

DECISION RECORD
BLM CATEGORICAL EXCLUSION NO. F-10 (CX F-10), WY-070-CX15-005
Fuller Construction, Inc. (Fuller),
Ullery Sand/Gravel Mine, WYW-168468
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION:

BLM approves Fuller Construction’s Ullery Sand/Gravel Mine, non-competitive sale, WYW-168468, as described in CX WY-070-CX15-005, incorporated here by reference. This project is the result of collaboration between the BLM Buffalo Field Office (BFO) and Fuller Construction, Inc. (Fuller). This project involves the removal of up to, but not exceeding, 25,000 cubic yards (CY) of sand/gravel from an area approximately 10 acres in size over 5 years’ time. This area consists of privately-owned surface and BLM-administered mineral lands in the area indicated below. The surface disturbance will be inclusive of all support infrastructure to include but not limited to the mine and staging areas, etc.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); Interior Department Order 3310.
- The Materials Act of 1947 (30 USC 601 et seq.), as amended; 43 CFR 3600 et seq.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- Buffalo Resource Management Plan (RMP) and Records of Decision (RODs) 1985, 2001, 2003, 2011.
- Supplement to Memorandum of Understanding No. WY 19 Between the US DOI BLM, Wyoming State Office, and the State of Wyoming DEQ LQD for Management of Surface Mining and Exploration for Mineral Materials (Salable Minerals) on Public Lands; 2013.

The following summarizes details of the approval. The project description and site-specific mitigation measures are found in the CX document (WY-070-CX15-005).

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Johnson	Fuller Construction, Inc., Ullery Sand/Gravel Mine	43 N.	79 W.	3	S2SWSENE, and N2NWNESE	10.0

Limitations. Approval of this project is dependent on compliance with the attached Standard Stipulations.

THE FINDING OF NO SIGNIFICANT IMPACT. Analysis of the CX, WY-070-CX15-005, found the project comports to findings that this type of action is categorically excluded from having significant impacts on the human environment, thus an EIS or environmental analysis are not required.

COMMENT OR NEW INFORMATION SUMMARY. Public scoping for noncompetitive sales is not required by 43 CFR 3600, although BLM will post the decision to its website.

DECISION RATIONALE. The BLM approves the project for the following reasons:

1. BLM and Fuller Construction added design features and mitigation measures which reduced environmental impacts while meeting the project’s need:
 - a. BLM approves the non-competitive sale as submitted by Fuller Construction to remove 25,000

CY of sand/gravel from approximately 10 acres of BLM-administered minerals, contingent upon compliance with other conditions of approval and reclamation.

2. The approved project will not result in any undue or unnecessary environmental degradation and complies with 43 CFR 3602.30 through .34, Noncompetitive Sales.
3. The approved project will help meet the nation's Mineral Materials needs.
4. The approved project will help ensure continued public health and safety by meeting needs for nearby road maintenance.
5. The approved project will help stimulate local economies by maintaining workforce stability.
6. The Operator committed to:
 - a. Comply with all applicable federal, state, and local laws and regulations.
 - b. Confine the surface disturbance to the acres permitted at the time of this Sales Contract application.
 - c. Reclaim the mine to the standards in the WY BLM Reclamation Policy found in Appendix A to CX WY-070-CX15-005.
7. The Operator certified it has posted an acceptable bond.
8. This project is not located in or near, nor will it affect, a floodplain, wetland, or riparian area.
9. The project is clearly lacking in wilderness characteristics as it is smaller than 5,000 acres and offers no outstanding opportunities for solitude.
10. BLM reviewed the 12 extraordinary circumstances and none apply, 43 CFR 46.215.

ADMINISTRATIVE APPEAL. This decision is subject to administrative review in accordance with 43 CFR 3601.80. Request for administrative review of this decision must include information required under 43 CFR 4 and is appealed to the Interior Board of Land Appeals, as provided in 43 CFR 3601.80 and 43 CFR 4. A party adversely affected by a decision of the authorized officer or State Director made pursuant to subpart 43 CFR 3600, et. al., has the right of appeal to the Interior Board of Land Appeals, Office of Hearings and Appeals, pursuant to 43 CFR 4 and 43 CFR 1840.

Field Manager: /s/ Duane W. Spencer

Date: 11/5/14

**BLM CATEGORICAL EXCLUSION NO. F-10 (CX F-10), WY-070-CX15-005
Fuller Construction, Inc. (Fuller),
Ullery Sand/Gravel Mine, WYW-168468
Bureau of Land Management (BLM), Buffalo Field Office (BFO), Wyoming**

BLM Categorical Exclusion (pursuant to 516 DM 11.9) No. F-10. Disposal of mineral materials, such as sand, stone, gravel, pumice, pumicite, cinders, and clay, in amounts not exceeding 50,000 cubic yards or disturbing more than 5 acres, except in riparian areas.

