not discussed further in this EA, based on the rationale provided in the following table. The elimination of non-relevant issues follows the Council on Environmental Quality (CEQ) policy, as stated in 40 CFR 1500.4. The potential effects of the No Action Alternative are considered beginning in Section 3.3.

Table 2. Supplemental Authorities Considered in the Analysis.				
Supplemental Authority¹	Not Present²	Present/Not Affected	Present/May be Affected³	Rationale
Air Quality		•		The disturbance of soils associated with future interments within the sale parcel would create fugitive dust that could affect air quality in the immediate vicinity of the disturbance. However, the effect would be short-term, lasting only as long as it takes to conduct the interment. The effect would also be periodic since new interments are likely to be fairly rare.
Area of Critical Environmental Concern (ACEC)	•			There are no ACECs within or near the proposed sale parcel.
Cultural Resources		•		The results of a Class III cultural resource inventory of those portions of the sale parcel outside of the existing cemetery revealed that no properties recommended as eligible for the National Register of Historic Places would be affected. Since Nye County has indicated that no actions beyond

¹ See H-1790-1 (January 2008) Appendix 1 Supplemental Authorities to be Considered.

² Supplemental Authorities determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document.

³ Supplemental Authorities determined to be present/May be Affected must be carried forward for analysis in the document.

Table 2. Supplemental Authorities Considered in the Analysis.

Supplemental Authority ¹	Not Present ²	Present/Not Affected	Present/May be Affected ³	Rationale
				maintenance of the existing cemetery would occur, there would be no effects to cultural resources within this portion of the sale parcel either.
Environmental Justice		•		The proposed land sale would not disproportionately affect low income or minority populations.
Farmlands Prime or Unique	•			The sale parcel is not located within or near prime or unique farmlands.
Noxious Weeds/ Invasive Non-native Species		•		The disturbance of soils associated with future internments could increase the potential for the establishment of noxious weeds within the sale parcel. However, periodic maintenance by cemetery sextants should prevent weeds from spreading to any substantial degree.
Native American Religious Concerns		•		No Native American Religious Concerns were expressed by any of the tribal groups contacted.
Floodplains	•			The sale parcel is not located in a floodplain as defined by Executive Order 11988.
Riparian/Wetlands	•			The sale parcel is not located in a riparian or wetland zone as defined by Executive Order 11990.
Threatened and Endangered Species	•			There are no threatened or endangered species or their habitat within or near the sale parcel.
Migratory Birds		•		Migratory birds may be displaced due to human presence associated with the construction of the perimeter fence and the use of equipment during future internments within the sale parcel. However, the effect would be temporary and there is an abundance of suitable habitat in adjacent areas.
Waste – Hazardous/Solid		•		An Environmental Site Assessment was conducted on March 29, 2013. The assessment found no evidence of any hazardous substance releases, past environmental contamination, or existing solid waste dumping on the sale parcel.
Water Quality		•		Although soil disturbance associated with future internments could impact surface waters due to erosion and off-site sedimentation, the impact would be

Table 2. Supplemental Authorities Considered in the Analysis.				
Supplemental Authority¹	Not Present²	Present/Not Affected	Present/May be Affected³	Rationale
				negligible.
Wild & Scenic Rivers	•			There are no wild and scenic rivers near the sale parcel.
Wilderness/WSAs/Lands with wilderness characteristics	•			The sale parcel is not located within or near a wilderness area, a WSA or lands with wilderness characteristics.
Forest and Rangelands (Healthy Forest Restoration Act [HFRA] projects only)	•			The proposed land sale is not associated with the Healthy Forest Restoration Act

3.2 Other Resources Considered in the Analysis

Other resources of the human environment that have been considered in this environmental assessment (EA) are listed in the table below. Elements that may be affected are further described in the EA. Rationale for those elements that would not be affected by the Proposed Action and alternative is listed in the table below.

