

DECISION RECORD
Categorical Exclusion (CX), WY-070-CX13-264
Tate Geological Museum, Willow Creek Turtle Paleontological Excavation Permit
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves BLM’s and the Tate Geological Museum’s (Tate) (repository) application for paleontological development (APD) for paleontological excavation for 3 apparent vertebrate fossils and site invertebrate fossils, if any, the site described in the Willow Creek Turtle Paleontological Excavation Permit Categorical Exclusion (CX), WY-070-CX13-264, incorporated here by reference.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Orders 3104, 3310.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (NHPA) (16 USC 470).
- Paleontological Resources Preservation Act, 2009 (PRPA) (16 USC 470)
- Archaeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. 470 et seq.)
- Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001)
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.

BLM summarizes the details of the approval of the paleontological excavation permit, below. The CX includes the project description, including and site-specific mitigation measures (terms and conditions).

Legal Description.

County	Feature	Twp	Rng	Sec	Subdivision	Acres
Johnson	Willow Creek Trionyx Specimen					
TOTAL						0.0007

Limitations. This decision approves a small excavation permit limited to the legal description, above, and bounded by the description of the initial discovery and supporting photographs in CX3, WY-070-CX13-264. This is does not approve a survey and limited collection permit. This paleontological excavation permit does not include any materials associated with an archaeological resource defined by ARPA or any cultural item defined by NAGPRA. Also see the terms and conditions (T&Cs).

FINDING OF NO SIGNIFICANT IMPACT (FONSI). Analysis of the APD and CX WY-070-CX13-264 (both incorporated here by reference) found Tate’s proposal will have no significant impacts on the human environment beyond those described in the Buffalo and Powder River Basin Final Environmental Impact Statements (FEISs). There is no requirement for an EIS or environmental assessment.

COMMENT OR NEW INFORMATION SUMMARY. BLM internally scoped this proposal, to which it is a party. BLM experience in the PRB revealed little public input or new issue discovery for paleontological resources. BLM received no new information that would bear on this analysis or decision since becoming aware of the discovery of the vertebrate fossils.

DECISION RATIONALE. BLM bases the decision authorizing the selected project on:

1. BLM and Tate included mitigation measures to reduce environmental impacts while meeting the BLM’s need. For a complete description of all site-specific T&Cs, see the T&Cs, incorporated by reference in this decision.
2. The PRB FEIS analyzed and predicted that the PRB development would have significant impacts to the region’s Greater Sage-Grouse (GSG) population. The impact of this development cumulatively

contributes to the potential for local extirpation yet its effect is acceptable because it is outside priority habitats, amounts to less than 1 acre, is within the parameters of the PRB FEIS and ROD and current BLM and Wyoming GSG conservation strategies.

3. Tate and BLM will conduct operations to minimize adverse effects to surface and subsurface resources, prevent unnecessary surface disturbance, and conform to current best practices.
4. The proposal will help advance scientific understanding of our natural world and its paleontological resources.
5. Tate committed to:
 - Comply with the law that the US Government (BLM) owns the fossils.
 - Obtain necessary permits from agencies.
 - Curate, store (be the repository), and provide reasonable public access to the fossils and scientific knowledge yielded from the study of them.
 - Credit the BLM in any publications or display concerning these fossils.
 - Withhold communicating the field location of the excavation site of the fossils to third parties until receiving written authorization to release such information from the Secretary of the Interior.
6. The project is clearly lacking in wilderness characteristics due to many area mineral developments.
7. In order to ensure that these significant specimens are collected and conserved by reputable and responsible parties, the BLM Field Manager shall suspend a paleontological resource use permit issued to any individual or entity charged with a criminal or civil charge that relates to performance of work under any BLM paleontological resources use permit. Where an individual or entity is convicted of a criminal or civil charge that relates to performance of work under any BLM paleontological resources use permit, the BLM Field Manager shall seek revocation of that permit and shall not issue or recommend issuance any further paleontological resource use permits to that individual or entity. In a criminal matter, “convicted” means any plea of guilty, *nolo contendere*, or no contest, or finding of guilt by any court or administrative body, whether federal, state, or local. In a civil matter, “convicted” means any resolution in which an admission of liability is made, or in which there is a finding of liability by any court or administrative body, whether federal, state, or local.