A. BACKGROUND

OFFICE: BLM, Buffalo Field Office (BFO), 1425 Fort St., Buffalo, WY, 82834.

TRACKING NUMBERS: WY-070-CX15-005.

* WY-070-CX-12-160, approved March 27, 2013, for Fuller Construction’s Ullery Sand/Gravel Mine. See BLM casefile WYW-168401.

* WY-070-CX-14-295, approved August 14, 2014, for Washakie County Road and Bridge Department’s Billy’s Flat/Rome Hills Sand/Gravel Mine. See BLM casefile WYW-168462.

* WY-070-EA12-109, approved March 22, 2013, for Quality Aggregate and Construction, Inc.’s Recluse Clinker (“Scoria”) Mine. See BLM casefile WYW-168351.

* WY-070-EA12-087, approved April 12, 2012, for Campbell County Road and Bridge Department’s Hakert Sand/Gravel Mine. See BLM casefile WYW-168349.

* BLM tiers to and incorporates these NEPA analyses by reference here because of substantially similar proposed mining operations, geography, and/or other resource issues.

BLM CASEFILE NO.: WYW-168479.

TITLE OF PROPOSED ACTION: New Sales Contract to Fuller for existing Ullery Sand/Gravel Mine.

PROPOSED ACTION: Mine and remove 25,000 cubic yards (CY) of sand/gravel from an existing 10-acre disturbance, over 5 years’ time. This site exists entirely on privately-owned surface and BLM-administered federal mineral estate.

LEGAL DESCRIPTION:

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Johnson	Fuller Construction, Inc., Ullery Sand/Gravel Mine	43 N.	79 W.	3	S2SWSENE, and N2NWNESE	10.0

APPLICANT: Fuller Construction, Inc. (Fuller), P.O. Box 640, Moorcroft, WY, 82721.

Description of Proposed Action: Quality Aggregate applied for a new Sales Contract in order to mine and remove mineral materials (here, sand and gravel) from their existing Ullery Sand/Gravel Mine. This Sales Contract application indicates they wish to remove 25,000 cubic yards (CY) of sand/gravel from this Mine disturbance, over 5 years' time. The project site consists of approximately 10 acres of privately-owned surface and BLM-administered federal mineral estate. This mine is also permitted with Wyoming Department of Environmental Quality (WDEQ) Land Quality Division (LQD), Permit to Mine #1569ET.

The mine will consist of mining areas, a staging area, and access road. The staging area will house the mining/transporting equipment when not in use, as well as stockpiles of topsoil and usable and unusable mined minerals. The unusable materials will be stockpiled to be placed back in the pit once mining is complete. The stockpiled materials will consist of both "pit run" (sized, but not crushed), and prepared (sized and crushed) mineral materials. See Figures 3, 4a, 4b, and 5.

Mining and processing will occur as needed, depending on product demand and weather, though usually just once annually. The portable processing plant (sieve, crusher, and conveyors) will move to each subsequent portion to be mined. This plant will be permitted with a WDEQ Air Quality Division (AQD) Air Quality Permit. A water tanker will serve the operations as needed, including for dust control during mineral materials processing and hauling, as well as on the staging area. All equipment needed to mine and process will be housed within the disturbed areas.

The immediate area (<1 mile radius) contains no less than 4 sand/gravel mines, with 2 being active, and 2 being reclaimed. The other active sand/gravel mine is Chapman Contracting's Ullery Sand/Gravel Mine (BLM WYW-168389, WDEQ 1291ET) just to the SE. The 2 being reclaimed are Sussex Sand & Gravel's Ullery Sand/Gravel Mine (BLM WYW-170024, WDEQ 1291ET), just to the S, and Johnson County Road & Bridge Department's Ullery Sand/Gravel Mine (BLM WYW-169620, WDEQ 476), just beyond Chapman's Mine, to the SE (and part of the same WDEQ Permit to Mine). See Figures 2 and 3.

Although sand/gravel deposits in this area tend to be plentiful, it is difficult to anticipate how much usable material they contain. These deposits can be deep in one spot, but then pinch out to <1' thick over a distance of several feet. And, thickness does not guarantee usable quality: deposits in this area can contain a fairly large percentage of fines, and/or more calcareous (weaker) material. However, Fuller has picked their site well, and have been able to produce a good volume of usable materials thus far (>35,000 CY). They anticipate being able to mine another 25,000 CY. Therefore, it is likely that this Mine site will not be reclaimed for some time into the future (6+ years, or more). Fuller directly uses, and sells some, of the sand/gravel on nearby oil/gas and/or ranch/public roads.

The project area is situated approximately 16 miles east of the Town of Kaycee, Wyoming, just north of Sussex Road (Wyoming State Highway 192). The Mine is accessed directly across WY Hwy 192 from Mr. James Ullery's ranch/house (see Figure 1); he is the surface owner in the Mine's location. The access road is approximately 0.75 miles long. Mr. Ullery is the closest resident to the project area, although there are several other ranch houses/residences, and mineral materials sites, within 15 miles of the project area. However, there are no occupied dwellings, homes, public buildings, schools, churches, community or institutional buildings, parks, or cemeteries within 300 feet of the proposed mine area.