Table 2: Other Resources Considered in the Analysis.				
Other Resources	Not Present⁴	Present/Not Affected	Present/May be Affected	Rationale
Grazing Management		•		The proposed sale parcel is located within is the 442,555 acre San Antone Allotment. The allotment is permitted for 13,505 Animal Unit Months (AUM). The sale of the parcel would remove less than 1AUM from the allotment. In accordance with 43 CFR 4110.4-2(b), the two-year waiver notice was mailed on July 18, 2013. The permittee, BTAZ Nevada LLC, has waived the 2-year grazing notification requirement.
Land Use Authorizations			•	See the discussion under the section titled, 3.3 Land Use Authorizations.
Minerals		•		Mineral resources would not be affected by the land sale because the United States would reserve the mineral estate. Letters of Intent to Relinquish have been received from RMGC and AU Mines for

⁴ Other Resources determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document based on the rationale provided.

Table 2: Other Resources Considered in the Analysis.				
Other Resources	Not Present⁴	Present/Not Affected	Present/May be Affected	Rationale
				claims encumbering a portion of the proposed sale area.
Paleontological Resources	•			There are no paleontological resources located within or near the sale parcel.
Recreation	•			There would be no traditional recreation taking place within the sale parcel.
Socio-Economic Values		•		The land sale would not result in additional job opportunities in the local community or additional revenues to Nye County.
Soils			•	See the discussion under the section titled, 3.4 Soils
Special Status Species	•			There are no special status species or their habitat located within or near the sale parcel.
Vegetation			•	See the discussion under the section titled, 3.5 Vegetation.
Visual Resources		•		The land sale and associated activities are within the allowable limits for Class IV VRM areas identified in the Tonopah RMP and Record of Decision, 1997
Wild Horses and Burros	•			There are no wild horse and burro HMAs located within or near the sale parcel.
Wildlife		•		The proposed sale may result in the displacement of small or burrowing species from the sale parcel. However, the parcel is a small fraction of the available habitat for these species and only negligible effects are expected. The sale parcel provides a small amount of marginal habitat for larger wildlife and no effects to these species are anticipated.

3.3 Land Use Authorizations

Affected environment

The Master Title Plat (MTP) for T. 8 N., R. 43 E., Section 24 shows three encumbrances. N-49546 is an underground water pipeline for the Manhattan Mill issued to Echo Bay Minerals in 1988 for a term of 30 years; N-49749 was issued to Sierra Pacific Power Company for the Echo Bay well in 1988 for a term of 30 years and N-54823 is an underground water pipeline issued to Nye County for Manhattan's waterline, well site, and tank site in 1991 for a term of 20 years.

The three valid and existing ROW Holders (N-49546, N-49749, and N-54823) were notified by mail of their opportunity to convert their compliant ROWs to either perpetual ROWs, perpetual easements, to remain as status quo, or to negotiate an easement with the patentee. Perpetual ROWs or easements are authorized only at patent issuance and only if the property is conveyed. If the property does not convey, the existing ROWs would remain on the land authorized under their current authority.

Environmental Consequences of the Proposed Action

The three ROW holders have indicated that the proposed land sale would result in a change in the term of the three existing ROWs from 20, 30 and 30 years, respectively to perpetual ROWs.

Environmental Consequences of the No Action Alternative

Under the No Action alternative, there would be no change in the current status or term of the three ROWs.

3.4 Soils

Affected Environment

The proposed sale parcel consists of soils of the Penelas Association. The parent material of these soils is colluvium derived from shale or residuum weathered from shale. These soils have a surface texture of very cobbly loam. Runoff is typically rapid and the hazard of erosion is moderate.

Approximately 2 acres of surface soil within the proposed sale parcel has been disturbed by internments associated with the existing cemetery and its associated parking lot, by road construction in the southern and northeastern areas and by small-scale placer prospects scattered across the northern area of the parcel. An ephemeral drainage is located along the eastern periphery of the parcel which has eroded the soil to bedrock in places.

Environmental Consequences

The proposed land sale would result in the gradual disturbance of approximately 4.5 additional acres of the Penelas Association due to future internments, the placement of headstones, and small-scale landscaping. This acreage would constitute most of the remaining undisturbed area of the sale parcel (the western half of the existing cemetery, which comprises about 1 acre, would not be further disturbed). However, since the disturbance would be proportion to the rate at which internments occur, only small areas of the sale parcel would be disturbed at any given time. This gradual rate of disturbance would limit the potential for erosion and off-site sedimentation. Once the soil at a given internment had settled, this potential would be reduced. The potential would be further reduced if the internment was graveled, seeded, or bordered in concrete or stone.