ADMINISTRATIVE REVIEW AND APPEAL. Applicants and permittees have the right to dispute and appeal any adverse decision; BLM Manual 8270-1, Chapter IV, C.8.

a. Disputes. Any applicant or permittee may question the decision of the Authorized Officer (i.e., State Director or Field Office Manager, as applicable) with respect to the denial of a permit application, the inclusion of specific terms and conditions in a permit, or the modification, suspension, revocation or non-renewal of a permit.

(1) Request for Review. The disputant may file a written request to the State Director for review of his or her decision, setting out reasons for believing that the decision should be reconsidered. The State Director may modify the original decision in light of information presented, or may sustain the original decision, in either case providing the disputant with written explanation.

(2) Request for Conference. Either the disputant or the State Director may request a conference to discuss the original decision and its basis. The State Director may modify the original decision in light of information presented, or may sustain the original decision, in either case providing the disputant with written explanation.

(3) Review at Higher Organizational Level.

(a) The disputant, if unsatisfied with the outcome of a review or conference addressing the State Director's decision, may request in writing, that the decision be reviewed at the next higher organizational level. The disputant's written request should set out the procedural or substantive basis for thinking that the State Director's decision is in error. The State Director's decision shall stand during the course of any higher level review.

- (b) Decisions of a Field Office Manager may be reviewed by the State Director, and those of a State Director may be reviewed by the Director.
- (c) Upon receiving a request for higher level review, the Authorized Officer shall transmit the request and the pertinent file(s) to the reviewing official, i.e., the State Director or Director, as appropriate.
- (d) The reviewing official should begin review within five working days. If it appears that the review will take more than 10 working days, the disputant should be informed of the estimated time required by mail (copy to the Authorized Officer).
- (e) If the reviewing official determines that the Authorized Officer's decision is procedurally and substantively correct and should stand unchanged, the reviewing official shall notify the disputant by mail (return receipt requested).
- (f) If the reviewing official determines that the Authorized Officer's decision is procedurally or substantively incorrect, the reviewing official shall consult with the Authorized Officer, establish a course for correcting the decision, and notify the disputant by mail (return receipt requested).
- (g) Upon concluding the review, the reviewing official shall return the pertinent file(s) to the Authorized Officer (i.e., the State Director will return a temporary file to the Field Office Manager; the Director will return any file(s) reviewed to the State Director).
- (h) The Authorized Officer shall immediately take any corrective actions determined under the above.
- (4) Record of Review. Record of any reexamination of an Authorized Officer's decision shall be included in the permanent file at the State Office.

b. Appeals.

- (1) Initiated by Disputant. After the dispute opportunities above have been exhausted, the disputant may file a formal appeal with the Interior Board of Land Appeals by following the procedures in 43 CFR Part 4, Subpart E. When the Authorized Officer finds that suspension of the decision in accordance with 43 CFR 4.21(a) would cause harmful effects to paleontological resources, the Authorized Officer shall apply to the Board for a determination that the decision being appealed, or pertinent parts of the decision, shall stand in full force and effect during the appeal period in the public interest.
- (2) Initiated by Other Affected Person. Other affected persons wishing to appeal a decision connected with a permit may file a formal appeal with the Interior Board of Land Appeals by following the procedures in 43 CFR Part 4, Subpart E. As necessary, the Authorized Officer shall apply to the Board for a determination that the decision being appealed shall stand during the appeal period.

Field Manager:

Kathleen R Brus

Date:

8/8/13

CATEGORICAL EXCLUSION (CX), WY-070-CX13-264
Tate Geological Museum, Willow Creek Turtle Paleontological Excavation Permit
Bureau of Land Management, Buffalo Field Office, Wyoming

BLM Categorical Exclusion (CX) (pursuant to DOI 516 DM 11.9 J-4, Use of small sites for temporary field work camps where the sites will be restored to natural or original condition within the same work season; and, 43 CFR 46.210 (e), Nondestructive data collection, inventory, (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities The proposed paleontological excavation will not cause unnecessary or undue degradation to the environment.

A. BACKGROUND

TRACKING NUMBERS: WY-070-CX13-264. **BLM BFO FILE NO.:** 8270-Tate.