B. LAND USE PLAN CONFORMANCE

Land Use Plan: Buffalo Resource Management Plan (RMP) approved 1985; Amended 2001, 2003, and 2011.

The proposal conforms to the applicable RMP because it is specifically provided for in the following RMP decision(s):

Buffalo Resource Management Plan (RMP), 1985, p. 8; MM-8: The entire resource area is available for mineral materials sales initiated either by the BLM or by application. This does not include sites designated by the BLM for free use by city, county, and state entities.

C. COMPLIANCE WITH NEPA

The proposal is categorically excluded from further analysis under the National Environmental Policy Act (NEPA) in accordance with 516 DM 11.9: F. Solid Minerals, 10, "Disposal of mineral materials, such as sand, stone, gravel, pumice, pumicite, cinders, and clay, in amounts not exceeding 50,000 cubic yards or disturbing more than 5 acres, except in riparian areas." [Note that 50,000 cubic yards (CY) of sand/gravel equals approximately 33,333 tons, as 1 CY equals approximately 1.5 tons.]

This CX F-10 is appropriate in this situation because there are no extraordinary circumstances having effects that may significantly affect the environment. BLM reviewed the proposal and none of the extraordinary circumstances in 516 DM 2 (and BLM NEPA Handbook H-1790-1, Appendix 5) apply.

I considered:

- BLM and Fuller added design features and mitigation measures which reduced environmental impacts while meeting the BLM's need:
 - BLM approves the Sales Contract as submitted by Fuller to remove 25,000 CY of sand/gravel from an existing disturbance of 10 acres on privately-owned surface and BLM-administered federally-owned mineral lands, contingent upon compliance with other conditions of approval and reclamation.
- The approved project will not result in any undue or unnecessary environmental degradation and complies with 43 CFR 3602, Mineral Materials Sales.
- The approved project will help meet the nation's mineral materials needs.
- The approved project will help ensure continued public health and safety by meeting needs for nearby road maintenance.
- The approved project will help stimulate local economies by maintaining workforce stability.
- The Operator has committed to:
 - Comply with all applicable federal, state, and local laws and regulations.
 - Confine the surface disturbance to the acres permitted at the time of this Sales Contract application.
 - Reclaim the mine to the standards in the WY BLM Reclamation Policy found in Appendix A to WY-070-CX15-005.
- The Operator certified it has posted an acceptable bond or that bond was waived.
- This project is not located in or near, nor will it affect, a floodplain, wetland, or riparian area.
- The project is clearly lacking in wilderness characteristics as it is smaller than 5,000 acres.

Persons and Agencies Consulted

The following individuals and agencies were consulted and contributed to this document:

- Jaime Jakes; WDEQ LQD Environmental Analyst
- Scott Jawors; BLM Biologist
- G.L. "Buck" Damone III; BLM Archaeologist
- Tom Bills; BLM NEPA Coordinator
- Kerry Aggen; BLM Geologist, Project Lead, and Document Preparer

D: SIGNATURE

Field Manager: _____/s/ Duane W. Spencer_____

Date: _____11/5/14_____

CONTACT PERSON: Kerry Aggen, Field Office Geologist, Buffalo Field Office, 1425 Fort Street, Buffalo, WY, 82834, 307-684-1196, kaggen@blm.gov.

REVIEW AND DOCUMENTATION FOR EXTRAORDINARY CIRCUMSTANCES:

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 516 DM 2 (and BLM NEPA Handbook H-1790-1, Appendix 5) apply.