3.5 Vegetation

Affected Environment

Dominant vegetation within the proposed sale parcel consists of sparse Black sagebrush, Indian Ricegrass, and Needle and Thread with scattered juniper. Approximately 2 acres of the parcel area has been denuded of vegetation by the establishment of internments in the eastern half of the existing cemetery, road construction in the southern and northeastern section of the parcel, grading associated with a parking lot in the northern parcel area, and placer prospects. Where intact natural vegetation occurs, it is typically sparse.

Environmental Consequences

The proposed land sale would result in the gradual, but permanent, removal of sparse natural vegetation across 4.5 acres of the parcel due to future internments (vegetation in the 1 acre area that constitutes the western portion of the existing cemetery would remain intact). The removal of this vegetation would be proportional to the rate in which internments occur. Vegetation, either native or exotic, would not likely return to these areas without intervention.

4.0 Cumulative Effects

The Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1508.7) define cumulative impacts as:

“ . . . the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The following analysis identifies past, present, or reasonably foreseeable future actions which, together with the proposed project, may incrementally impact the environment. The geographic scope of the cumulative effects study area (CESA) is the Manhattan Gulch sub-watershed (Appendix A). The CESA covers approximately 14,002 acres surrounding the area of the Proposed Action.

A 10-year timeframe was selected for the analysis. This timeframe for considering cumulative effects was selected because it represents the maximum amount of time that effects could be estimated with a reasonable amount of certainty.

4.1 Past and Present Actions

A review of GIS data, aerial imagery, agency records and professional knowledge indicate that that placer and lode mining and residential development are the past and present actions that have created the majority of the environmental impacts within the CESA.

Placer and Lode Mining

Placer mining has a long history in the CESA, dating to the early part of the 20th century. Until the late 1930's, the majority of mining activity was conducted on a small-scale by miners who leased portion of claims from claimholders for a percent of their gross earnings. These small-scale operations typically used dry washing, and later sluicing, to separate gold from the gravel deposits (Vanderburg 1936).

In 1937, large-scale placer operations in the CESA began with the formation of the Manhattan Gold Dredging Company. The company constructed a 172-foot long dredge floated by a man-made pond which scoured and processed gravels along the five-mile length of the gulch (Kautz 2011). Today, Manhattan Gulch is inundated with tailings from this historic operation. A.U. Mines is currently reworking these historic tailings under a permitted Plan of Operations.

Lode mining has been less prominent in Manhattan Gulch over the years, although the CESA contains hundreds of prospects. The most prominent historic operations were the White Caps and Jumbo Mines located along the eastern periphery of the CESA on lands managed by the U.S. Forest Service (Lincoln 1923). More recent operations include the Round Mountain Gold's Manhattan Pit, an open pit, heap leach operation located in the central portion of the CESA and an underground mine known as Gold Wedge just to the north. Round Mountain discontinued their operation in the early 1990's and it is nearing final closure, while Gold Wedge is currently undergoing a rehabilitation process under the ownership of Scorpio Gold, Inc.

Residential Development

Residential development within the CESA is limited to the town of Manhattan. Closely tied to historic mining activity, the town developed from a tent camp of 500 in 1905 to a thriving town of 3,500 by 1906. The population of the town fluctuated during the following decades owing to the “boom and bust” cycles common to the mining industry. Census data indicates that by 1920 only 401 people resided in the town (Kautz 2007). As of 2005, the population of Manhattan was 124 (http://en.wikipedia.org/wiki/Manhattan,_Nevada).

4.2 Reasonable Foreseeable Future Actions (RFFA’s)

At the current time, the BLM has no evidence that actions are likely to change in kind within the CESA. That is, no new types of actions other than those discussed under past and present actions are likely to occur.