This Project Tiers to or Incorporates by Reference these NEPA Analyses, in Addition to the Buffalo and Powder River Basin Final Environmental Impact Statements.

Project Name	NEPA Analysis	Project Type	Approval
Table Mountain Phase 4	WY-070-EA10-258	Gas 52 wells	9/2010
Table Mountain Phase 2	WY-070-10-376	Gas 86 wells	9/2010
Table Mountain Phase 1	WY-070-06-288	Gas 50 wells	2006
Storm Plan of Development (POD)	WY-070-CX10-327 to 330	Gas 4 wells	8/2010 5/2012
Willow Creek POD	WY-070-EA06-211	Gas 88 wells	9/2006
Willow Creek POD	WY-070-390CX3-10-196 to 225	Gas 36 wells	6/2010
Willow Creek Add 1 POD	WY-070-08-187	Gas 22 wells	9/2008
Vista	WY-070-EA08-34	Gas 14 wells	2/2008
Vista	WY-070-390CX3-10-156 to 168	Gas 13 wells	4/2010
Jepsen Draw II	WY-070-07-109	Gas 82 wells	3/2007
Little Willow Allotment	WY-070-05EA-258	Grazing	2005
Hoe Ranch Allotment	unnumbered	Grazing	2002
NRC: Irigaray & Christensen Ranch	NRC Docket 40-8502	Uranium	2011

This CX incorporates by reference all the above NEPA documents, analysis, and case files as they address overlapping, adjacent, or similar field environments and surface rehabilitation.

TITLE OF PROPOSED ACTION: Willow Creek Trionyx Paleontological Excavation

PROPOSED ACTION: Permitted paleontological excavation of a single fossil soft shell turtle specimen (Trionychidae), two fossil gar specimens (Lepisosteidae) and collection of 5 gallons of bulk sediment sample from area small locality in the Wasatch Formation. The permitted area of disturbance by hand tools will constitute approximately 3 square meters with volume of sediment disturbed amounting to approximately 2.63 cubic meters; see BLM Manuals H-8270, .09.C.2; and H-8270-1.

LEGAL DESCRIPTION:

County	Feature	Twp	Rng	Sec	Subdivision	Acres
Johnson	Willow Creek Trionyx Specimen	- redacted, see admin record -				
TOTAL						0.0007

BLM will redact the specific site in the public NEPA documents per the Paleontological Resources Preservation Act (PRPA) Sections 6304 and 6309 as described in BLM Instruction Memorandum (IM) 2012-141. The permittee (Tate) may release the location after securing written permission from the Secretary of Interior.

APPLICANT: BLM and Tate Geological Museum, 125 College Drive, Casper, WY 82601.

Description of Proposed Action: BLM and the Tate Geological Museum (Tate) (repository) requests an excavation permit to unearth a previously stabilized specimen of Trionyx originally identified by – redacted - the week of May 10, 2013, during a paleontological survey of the – redacted-. The paleontological locality is in the – redacted - in the Powder River Basin (PRB) (- redacted -, Wyoming 7.5’ series USGS Topographic Quadrangle). The site is along the – redacted -.

The Tate crew under the field supervision of Jean-Pierre Cavigelli will consist of 6 fieldworkers using hand tools to excavate a single fossilized specimen of soft shell turtle (Trionychidae) and associated two, fossilized specimens of gar (Lepisosteidae) along with an approximately 5 gallon bulk sediment sample from the Wasatch Formation. The bulk sample will be subsequently screened to recover any microvertebrate assemblage which may be present to aid in the analysis of site sedimentology, taphonomy, and paleoecology. The area of excavation will measure 2 meters by 1.5 meters by 0.75 meters encompassing a total area of 3 square meters (0.0007 acres) and result in 2.63 cubic meters of ground disturbance. The Tate is currently permitted through December 31, 2015 to conduct paleontological surveys, recordation and recovery under paleontological permit number PA04-WY-126. The paleontological locality is – redacted - roads. Vertebrate and invertebrate fossils discovered and removed from federal public lands resultant of this permitted excavation remain the property of the US (BLM); Paleontological Resources Preservation Act, 2009 (PRPA) (16 USC 470), Sec 6304, (c)(1). Management of such collections is the joint responsibility of the BLM and the repository that agrees to house the fossils on behalf of the Government, to make the specimens available for public study, and to cite the BLM in any publication concerning the specimens; BLM Manual H-8270-1, IV-1.