EXTRAORDINARY CIRCUMSTANCES:		
1. Have significant impacts on public health or safety.		
Yes	No XX	<p>This project will have <i>positive</i> impacts on public health and safety. The mineral materials obtained from the project area will be used on nearby oil/gas development roads to help keep them passable year-round. These roads are used year-round by employees and operators of these oil and gas operations, and neighboring ranchers. State and federal employees also use this road to access many of these operations to conduct inspections and other required activities.</p> <p>There is no public access to the proposed project site; any residual amount is mitigated for and/or minimized through the Standard and Special Stipulations attached to this project. Any potentially negative impacts on public health and safety are mitigated for and/or minimized through the Standard and Special Stipulations attached to the project.</p>
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.		
Yes	No XX	<p>The project is in an area of previous adequate cultural resource inventory. There are no historic properties in the area of potential effect (APE). Following the State Protocol Between the Wyoming Bureau of Land Management State Director and The Wyoming State Historic Preservation Officer (SHPO), Section V(E)(iv) (or) 2006 Section VI(A)(1), the Bureau of Land Management electronically notified the Wyoming SHPO on October 23, 2014, that no historic properties exist within the APE.</p> <p>There are no Areas of Critical Environmental Concern, Wilderness Study Areas, National Monuments, or other areas with special designation in/near the project area.</p> <p>The project area does not occur in, nor will it affect, a floodplain, wetland, or riparian area. It occurs on a fairly gently sloping (less than 20 degrees) gravel terrace or pediment. The nearest riparian area to the project area is approximately 1 mile to the northeast: Fourmile Creek. This area will not be affected by the projects' activities.</p> <p>The project area is outside of any core population area or connectivity corridors for Greater Sage-Grouse (GSG) conservation (as outlined in Wyoming State Executive Order 2011-5, "Greater Sage-Grouse Core Area Protection."). The project is located in suitable, but marginal GSG habitat. There are no known active GSG leks within 4 miles of the proposed project. The project area is not in the area modeled for GSG nesting habitat (Doherty, K.E., D.E. Naugle, B.L. Walker, and J.M. Graham, 2008, Greater Sage-Grouse Winter Habitat Selection and Energy Development, <i>Journal of Wildlife Management</i>, in press). The GSG winter habitat model shows the area to be just outside high-quality winter habitat.</p>

EXTRAORDINARY CIRCUMSTANCES:		
		<p>According to a statewide population density model that was developed based on GSG lek attendance (Doherty et al. 2008), the project is not located in an area that was estimated to contain a measurable density of GSG as compared to populations across the state.</p> <p>GSG hens may avoid nesting in otherwise suitable habitat in/near the project area, due to elevated noise levels from mining and crushing/screening of sand/gravel. Vegetation and overburden removal, which occurs at/near the surface, and subsequent mining of sand/gravel below these layers, will occur only sporadically. These activities usually occur in the fall or spring, and not every year.</p> <p>The mine floor, the deepest level to which the deposit will be mined, is approximately 10-15' below the surface. Crushing/screening will be performed within the confines of the mine floor, so noise will be muffled. Three (3) other BLM-authorized sand/gravel mines exist within approx. 0.5 miles of the project site (see #3 below): 2 are in reclamation, and 1 is active; see Figures 2 and 3. There are other active sand/gravel mines more than 1 mile south, southeast, and southwest of the project area, on the other side of Sussex Road (Wyoming State Highway 192) and closer to the Powder River. GSG are likely to continue to avoid the area, due to the presence of surface disturbance, noise and human activity, and the marginal quality of the area's sagebrush habitat.</p>
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102 (2) (E)].		
Yes	No XX	This project involves mining and removing sand/gravel from an existing disturbance of 10.0 acres. Three (3) BLM-authorized sand/gravel mines occur within approximately 0.5 miles of the project site: Johnson County's Ullery Sand/Gravel Mine (WYW-169620), Sussex Sand & Gravel's Ullery Sand/Gravel Mine (WYW-170024), and Chapman Contracting's Ullery Sand/Gravel Mine (WYW-168389). The first 2 are in reclamation, and the third is active. Other sand/gravel mines exist more than 1 mile south, southeast, and southwest of the project area. The impacts of this project are similar to other mineral materials projects that have been implemented and monitored, such as Johnson County's, Sussex Sand & Gravel's, and Chapman Contracting's. Therefore, impacts of the proposed project are well-known.
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.		
Yes	No XX	The proposed action generally has very predictable consequences well established as insignificant. Based on the ID team review, no new consequences were identified.
5. Establish a precedent for future action or represent a decision in principal about future actions with potentially significant environmental effects.		
Yes	No XX	This project is not connected to another action requiring further environmental analysis, nor would it have a direct relationship to other actions that would result in any cumulative significant environmental effects. This project will not establish a precedent for future actions with potentially significant environmental effects. Any additional mining operations proposed in the surrounding area would require separate environmental analyses.
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.		
Yes	No XX	This project does not have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. The proposal is consistent with other land uses in the area.

EXTRAORDINARY CIRCUMSTANCES:		
7. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau.		
Yes	No XX	No Cultural Resources, including historic properties, will be affected (see #2 above).
8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species. A table of analyses for specific threatened, endangered and sensitive species can be found in the project files.		
Yes	No XX	No threatened or endangered species will be affected by this project. BFO staff reviewed the known data and literature in making this determination. Suitable, but marginal, habitat for GSG exists in/near the project area. However, the nearest GSG lek is greater than 4 miles away (see #2 above).
9. Violate a Federal law, or a State, local or tribal law or requirement imposed for the protection of the environment.		
Yes	No XX	The proposed mining operation is also permitted with WDEQ LQD, under Permit to Mine #1569ET. WGFD will routinely monitor the site for wildlife impacts.
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).		
Yes	No XX	Neither low-income nor minority populations will be impacted. The nearest residence to the project area is the surrounding Ullery Ranch. Mr. James Ullery owns much of the adjacent surface and/or mineral lands.
11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).		
Yes	No XX	No sacred sites exist in or near the project area, therefore access to sacred sites will not be affected by approval of this project (see #2 above).
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).		
Yes	No XX	Operator has agreed to abide by the Standard and Special Stipulations attached to the approval of this project. These Stipulations include requirements that the operator take necessary actions to prevent the introduction and/or spread of noxious or non-native invasive species in the project area.