However, it is reasonably foreseeable that in the next 10 years additional mining activities will occur within the CESA. A.U. Mines, which is operating under a permitted Plan of Operations within the Manhattan Gulch portion of the CESA, is proposing to amend their current plan to include an additional 27 acres of ground disturbance in previously undisturbed areas of the gulch. In addition, a Plan of Operations is currently under development to refurbish the abandoned White Caps mill located just northeast of Manhattan to reprocess historic tailings from the old White Caps Mine. It is also reasonably foreseeable that Round Mountain’s Manhattan Pit operation will attain final closure once the heap leach pads have been satisfactory revegetated.

Residential developments are likely to remain more or less static into the foreseeable future as population levels are not likely to rise unless mining activity increases substantially. At this time, this level of increase is not reasonably foreseeable.

4.3 Cumulative impacts associated with past, present, and reasonably foreseeable future actions, including the Proposed Action and No Action alternative

In order to provide a basis to characterize and quantify impacts to natural resources associated with past and present actions, the CESA boundary was overlain with large-scale aerial imagery. Areas that were denuded of vegetation or otherwise appeared unnatural were examined in detail (Master title plats formed the basis for the land use authorization analysis). This examination revealed the outline of the town of Manhattan, the extent of Round Mountain’s Manhattan Pit operation, the historic tailings associated with the Manhattan Gold Dredging operation and the surface facilities of the Gold Wedge mine. By creating shapefiles outlining the extent of these disturbances, acreage values were calculated which could be assigned to each past and present action under consideration. These estimates provided the basis of assessing the cumulative impacts associated with past and present actions.

Estimates of the extent of impacts associated with reasonably foreseeable future actions were based on either existing proposals or actions that are known to likely occur in the future.

Cumulative Impacts - Land Use Authorizations

Although various historic laws and statutes mandated the issuance of land use authorizations prior to conducting mining operations, the 1976 passage of the Federal Land Policy and Management Act (FLPMA), which provides the BLM with the authority to issue Land Use Authorizations (LUAs) on public lands, has led to the sharpest increase in LUAs associated with past and present lode and placer mining within the public land portions of the CESA. Every mining operation on public lands, from notice-level exploration operations to mining plans of operation require some form of LUA to commence and sustain operations.

Currently, there are approximately 2 permitted mining notices of intent and 3 permitted mining plans of operation within the BLM-administered portions of the CESA. These LUAs authorize mining activities of varying intensities on an estimated 1,643 acres of the CESA. These LUAs are cumulative to a wide variety of rights-of-way that are either directly or indirectly associated with past and present lode and placer mining activity (Table 3).

ROW Type	Acres in CESA
Roads and Highways	291
Telecommunications	7
Power Transmission	3
Communication Sites	1
Water Facilities and Pipelines	8
Other	80
Total	390

A positive correlation exists between the number of LUAs and the amount of soil and vegetation disturbance within BLM-administered portions of the CESA. Since a LUA is required to be issued prior to the commencement of mining operations and other land uses associated with ground disturbance, the accumulation of LUAs within a given area typically results, indirectly, in higher levels of cumulative effects to these resources.

Past and present residential development has had little effect on LUAs because the land on which the development has occurred is located on private, not public lands and, hence a LUA would not be required.

It is reasonably foreseeable that 4 additional LUAs, 3 notices of intent which are pending, and A.U. Mines Plan of Operations amendment and White Cap's mill refurbishment proposal could be authorized within the next 10 years. If issued, these LUAs would result in the indirect disturbance of up to 42 additional acres within the CESA.

The Proposed Action would not contribute to direct cumulative effects to either LUAs or indirect cumulative effects to soils or vegetation because no new LUAs would be issued, only the term of 2 existing LUAs would change. The No Action alternative would not contribute to cumulative effects either since it is not associated with the proposed issuance of a LUA.

Cumulative Impacts to Soils

Past and present placer and lode mining within the CESA has disturbed surface and subsurface soils across an area of approximately 1,633 acres, increasing the potential for wind and water erosion across. The majority of the impact has been related to the development of heap leach pads associated with the Round Mountain's Manhattan Pit Project. The development of these pads resulted in the creation of unnatural soil and rock surfaces covering an area of approximately 529 acres. Over time, the heap leach pads have partially revegetated, reduced their susceptibility to wind and water erosion.