B. LAND USE PLAN CONFORMANCE

Land Use Plan: Buffalo Resource Management Plan (RMP) approved 1985; Amended 2001, 2003, 2011, and 2013.

The proposal conforms to the applicable RMP for it is specifically provided for in the following: Buffalo Resource Management Plan (RMP), 2001, pp. 21-23 - Management objective: manage paleontological resources that are part of the BLM-administered public land surface estate for their informational, educational, scientific, public, and recreational uses. Management decisions include: using the land for scientific purposes such as paleontological exploration authorized through a permit system; fossils are part of the surface estate; and requiring a paleontological collecting permit before collecting any fossil vertebrates, significant fossil invertebrates, and plants on BLM-administered public lands.

See also: Buffalo RMP 2003, pp. 3-65 to 3-66 and pp. 4-125 to 4-127 - Scientifically significant paleontologic resources, including vertebrate, invertebrate, plant and trace fossils are known to occur in many of the geologic formations within the project area. BLM has developed a paleontologic sensitivity model for the Powder River Basin (PRB) that categorizes geologic formations in 5 classes of ascending significance based on using the Probable Fossil Yield Classification (PFYC). The Class 5 category reflects highly fossiliferous geologic units that regularly and predictably produce vertebrate fossils or scientifically significant non-vertebrate fossils that are at high risk of natural degradation or human-caused adverse impacts. The Wasatch Formation (Class 5) is by far the most geographically widespread formation in the project area and is the bedrock geologic formation exposed at the surface in most of the PRB in Wyoming. Much of the area within and surrounding the PRB in Wyoming has not been adequately explored for paleontologic resources and new scientifically significant fossil occurrences are being discovered regularly. Within the PRB Area, the construction of oil and gas-related facilities, including access roads, could adversely affect scientifically significant fossils. The potential for impact to significant fossils is greatest in areas where Class 3, 4, or 5 formations are present. Both surface and subsurface fossils could be damaged or destroyed during ground-disturbing activities. Paleontological

adequately explored for paleontologic resources and new scientifically significant fossil occurrences are being discovered regularly. Within the PRB Area, the construction of oil and gas-related facilities, including access roads, could adversely affect scientifically significant fossils. The potential for impact to significant fossils is greatest in areas where Class 3, 4, or 5 formations are present. Both surface and subsurface fossils could be damaged or destroyed during ground-disturbing activities. Paleontological resources are fragile and, once disturbed, lose much of their preserved information. Avoidance of significant sites is the preferred mitigation measure for adverse effects on paleontological resources. The discovery of significant paleontological resources during a pre-construction survey would require mitigation of possible impacts to these resources before ground-disturbing activities begin. The excavation of the soft shell turtle (Trionychidae) specimen and associated specimens of gar (Lepisosteidae) therefore represents mitigation aimed at protecting paleontological resources from adverse effects associated with commercial development on federal lands.

C. COMPLIANCE WITH NEPA, LAWS, AND REGULATIONS

BLM determined the proposal does not have a significant effect on the human environment and is categorically excluded from the analysis required for an environmental impact statement or environmental assessment under the National Environmental Policy Act (NEPA) per 40 CFR 1508.4; 43 CFR 46.210(e); and DOI 516 DM 11.9: J. 4. BLM reviewed the proposed paleontological excavation permit and found the proposal conforms to the Omnibus Land Management Act of 2009, Public Law 111-011, Title VI, Subtitle D on Paleontological Resources Preservation (OPLM-PRP) (123 Stat. 1172: 16 U.S.C. 470aaa) (PRPA). The proposed permit complies with: PRPA, DOI Manual Part 411, and BLM Manuals H-8270, Paleontological Resource Management, and H-8270-1, General Procedural Guidance for Paleontological Resource Management. BLM reviewed the proposal and none of the extraordinary circumstances apply; 43 CFR 46.215, DOI 516 DM 2, and BLM NEPA Handbook H-1790-1, Appendix 5. See the Extraordinary Circumstances worksheet, incorporated here by reference.