Figure 1. Map showing the general location of Fuller Construction’s proposed Ullery Sand/Gravel Mine project (WYW-168468). Three other currently BLM-authorized sand/gravel mines exist within approximately 0.5 miles of the project area (see Figure 2). Sussex Road (Wyoming State Highway 192) lies approximately 0.75 miles to the south of the project area, and is used to access the Mine. Closest residence to the Mine site is that of Mr. James Ullery, just south of WY Hwy 192 from the Mine access road; he is the surface owner for the Mine site. Map modified from US Geological Survey, Sussex, Wyoming, quadrangle map, 1961.

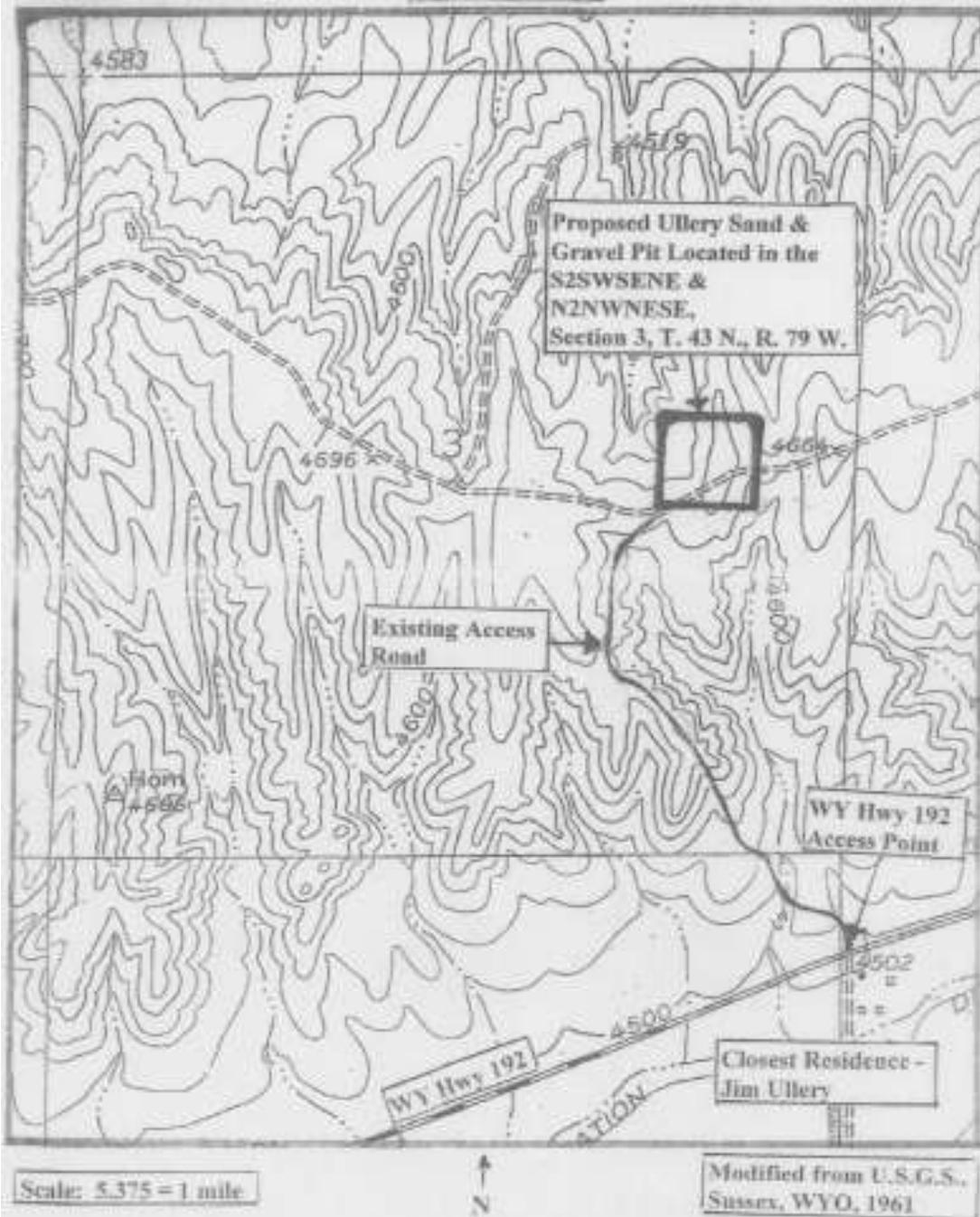


Figure 2. Closer-up map of area of Fuller’s proposed Ullery Sand/Gravel Mine project (WYW-168468). The Mine area (approx. 10 acres) is highlighted by blue diagonal hatching, and the access road (approx. 0.75 miles) is also shown. The sand/gravel deposit in this area varies in thickness and quality, and some hillier areas contain thicker sand/gravel of relatively good quality, and some not (see Figure 5). The area Fuller is mining is actually a flatter area, and becomes an area of intermittent drainage just to the north. Approximate Mine boundary map received from Fuller on August 14, 2014, and is amended here to show other pertinent information.