Large-scale dredging operations have scoured much of Manhattan Gulch, exposing approximately 497 acres of sediments and gravels. Smaller-scale disturbances are associated with the old White Caps Operation and the historic Jumbo mine to the south. These operations predate modern reclamation requirements and approximately 47 acres of surface soils are currently exposed to erosion and off-site sedimentation.

The development of the town of Manhattan has resulted in the disturbance of approximately 68 acres of surface soils within the central CESA area. Unlike the placer and lode mining operations, the majority of the residential area is covered by buildings, lawns and various types of vegetation that serve to reduce the potential for wind and water erosion relative to other disturbed areas of the CESA. However, there is a slightly increased runoff potential due to soil compaction and asphalt associated with the developments of roads and streets.

It is reasonably foreseeable that an additional 27 acres of soils would be disturbed in the Manhattan Gulch portion of the CESA if the A.U. Mines Plan of Operations amendment is approved. While the duration of the disturbance is not presently clear, it is likely that this disturbance will be cumulative to those disturbances from past and present mining activity over the long term.

The reasonably foreseeable refurbishment of the existing White Caps itself is not likely to add to soil disturbance within the CESA, since few ground disturbing actions are proposed. However, excavation associated with the reworking of the historic tailings at the Old White Caps Mine could increase wind and water erosion potential at those locations as these naturally compacted tailings are disturbed.

As described in Chapter 3, the Proposed Action would eventually contribute an additional 4.5 acres of soil disturbance which would add in a very nominal way to additional wind and water erosion potential within the CESA. The No Action alternative would not contribute to cumulative impacts to soils since the parcel would remain in Federal ownership.

Cumulative Impacts to Vegetation

Relative to soils, cumulative impacts to vegetation has been somewhat less intensive because some areas where soil disturbance has occurred, such as Manhattan Gulch, contained very sparse or no vegetation. The majority of impacts to vegetation have been related to the development of the heap leach pads associated with Round Mountain's Manhattan Pit Project, and other historic

mining operations which have resulted in the removal of natural vegetation across an area of approximately 1,136 acres.

Though small pockets of natural vegetation remain, the establishment of the town of Manhattan resulted in the removal of the majority of vegetation within the town limits, an area covering approximately 68 acres. The reasonably foreseeable amendment of the A.U. plan of operation would result in the long-term loss of an addition 27 acres of natural vegetation.

It is also reasonably foreseeable, however, that the heap leach pads associated with the Round Mountain Manhattan Pit Project would become sufficiently vegetated to attain final closure. The level of vegetative growth expected over the next ten years would reduce the cumulative effect to vegetation by approximately 529 acres or about 47 percent.

As presented in Chapter 3, the Proposed Action would gradually result in the removal of 4.5 acres of natural vegetation. Due to the small size of the sale parcel and the sparse nature of vegetation in this area, the contribution to the collective effect would be negligible. The No Action alternative would not contribute to cumulative impacts to vegetation because the land sale request would be denied.

5.0 TRIBES, PERSONS, ORGANIZATION, or AGENCIES CONSULTED

Duckwater Shoshone Tribe
Timbisha Shoshone Tribe
Yomba Shoshone Tribe
Big Smokey Western Shoshone Descendants
Nye County Commission