I considered that: The proposal is within the parameters of categorical exclusions 43 CFR 46.210(e) and DOI 516 DM 11.9.J.4, and the Buffalo RMP. The proposal will have no significant effects on the human environment and is categorically excluded from the analysis required for an environmental impact statement or environmental analysis. This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. Tate and its field coordinator previously demonstrated to the BLM that they are qualified to perform this excavation as a result of training, experience, and through recent and present BLM paleontological permits; BLM Manual H-8270-1, Chap IV, C.2. Tate also demonstrated evidence of its capability of providing adequate long-term curatorial services in its past and recent support of BLM management objectives. I considered the categorical exclusion, WY-070-CX13-264, and the attached extraordinary circumstances worksheet, incorporated here by reference. This proposal conforms to the Buffalo RMP and must comply with the WY BLM reclamation requirements, attached as Appendix A and incorporated here by reference.

Persons and Agencies Consulted

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

- Donald Brewer; BLM Wildlife Biologist
- John Kelley; BLM NEPA Coordinator

D. SIGNATURE

Field Manager:  Date: 8/8/13

CONTACT: Douglas F. Tingwall, Archaeologist, BLM, 1425 Fort Street, Buffalo, WY, 82834, 307-684-1169.

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. BLM reviewed the proposal, and none of the extraordinary circumstances apply as described in 43 CFR 46.215, DOI 516 DM 2, and BLM NEPA Handbook H-1790-1, Appendix 5.

EXTRAORDINARY CIRCUMSTANCES:		
1. Have significant impacts on public health or safety.		
Yes	No XX	<p>This project will have no significant impacts on public health and safety. The proposed paleontological excavation would adhere to Occupational Safety and Health Administration rules concerning health and safety. The excavation will be infilled upon completion of the fieldwork and reclaimed to natural contours.</p> <p>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 proposed undertaking has no potential to affect historic properties. The paleontological locality is situated within an area of previous adequate cultural resource inventory conducted for the redacted. The two closest cultural resources (48JO3825 and 48JO3828), consisting of small prehistoric lithic scatters and historic debris scatters, have been determined to be not eligible for inclusion in the National Register of Historic Places and are situated approximately 0.25 miles from the paleontological locality.</p> <p>There are no areas of critical environmental concern, wilderness study areas, monuments, refuges, recreation areas, parks, national landmarks, farmland or other areas with special designation in or near the project area.</p> <p>The project area does not occur in, nor will it affect, a floodplain, wetland, riparian area, or sources of principal drinking water.</p> <p>Given the degree of locally occurring extractive industry development and the proposed small scale of hand excavation involved with the paleontological recovery effort, the proposed undertaking would have no effect to visual qualities in the surrounding area.</p> <ol style="list-style-type: none">1. The paleontological locality is within protection buffers for both Greater Sage-Grouse and raptor nests; however, proposed excavation will adhere to timing stipulations and will not commence prior to July 31, 2013; see the NEPA analyses in the table in CX3, WY-070-CX13-264 for analyses supporting timing limitations for Greater Sage-Grouse and raptors – biological (spatial) buffers.
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102 (2) (E)].		
Yes	No XX	<p>The proposed paleontological excavation has been reviewed and found to be in conformance with the revised Buffalo Resource Management Plan and in accordance with the Omnibus Land Management Act of 2009, Public Law 111-011, Title VI, Subtitle D on Paleontological Resources Preservation (OPLM-PRP) (123 Stat. 1172: 16 U.S.C. 470aaa). The proposed undertaking does not include any controversial environmental effects or involve unresolved</p>