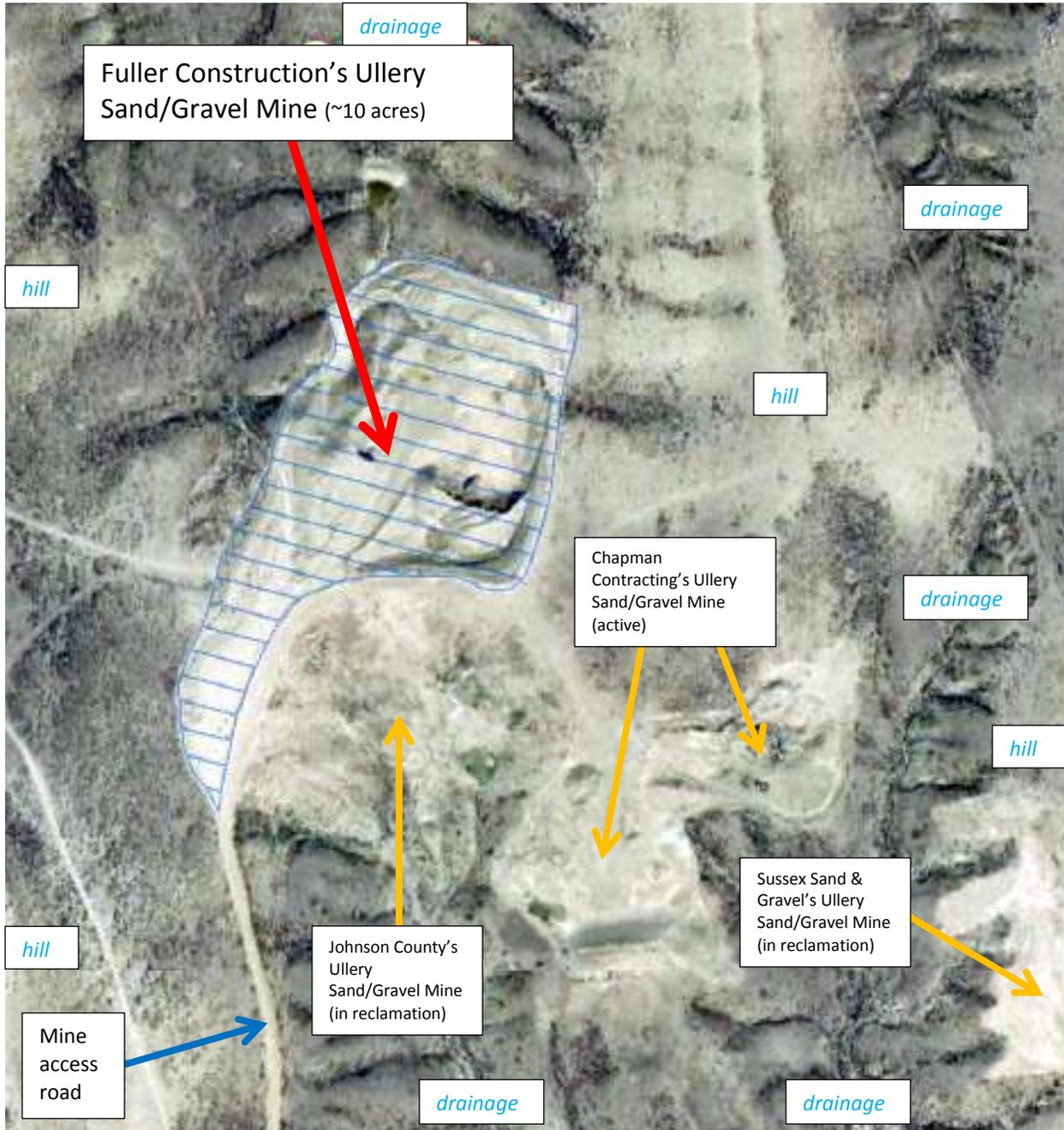
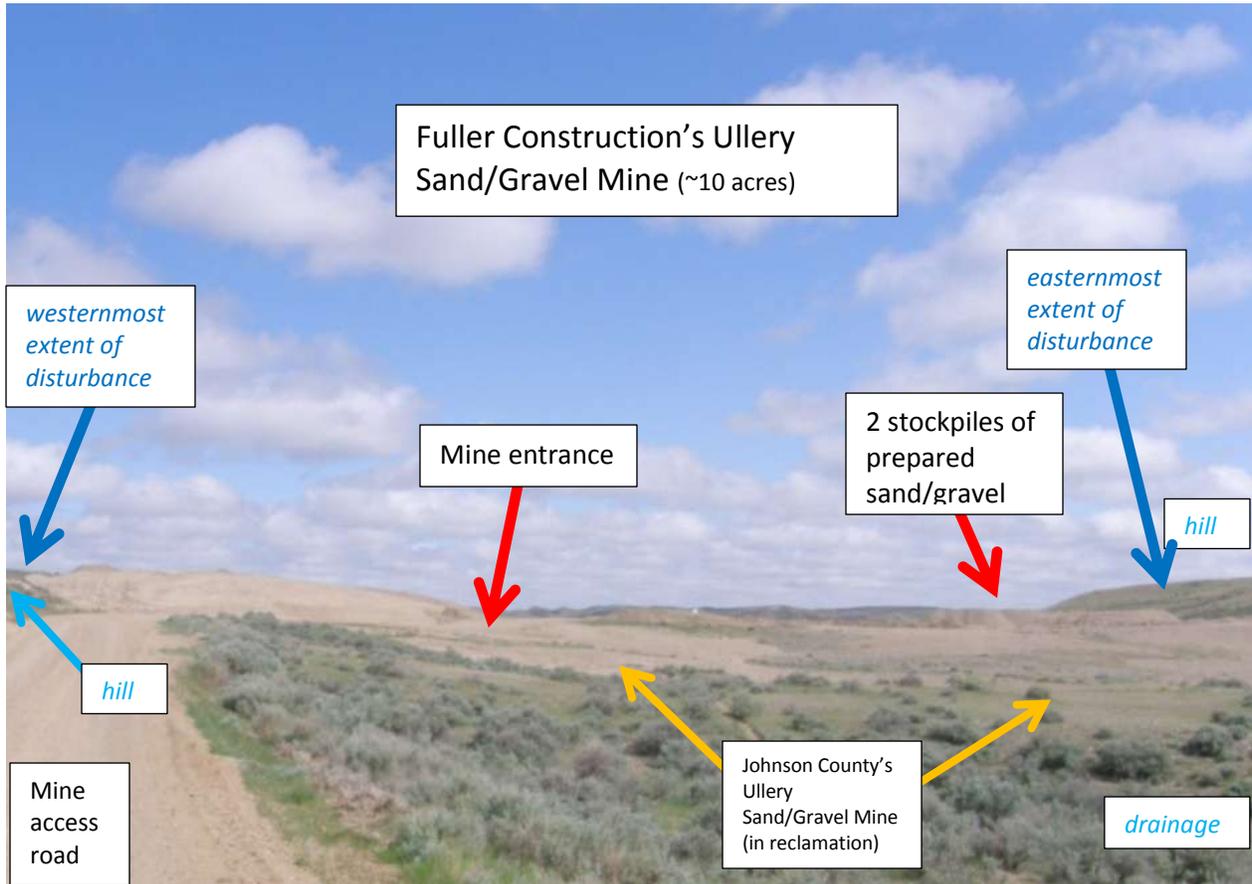