5.1 LIST OF PREPARERS

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6.0 References Cited

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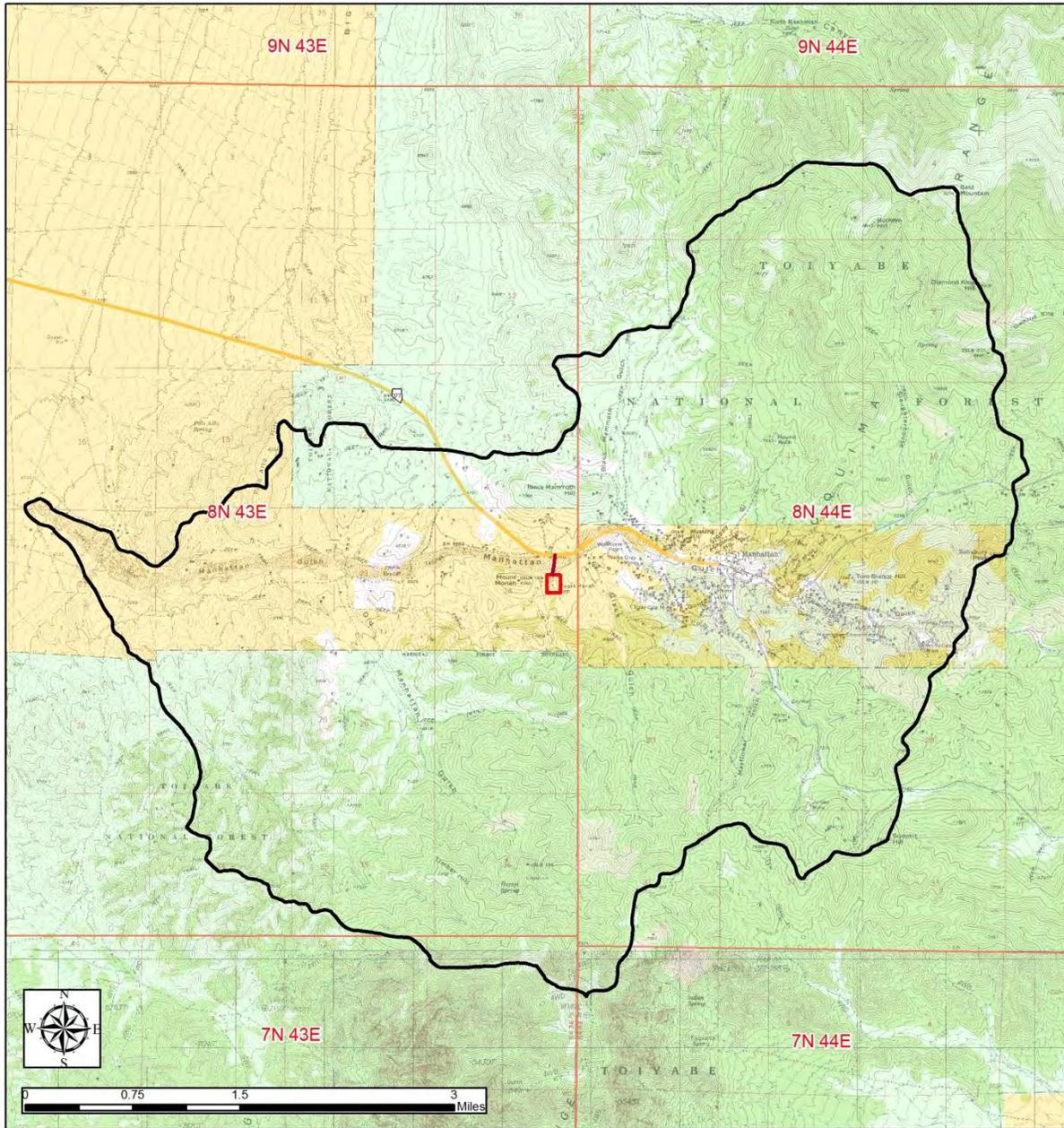
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Appendix A

The Cumulative Effects Study Area

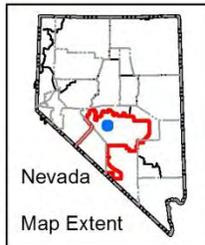


Mt. Moriah Cemetery (CESA) 14,001.05 Acres

Legend

- Cemetery Road
- CESA
- Sale Area
- Bureau of Land Management
- Forest Service
- Private

CESA Land Status	Acres
Private	1401.8
Bureau of Land Management	2946.42
Forest Service	9652.83



United States Department Of The Interior

Bureau of Land Management
 Tonopah Field Office
 1553 S. Main Street/P.O. Box 911
 Tonopah, NV 89049



Projection: UTM NAD 83, Zone 11N
 Map Date: September 18, 2013

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