EXTRAORDINARY CIRCUMSTANCES:		
		conflicts with available resources. Disturbance would be limited to less than .010 of an acre.
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.		
Yes	No XX	The environmental effects of proposed paleontological excavations are not highly uncertain nor involve unique or unknown environmental risks. The proposed action would be limited to the short-term (estimated 2 days) surface disturbance with hand tools during the 2013 field season on less than 0.010 of an acre of ground. The excavation shall be backfilled and reclaimed to natural contours once the fossil assemblage is removed; no open pits would remain once fieldwork is complete
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 proposed paleontological excavation does not commit the BLM to pursue further actions, and as such would not establish a precedent or decision for future actions with potentially significant environmental effects.
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.		
Yes	No XX	The proposed paleontological excavation in the identified locality would have no direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.
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	The proposed paleontological excavation is within an area of previous adequate cultural resource inventory conducted for the - redacted - . The two closest cultural resources (48JO3825 and 48JO3828), consisting of small prehistoric lithic scatters and historic debris scatters, have been determined to be not eligible for inclusion in the National Register of Historic Places and are situated approximately 0.25 miles from the paleontological locality. No cultural resources 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.		
Yes	No XX	Adequate site-specific wildlife survey has been conducted in the project area. The paleontological locality is within protection buffers for both Greater Sage-Grouse and raptor nests; however, proposed excavation will adhere to timing stipulations and will not commence prior to July 31, 2013. The proposed paleontological excavations would not change the overall habitat function; would not have a significant impact on listed species or species proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species. The excavation shall be backfilled and reclaimed to natural contours once the fossil material is removed; no open pits would remain once fieldwork is complete. (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 paleontological excavations would not violate any federal, state, local or tribal laws.
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).		
Yes	No XX	Paleontological permits are approved for qualified applicants regardless of socioeconomic status or heritage. The proposed paleontological excavations would have no adverse effect on low income or minority populations because as stated in the Buffalo RMP there are not any substantial concentrations of low income or minority populations within the planning area.

EXTRAORDINARY CIRCUMSTANCES:		
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	The Pumpkin Buttes constitute the only known traditional cultural property (TCP) located within the proposed paleontological excavation vicinity; however, the closest associated landform with this TCP, North Butte, is situated – redacted – to the southeast. Access to and/or ceremonial use of the Pumpkin Buttes would not be impeded by the paleontological excavations nor would the physical or visual integrity of said site be adversely affected by the proposed paleontological excavation. (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	The proposed paleontological excavations are not anticipated to contribute to the spread of noxious weeds. Scarce vegetation is currently present on the exposed bedrock; access to the excavations is pedestrian only. If noxious weeds or non-native species are found in the project area they would be treated under the BLM Memorandum of Understanding (MOU) with Johnson County Weed and Pest, for weed management, control and treatments.

Figure 1. Tate Geological Museum’s Willow Creek Turtle Paleontological Excavation. Topographic map at 7.5’ scale depicting the location of Tate Geological Museum’s Willow Creek Turtle Paleontological Excavation project. The location of the paleontological excavation is exhibited with a red dot.

- Redacted -

Figure 2. Tate Geological Museum’s Willow Creek Turtle Paleontological Excavation.
Orthophotographic map showing location of Tate Geological Museum’s Willow Creek Turtle Paleontological Excavation project. The location of the paleontological excavation is exhibited with a red dot. Bureau of Land Management jurisdiction is indicated in pale yellow. State land is indicated in light blue. Private land is not colorized.

- redacted -

Figure 3. Tate Geological Museum’s Willow Creek Turtle Paleontological Excavation. Photograph of the Willow Creek Turtle specimen in-situ and surrounding area. The paleontologist in the photograph is indicating the maximum length of the fossil soft shell turtle (Trionychidae) specimen with reference to the spread of his arms. The length and width of the specimen approximately corresponds to the horizontal extent of proposed paleontological excavation. Overview photograph taken by – redacted – representative on May 9, 2013. Image unmodified.



Figure 4. Tate Geological Museum's Willow Creek Turtle Paleontological Excavation. The Photograph depicts the skull of the fossilized soft shell turtle (Trionychidae) in-situ. Photograph taken by [redacted] representative on May 9, 2013. Image unmodified.



Figure 5. Tate Geological Museum's Willow Creek Turtle Paleontological Excavation. The photograph depicts one of the specimens of gar identified in-situ at the paleontological locality. The scale is in centimeters as a reference for the dimensions of the specimen. Photograph taken by [redacted] representative on May 9, 2013. Image unmodified.



Figure 6. Tate Geological Museum's Willow Creek Turtle Paleontological Excavation. The photograph depicts the second specimen of gar identified in-situ at the paleontological locality. The scale is in centimeters as a reference for the dimensions of the specimen. Photograph taken by [redacted] representative on May 9, 2013. Image unmodified.



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 any 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.
- 2. Ensure subsurface integrity, and eliminate sources of ground and surface water contamination:**
 - a. 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 landscape to the approximate 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 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.
- 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.
- 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 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.
- 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.