Figure 3. Panoramic photo of Fuller’s proposed Ullery Sand/Gravel Mine project (WYW-168468). The Mine Area can be seen across far ground, on a relatively flat area between hillier areas. Johnson County’s Ullery Sand/Gravel Mine (WYW-169620) can be seen spread between approximately center and right mid- to foreground; this mine is being re-vegetated. Chapman’s and Sussex Sand & Gravel’s Ullery Sand/Gravel Mines (WYW168389 and -170024, respectively) are out of photo to the right (east); Chapman’s is active, and Sussex’s is in reclamation. Photo taken looking approx. NNW (left) through NNE (right) from along Mine access road just south of Mine on May 22, 2013, by Kerry L. Aggen.



Figures 4a and 4b. Photos of stockpiles of prepared sand/gravel in Fuller’s proposed Ullery Sand/Gravel Mine project (WYW-168468). Although these photos were taken from different angles, roughly half of the approximately 10,000 CY stockpile observed in Summer 2013 (Figure 4a) still remains at the Mine in Summer 2014 (Figure 4b).

Figure 4a. Stockpiles as observed during BLM Geologist’s Field Inspection on May 22, 2013. Photo taken looking approximately NNE from Mine entrance by Kerry L. Aggen.



Figure 4b. Stockpiles as observed during BLM Geologist’s Field Inspection on July 23, 2014. Photo taken looking approximately NNW from eastern extent of Mine disturbance by Kerry L. Aggen.



Figure 5. Photo showing heterogeneity of the sand/gravel deposit being developed in and around Fuller’s Ullery Sand/Gravel Mine project (WYW-168468). The slightly darker layer seen in the middle of the Mine’s western highwall contains more calcareous (less durable) materials than the upper and lower portions of the sand/gravel deposit. This more calcareous material breaks down more easily during processing, creating more fines than other portions of the deposit do. This material also contains a higher iron content, as revealed by the more orangey-brownish colorations. This material is not usable by itself for the desired applications, and although some will get mixed in with the other, more durable materials, as much of it as possible will be separated out. During reclamation of the Mine, this stockpiled unusable material will be placed back into the mined areas as fill and re-contoured. Topsoil will then be respread over the fill materials, and vegetated. Photo taken looking approximately west from just inside Mine on May 22, 2013, by Kerry L. Aggen.



APPENDIX A: RECLAMATION REQUIREMENTS, WYOMING BLM.

The following Reclamation Requirements apply to all surface disturbing activities, including BLM-initiated activities, and must be addressed in each reclamation plan. These requirements also must be met prior to release of the bond and/or the reclamation liability. Where these Reclamation Requirements differ from other applicable federal, laws, rules, and regulations, those requirements supersede this policy. State and/or local statutes or regulations may also apply.

1. Manage all waste materials:

- a. Segregate, treat, and/or bio-remediate contaminated soil material.
- b. Bury only authorized waste materials on site. Buried material must be covered with a minimum of three feet of suitable material or meet other program standards.
- c. Ensure all waste materials moved off-site are transported to an authorized disposal facility.

2. Ensure subsurface integrity, and eliminate sources of ground and surface water contamination:

- a. Properly plug all drill holes and other subsurface openings (mine shafts, adits etc.).
- b. Stabilize, properly back fill, cap, and/or restrict from entry all open shafts, underground workings, and other openings.
- c. Control sources of contamination and implement best management practices to protect surface and ground water quality.

3. Re-establish slope stability, surface stability, and desired topographic diversity:

- a. Reconstruct the landscape to the approximate original original contour or consistent with the land use plan.
- b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
- c. Eliminate highwalls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
- d. Minimize sheet and rill erosion on/or adjacent to the reclaimed area. There shall be no evidence of mass wasting, head cutting, large rills or gullies, downcutting in drainages, or overall slope instability on/or adjacent to the reclaimed area.

4. Reconstruct and stabilize water courses and drainage features:

- a. Reconstruct drainage basins and reclaim impoundments to maintain the drainage pattern, profile, and dimension to approximate the natural features found in nearby naturally functioning basins.
- b. Reconstruct and stabilize stream channels, drainages, and impoundments to exhibit similar hydrologic characteristics found in stable naturally functioning systems.

5. Maintain the biological, chemical, and physical integrity of the topsoil and subsoil (where appropriate):

- a. Identify, delineate, and segregate all salvaged topsoil and subsoil based on a site-specific soil evaluation, including depth, chemical, and physical characteristics.
- b. Protect all stored soil material from erosion, degradation, and contamination.
- c. Incorporate stored soil material into the disturbed landscape.
- d. Seed soils to be stored beyond one growing season, with desired vegetation.
- e. Identify stockpiles with appropriate signage.

6. Prepare site for revegetation:

- a. Redistribute soil materials in a manner similar to the original vertical profile.
- b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate desired plant species.
- c. Provide suitable surface and subsurface physical, chemical, and biological properties to support the long term establishment and viability of the desired plant community.
- d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc.)

7. Establish a desired self-perpetuating native plant community:

- a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community.
- b. Enhance critical resource values (e.g. wildlife, range, recreation, etc.), where appropriate, by augmenting plant community composition, diversity, and/or structure.
- c. Select genetically appropriate and locally-adapted native plant materials based on the site characteristics and ecological setting.
- d. Select non-native plants only as an approved short term and non-persistent alternative to native plant materials. Ensure the non-natives will not hybridize, displace, or offer long-term competition to the endemic plants, and are designed to aid in the re-establishment of native plant communities.

8. Reestablish complementary visual composition:

- a. Ensure the reclaimed landscape features blend into the adjacent area and conform to the land use plan decisions.
- b. Ensure the reclaimed landscape does not result in a long-term change to the scenic quality of the area.

9. Manage Invasive Plants:

- a. Assess for invasive plants before initiating surface disturbing activities.
- b. Develop an invasive plant management plan.
- c. Control invasive plants utilizing an integrated pest management approach.
- d. Monitor invasive plant treatments.

10. Develop and implement a reclamation monitoring and reporting strategy:

- a. Conduct compliance and effectiveness monitoring in accordance with a BLM- (or other surface management agency-) approved monitoring protocol.
- b. Evaluate monitoring data for compliance with the reclamation plan.
- c. Document and report monitoring data and recommend revised reclamation strategies.
- d. Implement revised reclamation strategies as needed.
- e. Repeat the process of monitoring, evaluating, documenting/reporting, and implementing, until reclamation goals are achieved.